ANSYS, INC. NDQ-ANSS

RECENT PRICE **262.87** | P/E RATIO **43.9** (Trailing: 40.1 / Median: 26.0) | RELATIVE P/E RATIO **2.73** | DIV'D YLD **Nil** | VALUE LINE

TIMELINESS **1** Raised 11/8/19
SAFETY **2** Raised 5/15/15
TECHNICAL **2** Raised 5/8/20
BETA 1 05 (1 00 = Market)

18-Month Target Price Range
Low-High Midpoint (% to Mid)
$185-$341 $263 (0%)

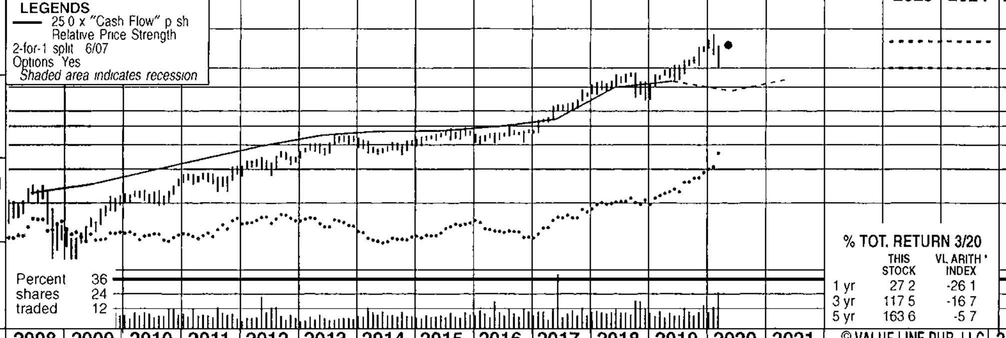
2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	275	(+5%)	*1%*
Low	200	(-25%)	*-6%*

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	280	286	316
to Sell	267	261	271
Hld's(000)	79045	79509	81100

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High	43 9	53 6	62 3	74 4	89 7	87 1	98 4	99 0	155 1	190 5	260 1	299 1	
Low	18 0	38 7	45 7	55 2	68 3	71 1	78 8	80 5	91 9	136 8	137 1	200 1	



Target Price Range 2023 | 2024 | 2025

% TOT. RETURN 3/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	27 2	-26 1
3 yr	117 5	-16 7
5 yr	163 6	-5 7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
2 14	2 47	3 42	4 93	5 35	5 76	6 33	7 57	8 72	9 38	10 37	10 72	11 54	13 04	15 59	17 83	*18.30*	*20.60*	Revenues per sh	*27.25*
65	81	90	1 51	1 81	1 99	2 33	2 73	3 18	3 59	3 77	3 78	3 99	4 35	6 36	6 87	*6.10*	*7.05*	"Cash Flow" per sh	*10.00*
51	65	56	98	1 29	1.25	1 64	2 53	2 91	3.27	3 41	3 42	3 63	4 01	5 98	6 58	*5.75*	*6.75*	Earnings per sh	*9.50*
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*Nil*	*Nil*	Div'ds Decl'd per sh	*Nil*
05	.07	09	14	19	09	.16	24	26	31	29	18	.15	23	.26	52	*.45*	*.50*	Cap'l Spending per sh	*.45*
2 79	3 51	6 93	8 20	13 23	14 63	16 69	18 94	20 94	23 14	24 43	24 90	25 77	26 68	31.68	40 28	*45.05*	*48.80*	Book Value per sh B	*64.00*
62.83	64 10	77 18	78 20	89 38	89 72	91 65	92 65	92 67	92.32	90 77	88 14	85 69	84 19	83 63	85 73	*86.00*	*85.00*	Common Shs Outst'g C	*82.00*
23.3	27 9	42 5	31.0	29 4	25 7	27 0	21 3	22 4	24 5	23 0	26 1	24 8	30 2	27 5	30 8	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*25.0*
1 23	1 49	2 29	1 65	1 77	1 71	1.72	1 34	1 43	1 38	1 21	1 31	1 30	1 52	1 49	1 67			Relative P/E Ratio	*1.40*
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			Avg Ann'l Div'd Yield	*Nil*
						580.2	701.1	807 7	865 9	941.4	944 5	988.6	1098 1	1303 5	1528 4	*1575*	*1750*	Revenues ($mill)	*2225*
						48 3%	52.3%	52.3%	51 2%	50 2%	49.5%	48 9%	48 0%	48 8%	46 8%	*41.5%*	*44.0%*	Operating Margin	*46.0%*
						60.8	14 2	18 1	20 0	20 9	19 5	18 7	17 9	18 4	23 6	*25.0*	*25.0*	Depreciation ($mill)	*25.0*
						153 1	239 0	276 8	311 5	320 9	313 3	322 9	347 9	513 9	565 0	*500*	*575*	Net Profit ($mill)	*800*
						29 2%	32 0%	31 5%	26 5%	29 1%	30 6%	31 1%	32 3%	18 2%	19 2%	*20.5%*	*20.5%*	Income Tax Rate	*20.5%*
						26 4%	34 1%	34 3%	36 0%	34 1%	33 2%	32 7%	31 7%	39 4%	37 0%	*31.7%*	*32.9%*	Net Profit Margin	*36.0%*
						403 2	301 2	436 0	627.2	645 4	592 2	630 3	661 7	786 4	860 4	*800*	*750*	Working Cap'l ($mill)	*750*
						127 6	53 1	--	--	--	--	--	--	53 1	423 5	*400*	*325*	Long-Term Debt ($mill)	*Nil*
						1529.9	1754 5	1940.3	2136 2	2217 5	2194.4	2208 4	2245 8	2649 5	3453.4	*3875*	*4150*	Shr. Equity ($mill)	*5250*
						9 4%	13 3%	14.3%	14 6%	14 5%	14.3%	14 6%	15 5%	19 4%	14 6%	*12.0%*	*13.0%*	Return on Total Cap'l	*15.0%*
						10 0%	13 6%	14.3%	14 6%	14 5%	14 3%	14 6%	15 5%	19 4%	16 4%	*13.0%*	*14.0%*	Return on Shr. Equity	*15.0%*
						10 0%	13 6%	14 3%	14 6%	14 5%	14 3%	14 6%	15 5%	19 4%	16 4%	*13.0%*	*14.0%*	Retained to Com Eq	*15.0%*
						--	--	--	--	--	--	--	--	--	--	*Nil*	*Nil*	All Div'ds to Net Prof	*Nil*

CAPITAL STRUCTURE as of 12/31/19
Total Debt $498 5 mill **Due in 5 Yrs** $500 0 mill
LT Debt $423 5 mill. **LT Interest** $5.3 mill
(11% of Cap'l)

Leases, Uncapitalized: Annual rentals $21 6 mill

No Defined Benefit Pension Plan

Pfd Stock None

Common Stock 85,914,375 shs
as of 2/20/20
MARKET CAP: $22.6 billion (Large Cap)

CURRENT POSITION ($MILL.)	2017	2018	12/31/19
Cash Assets	881.8	777 4	872 4
Receivables	124 7	317 7	433 5
Other	263 8	216 1	249 6
Current Assets	1270 3	1311 2	1555 5
Accts Payable	6 0	8 0	14 3
Debt Due	--	--	75 0
Deferred Revenue	440 5	328 6	351 4
Other	162 1	188 2	254 4
Current Liab	608 6	524 8	695 1

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	11 0%	10.5%	*10 0%*
"Cash Flow"	12 5%	11 0%	*9 5%*
Earnings	17 0%	11 5%	*9 5%*
Dividends	--	--	*NMF*
Book Value	10.5%	7 5%	*11 5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	253 5	264 3	276 8	303 4	1098 1
2018	283 7	308 8	293 0	418 0	1303 5
2019	319.9	370 5	345 5	492.5	1528.4
2020	*300*	*350*	*425*	*500*	*1575*
2021	*350*	*400*	*450*	*550*	*1750*

Cal-endar	EARNINGS PER SHARE AD Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.89	.99	1.05	1 07	4.01
2018	1 20	1.35	1 31	2 13	5 98
2019	1 29	1 61	1 42	2 24	6.58
2020	*.75*	*1.25*	*1.75*	*2.00*	*5.75*
2021	*1.00*	*1.50*	*2.00*	*2.25*	*6.75*

Cal-endar	QUARTERLY DIVIDENDS PAID Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	NO CASH DIVIDENDS BEING PAID				
2017					
2018					
2019					
2020					

BUSINESS: ANSYS, Inc develops and markets software and technologies widely used by engineers and designers across a broad spectrum of disciplines, including aerospace, automotive, manufacturing, electronics, and biomedical Product/market emphasis includes Structures, Fluids, Electronics, Multiphysics, Embedded Software, Systems, 3-D Modeling, and Academic Software licenses, 46% of '19 revenue, Maintenance and service, 54% '19 R&D expense, 19 7% of revenue Employed about 4,100 (12/31/19) Stock owners two fin'l inst, 19 2%, Off & dir, less than 1% (3/20 proxy). Chrmn Ronald W Hovsepian, Pres & CEO: Dr. Ajei S Gopal Inc DE. Address: 2600 ANSYS Drive, Cannonsburg, PA 15317 Tel: 724-746-3304 Internet www ansys com

ANSYS should be able to weather the difficult business conditions ahead caused by the coronavirus pandemic. The company's financial position is strong and liquid, providing it with the staying power to withstand what will likely be a deep (but hopefully not extended) economic recession. Although much has changed in the software business since the 2008-2009 recession, a glance at the historical array above shows how ANSYS performed as a company during the last recession. True, the shares were bid down sharply in that interim, but revenue and earnings began a recovery during the third quarter of 2009, as did the stock.

The company has some intrinsic strengths. As the realities of the coronavirus pandemic have set in, technology industry analysts are now calling for a steep drop in overall spending on software this year, with Gartner's forecast going from an advance of around 11% to a decline of about 7%. Still, like many software businesses these days, ANSYS' revenue stream has a large recurring component. On point, 77.4% of its annual contract value (ACV) of $1,461.8 million (at 12/31/19) was recurring in nature, underpinning the top line for 2020. That said, our sense it will be quite a challenge for the company to meet its goal of growing ACV 10%-12% this year, but half of that goal may not be an unreasonable target. Indeed, ANSYS' products and services find use in their customers' new product development efforts. Many of them are likely to keep investing in new product R&D, though possibly at a reduced level in the near term. True, the cash allocated to R&D would depend on each customer's financial position and their own staying power, but we see the glass half full here.

What about ANSYS shares? All things considered, the stock price has held up rather well, since reaching its high of nearly $300 in mid-February. The move to the 5G protocol, autonomous vehicles, and the general need to simulate increasingly complex product designs should continue to underscore the company's long-term prospects. That said, those considering making a new commitment to ANSS stock will have to shoulder a premium, since these positives have not gone unnoticed.

Charles Clark *May 8, 2020*

(A) Diluted earnings, nonGAAP 2011 forward Next earnings report date early August. Excluded items '04, d3¢, '06, d73¢, '11, d62¢, '12, d77¢, '13, d69¢, '14, d71¢, '15, d66¢; '16, d64¢, '17, d$1 03, '18, d$1 10, '19, d$1 32
(B) Includes intangibles, in '19 $2,413 3 mill., $28 15 per share
(C) In millions, adjusted for stock splits
(D) Quarters may not sum to annual figure, due to rounding or changes in shares outstanding

Company's Financial Strength	A
Stock's Price Stability	80
Price Growth Persistence	85
Earnings Predictability	80

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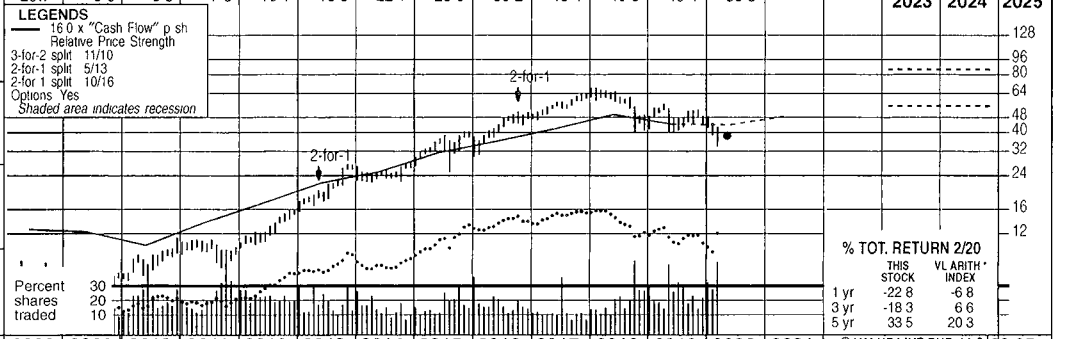
SMITH (A.O.) NYSE-AOS

RECENT PRICE **38.60** | P/E RATIO **18.2** (Trailing: 17.3 / Median: 21.0) | RELATIVE P/E RATIO **1.38** | DIV'D YLD **2.5%** | VALUE LINE

TIMELINESS **3** Raised 4/10/20
SAFETY **3** New 7/27/90
TECHNICAL **4** Lowered 3/20/20
BETA 1 20 (1 00 = Market)

High	7 6	11 5	11 2	16.0	27 6	28 6	40 6	51 5	63 7	68 4	56 7	48 6	
Low	3 5	6 8	7 5	10 1	15 5	22 1	25 0	30 2	46 4	40 3	40 4	33 8	

Target Price Range 2023 | 2024 | 2025



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$31-$62	$47 (20%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	85	(+120%)	23%
Low	55	(+40%)	11%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	235	208	224
to Sell	267	244	210
Hld's(000)	126292	130406	132755

% TOT. RETURN 2/20

	THIS STOCK	VL ARITH * INDEX
1 yr	-22 8	-6 8
3 yr	-18 3	6 6
5 yr	33 5	20 3

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
9 21	9 30	11 62	11 84	11 80	10 24	8 14	9 27	10 49	11 80	13 18	14 42	15 49	17 46	18 96	18 43	*18.80*	*19.75*	Sales per sh	*23.20*
50	62	74	80	79	77	65	86	1 08	1 38	1 57	1 97	2 26	2 61	3 10	2 76	*2.75*	*3.05*	"Cash Flow" per sh	*3.85*
20	31	41	48	49	.57	43	60	78	1 03	1 22	1 58	1 85	2 17	2 61	2 22	*2.20*	*2.50*	Earnings per sh A	*3.30*
10	11	11	12	12	13	14	15	18	23	30	38	48	56	76	90	*.98*	*1.08*	Div'ds Decl'd per sh B■	*1.44*
27	28	37	37	34	29	29	29	38	54	48	41	47	55	51	40	*.50*	*.50*	Cap'l Spending per sh	*.65*
3 29	3 37	3.68	3 88	3 28	4 06	4 82	5 89	6 46	7 28	7 73	8 20	8 74	9 60	10 21	10 27	*10.45*	*11.65*	Book Value per sh C	*16.15*
179 48	181 69	186 02	195 30	195.30	194 44	182 97	184 48	184 88	182 48	178 80	175 90	173 44	171 66	168 16	162 37	*158.00*	*157.00*	Common Shs Outst'g D	*155.00*
24 6	16 1	17 2	14 1	11 9	10 1	20 3	16 6	16 4	20.2	20 3	21 6	23.0	25 4	22 2	21 8	*Bold figures are*		Avg Ann'l P/E Ratio	*20.0*
1 30	86	93	75	.72	67	1 29	1 04	1 04	1 13	1 07	1 09	1 21	1 28	1 20	1 18	*Value Line*		Relative P/E Ratio	*1.10*
2 1%	2 2%	1 6%	1 7%	2 1%	2 2%	1 6%	1 5%	1 4%	1 1%	1 2%	1 1%	1 1%	1 0%	1.3%	1 9%	*estimates*		Avg Ann'l Div'd Yield	*2.3%*

CAPITAL STRUCTURE as of 12/31/19
Total Debt $284 0 mill. **Due in 5 Yrs** $204 4 mill
LT Debt $277 2 mill **LT Interest** $9 1 mill
(14% of Cap'l)
Leases, Uncapitalized Annual rentals $14 0 mill
Pension Assets-12/19 $832.4 mill.
Oblig. $869 3 mill
Common Stock 161,971,034 shares
Includes 26,044,733 Class A shares
Class A shares have (10 times) super voting power for matters beyond director elections.
as of 1/31/20

MARKET CAP: $6.3 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
1489 3	1710 5	1939.3	2153 8	2356.0	2536 5	2685 9	2996 7	3187 9	2992 7	*2970*	*3100*	Sales ($mill)	*3600*
10 6%	10 9%	13 6%	15 8%	15 6%	18 2%	19 6%	19 7%	19 6%	18 2%	*17.5%*	*19.0%*	Operating Margin	*21.0%*
40 8	47 0	54 6	59 7	59 8	63 0	65 1	70 1	71 9	78 3	*85.0*	*86.0*	Depreciation ($mill)	*90.0*
78 9	111 2	145 1	191.2	221 0	282 9	326 5	378 3	449 2	370 0	*350*	*395*	Net Profit ($mill)	*510*
28 4%	31 1%	29 6%	28 4%	28.3%	29 7%	29.4%	27 4%	20 4%	21 6%	*22.0%*	*22.0%*	Income Tax Rate	*22.0%*
5 3%	6 5%	7.5%	8 9%	9 4%	11 2%	12.2%	12 6%	14 1%	12 4%	*11.8%*	*13.2%*	Net Profit Margin	*14.2%*
359 2	688 8	608 2	614 7	713 8	802 1	796.4	978 3	853 2	733 9	*735*	*800*	Working Cap'l ($mill)	*1175*
242 4	443 0	225 1	177 7	210 1	236 1	316 4	402 9	221 4	277 2	*280*	*280*	Long-Term Debt ($mill)	*250*
881 4	1085 8	1194 1	1328 7	1381 3	1442 3	1515 3	1648 8	1717 0	1666 8	*1655*	*1830*	Shr. Equity ($mill) C	*2500*
7.3%	7 6%	10 5%	12 9%	14 0%	17 1%	18 0%	18 7%	23 4%	19 3%	*18.5%*	*19.0%*	Return on Total Cap'l	*18.5%*
9 0%	10 2%	12.2%	14.4%	16 0%	19 6%	21 5%	22 9%	26 2%	22 2%	*21.0%*	*21.5%*	Return on Shr. Equity	*20.5%*
6 1%	7 7%	9 4%	11 2%	12 1%	14 9%	16 0%	17 1%	18 6%	13 2%	*11.5%*	*13.5%*	Retained to Com Eq	*11.5%*
31%	25%	23%	22%	25%	24%	26%	26%	29%	40%	*45%*	*43%*	All Div'ds to Net Prof	*44%*

CURRENT POSITION ($MILL.)	2017	2018	12/31/19
Cash Assets	820 0	645 0	551 4
Receivables	598 4	647 3	589.5
Inventory (LIFO)	291 2	304 7	303 0
Other	57 2	41 5	56 5
Current Assets	1766 8	1638 5	1500 4
Accts Payable	535 0	543 8	509 6
Debt Due	7 5	- -	6 8
Other	246 0	241 5	250.1
Current Liab	788 5	785 3	766 5

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	5 0%	9 0%	*3 5%*
"Cash Flow"	13 5%	16 0%	*5 0%*
Earnings	16 5%	18 5%	*5 5%*
Dividends	19 5%	25.5%	*12.0%*
Book Value	10 5%	7 0%	*5 0%*

Cal-endar	QUARTERLY SALES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	740 0	738 2	749 9	768 6	2996 7
2018	788 0	833 3	754 1	812 5	3187 9
2019	748.2	765.4	728.2	750 9	2992 7
2020	*680*	*725*	*745*	*820*	*2970*
2021	*730*	*765*	*765*	*840*	*3100*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.50	.53	.54	.60	2 17
2018	60	66	61	74	2 61
2019	53	61	53	56	2 22
2020	*.41*	*.56*	*.59*	*.64*	*2.20*
2021	*.52*	*.64*	*.66*	*.68*	*2.50*

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	12	12	12	12	48
2017	14	14	14	14	56
2018	18	18	18	22	76
2019	22	22	22	24	90
2020	24				

BUSINESS. A O Smith Corp is a leading manufacturer of residential and commercial water heaters and boilers Has two reportable segments North America (69% of '19 sales); and Rest of World (31%), which primarily serves China, Europe, and India and also markets water treatment products and air purifiers Brands include A O Smith, GSW (acquired 4/06), Lochinvar (8/11), Reliance, and Takagi '19 Depreciation rate 6 8% At 12/31/19, had approx 15,100 employees Smith Family Voting Trust owns 96 5% of Class A shares; Officers & directors, 2 1% of regular common, Vanguard Group, 11.6% (3/20 proxy) Chairman & CEO Ajita G. Rajendra. Inc. Delaware Address 11270 West Park Place, Milwaukee, WI 53224 Telephone 414-359-4130 Internet www aosmith com

Reports that China's economy is slowly recovering from the coronavirus pandemic may lead to renewed interest in shares of A.O. Smith. That's because the Milwaukee-based maker of water heaters and boilers generates nearly 28% of its overall sales in the world's most-populous nation and is well positioned to benefit from an increase in household formation there Indeed, even after a recent rationalization of its retail presence, the company still has more than 5,000 storefronts in China, which sell, among other things, air filter and water-treatment systems. What's more, management recently announced that the company's distribution partners in China had largely worked off excess inventories, setting the stage for a long-awaited resumption in ordering.

Nonetheless, we think that it is too early to say that business in China is back. Our trepidation partly reflects that economy's continued reliance on exports amid a downturn in global trade.

Solid finances position A.O. Smith well to weather what could be a lengthy coronavirus-related slowdown in business. As of December 31st, cash on the company's balance sheet exceeded overall debt by $267.4 million ($551.4 million versus $284.0 million). Near-term obligations, meantime, are modest, with less than $7 million in debt maturing over the next 12 months.

The company is better positioning itself within the clean water space. Last year, it paid $107 million in cash for Water-Right, Inc., a supplier of residential and commercial water treatment products, including systems for problem well water. Prior to that, A.O. Smith brought Aquasana into the fold, shelling out $87 million for the maker of reusable water bottles that come with impurity-removing filters. Given growing concerns about the safety of America's water supply, we like the moves.

Shares of A.O. Smith are ranked 3 (Average) for relative year-ahead price performance. At the recent quotation, the issue has decent, albeit speculative, long-term recovery potential. Less-venturesome sorts should probably turn the page.

Nils C. Van Liew *April 10, 2020*

(A) Excludes nonrecurring gains/(losses) '04, $0 03, '05, ($0 13), '08, ($0 11), '14, ($0 14), '18 Q1, ($0 03) Also excludes disc operations: '05, ($0.06), '10, ($0 60); '11, $0 14, '12, $0 22
Next earnings report due in late April.
(B) Dividends historically paid in mid-February, May, August & November ■ Dividend reinvestment plan available.
(C) Includes intangible assets In 2019: $884.4 mill, $5.45/sh (D) In millions, adjusted for stock splits

Company's Financial Strength	B++
Stock's Price Stability	75
Price Growth Persistence	85
Earnings Predictability	85

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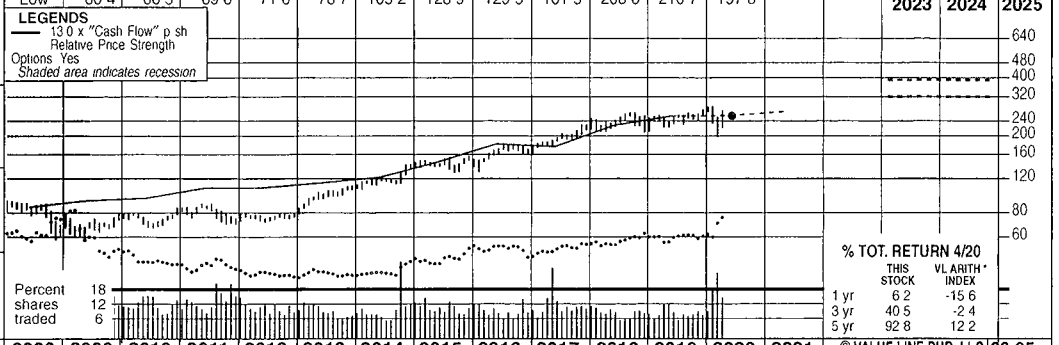
RECENT PRICE 255.27 | P/E RATIO 22.7 (Trailing: 21.9 Median: 18.0) | RELATIVE P/E RATIO 1.37 | DIV'D YLD 1.3% | VALUE LINE

TIMELINESS 3 Lowered 2/14/20
SAFETY 1 Raised 3/4/05
TECHNICAL 3 Raised 5/15/20
BETA .80 (1.00 = Market)

High	80.0	85.5	89.8	80.6	110.9	142.6	157.5	181.8	229.7	265.9	275.5	286.7
Low	60.4	66.5	69.6	71.6	78.7	105.2	128.9	129.5	161.5	208.6	210.7	197.8

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 13.0 x "Cash Flow" p.sh
Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range
Low-High: $202-$361 | Midpoint (% to Mid): $282 (10%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	390	(+55%)	12%
Low	320	(+25%)	7%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	609	605	647
to Sell	588	569	578
Hld's(000)	228350	229647	230521

Percent shares traded 18 12 6

% TOT. RETURN 4/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	6.2	-15.6
3 yr	40.5	-2.4
5 yr	92.8	12.2

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
19.79	21.86	23.79	26.08	29.44	30.20	32.08	36.44	39.15	41.52	43.99	48.80	58.53	53.05	59.59	63.94	*60.70*	*63.15*	Sales per sh A	*74.15*
4.13	4.60	5.08	5.82	6.60	7.13	7.34	8.27	8.30	8.78	9.37	11.25	13.99	13.56	17.48	19.58	*19.65*	*20.65*	"Cash Flow" per sh	*26.75*
2.56	2.88	3.28	3.84	4.46	4.95	4.94	5.62	5.36	5.81	6.25	7.16	8.59	9.48	11.01	11.68	*11.05*	*12.75*	Earnings per sh AB	*17.75*
.60	.72	.86	.98	1.14	1.32	1.48	1.64	1.80	1.98	2.18	2.40	2.64	2.92	3.00	3.08	*3.16*	*3.24*	Div'ds Decl'd per sh C■	*4.00*
1.07	1.28	1.87	2.28	2.68	2.96	2.75	2.82	2.81	3.03	3.40	2.83	3.25	3.19	3.34	3.54	*3.40*	*3.15*	Cap'l Spending per sh	*3.10*
12.18	13.26	15.63	17.89	20.30	21.69	23.65	22.48	21.00	26.00	26.32	34.00	35.79	56.80	78.26	77.95	*78.55*	*80.70*	Book Value per sh D	*86.20*
249.33	247.68	245.47	243.84	243.08	237.08	229.82	214.82	196.91	194.00	191.98	210.70	213.29	227.94	268.22	270.43	*280.00*	*285.00*	Common Shs Outst'g E	*290.00*
18.0	19.3	18.8	19.5	19.0	13.7	14.9	14.5	14.1	15.6	18.1	19.5	18.4	19.4	20.8	20.8	*Bold figures are*		Avg Ann'l P/E Ratio	*20.0*
.95	1.03	1.02	1.04	1.14	.91	.95	.91	.90	.88	.95	.98	.97	.98	1.12	1.14	*Value Line*		Relative P/E Ratio	*1.10*
1.3%	1.3%	1.4%	1.3%	1.3%	1.9%	2.0%	2.0%	2.4%	2.2%	1.9%	1.7%	1.7%	1.6%	1.3%	1.3%	*estimates*		Avg Ann'l Div'd Yield	*1.1%*

CAPITAL STRUCTURE as of 12/31/19
Total Debt $19405 mill. Due in 5 Yrs 12809 mill.
LT Debt $16949 mill. LT Interest 475 mill.
(44% of Capital)

Leases, Uncapitalized Annual rentals $122 mill.

Pension Assets-9/19 $2926 mill. Oblig. $3731 mill.

Pfd Stock $2400 mill. Pfd Div'd $150.0 mill.
Common Stock 271,173,148 shares
MARKET CAP: $69.2 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
7372.3	7828.9	7708.4	8054.0	8446.0	10282	12483	12093	15983	17290	*17000*	*18000*	Sales ($mill) A	*21500*
29.7%	29.1%	27.1%	26.9%	26.6%	32.8%	30.5%	32.9%	37.0%	39.2%	*39.5%*	*39.5%*	Operating Margin	*42.0%*
502.1	504.1	510.9	546.0	562.0	891.0	1114.0	1088.0	1978.0	2253.0	*2265*	*2255*	Depreciation ($mill)	*2615*
1185.2	1271.5	1122.5	1158.0	1236.0	1480.0	1869.1	2072.0	2862.8	3195.0	*3245*	*3635*	Net Profit ($mill)	*5150*
29.0%	26.3%	24.8%	24.5%	22.8%	31.2%	20.0%	15.2%	17.3%	18.8%	*15.0%*	*15.0%*	Income Tax Rate	*15.0%*
16.1%	16.2%	14.6%	14.4%	14.6%	14.4%	15.0%	17.1%	17.9%	18.5%	*19.1%*	*20.2%*	Net Profit Margin	*23.9%*
2833.6	2845.1	3344.0	3743.0	3896.0	1659.0	1967.0	15291	195.0	1009.0	*d25.0*	*790*	Working Cap'l ($mill)	*2040*
1495.4	2484.7	3761.1	3763.0	3768.0	11370	10550	18667	18894	18081	*16500*	*14000*	Long-Term Debt ($mill)	*12000*
5434.6	4828.2	4135.9	5043.0	5053.0	7164.0	7633.0	12948	20994	21081	*22000*	*23000*	Shr. Equity ($mill) D	*25000*
17.7%	18.2%	15.2%	13.9%	14.8%	9.0%	11.3%	7.4%	7.8%	8.9%	*9.0%*	*10.5%*	Return on Total Cap'l	*14.5%*
21.8%	26.3%	27.1%	23.0%	24.5%	20.7%	24.5%	16.0%	13.6%	15.2%	*14.5%*	*16.0%*	Return on Shr. Equity	*20.5%*
15.4%	18.9%	18.3%	15.3%	16.1%	13.9%	17.1%	10.8%	9.2%	10.5%	*10.5%*	*12.0%*	Retained to Com Eq	*16.0%*
29%	28%	33%	33%	34%	33%	30%	33%	32%	31%	*27%*	*25%*	All Div'ds to Net Prof	*23%*

CURRENT POSITION ($MILL.)	2018	2019	12/31/19
Cash Assets	1157	566	568
Receivables	2319	2345	2074
Inventory (FIFO)	2451	2579	2760
Other	1484	1174	1036
Current Assets	7411	6664	6438
Accts Payable	1106	1092	*1100*
Debt Due	2601	1309	2456
Other	3509	3254	3170
Current Liab.	7216	5655	6726

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	7.5%	7.0%	*4.0%*
"Cash Flow"	10.0%	14.0%	*8.0%*
Earnings	9.5%	13.0%	*9.0%*
Dividends	10.0%	8.5%	*5.0%*
Book Value	13.5%	24.0%	*3.5%*

Fiscal Year Ends	QUARTERLY SALES ($ mill.) A Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2017	2923	2969	3035	3166	12093
2018	3081	4222	4278	4402	15983
2019	4161	4195	4350	4584	17290
2020	4225	*4200*	*4000*	*4575*	*17000*
2021	*4300*	*4400*	*4550*	*4750*	*18000*

Fiscal Year Ends	EARNINGS PER SHARE AB Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2017	2.33	2.30	2.46	2.39	9.48
2018	2.48	2.65	2.91	2.93	11.01
2019	2.70	2.59	3.08	3.31	11.68
2020	2.65	*2.45*	*2.30*	*3.65*	*11.05*
2021	*2.85*	*2.95*	*3.20*	*3.75*	*12.75*

Cal-endar	QUARTERLY DIVIDENDS PAID C■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.66	.66	.66	.73	2.71
2017	.73	.73	.73	.75	2.94
2018	.75	.75	.75	.77	3.02
2019	.77	.77	.77	.79	3.10
2020	.79				

BUSINESS: Becton, Dickinson & Co. operates in three segments: Medical (52% of FY'19 sales) manufactures medical devices which include Diabetes Care, Medication Management Solutions, and Medication Delivery; Life Sciences (25%) includes Diagnostic and Preanalytical Systems, Interventional (23%) includes Peripheral Intervention and Urology and Critical Care. '19 R&D: $1062 mill., 6.1% of sales. Acquired CareFusion 3/15, C.R. Bard 12/17. Employs about 70,000. Officers & dir. own less than 1.0% of stock, T. Rowe Price, 12.9%, Vanguard Group, 8.6%, Blackrock, 7.9%; (12/19 proxy). CEO and President, Thomas E. Pohlen. Inc.: New Jersey. Address: One Becton Drive, Franklin Lakes, NJ 07417. Telephone: 201-847-6800. Internet: www.bd.com.

Shares of Becton, Dickinson (BD) have been on a roller coaster ride since our last full-page review in February. The stock price began to sink in February on worries that defects with its recalled *Alaris* infusion pump would take longer to rectify than initially thought. Then, the shares slumped even further, owing to the broader market downfall caused by the COVID-19 outbreak. The stock has since rebounded somewhat, but has still slipped roughly 6% in value for the year.

We have cut our near-term outlook. While most healthcare facilities around the globe are focused on the coronavirus pandemic, a large number of other medical procedures have been put on hold. Indeed, many hospitals outside of COVID-19 hot spots have had to furlough staff due to lack of patients. This trend will certainly have an impact on BD's business in the short term. On the plus side, BD has been front and center in helping develop coronavirus testing solutions. One example is a molecular diagnostic test that uses the *BD Max* platform and is able to return results in two to three hours. Nonetheless, we expect the overall slowdown in procedures will cause weak demand for a number of BD's wide array of products. With that in mind, we have chopped $650 million and $0.95 per share off of our respective fiscal 2020 (ends September 30th) top- and bottom-line estimates. We should gain more color on how the company is faring when it reports fiscal second-quarter figures shortly after press time. In fiscal 2021, we expect BD will return to solid growth, assuming normal healthcare operations resume throughout the globe.

The company's finances are in good shape. Cash flow should be sufficient enough to pay down debt as well as fund capital spending and maintain consistent dividend hikes.

These shares are best suited for conservative accounts. The stock is ranked to mirror the broader market averages in the year ahead. Too, capital appreciation potential out to 2023-2025 is subpar. Nonetheless, this issue remains attractive for investors looking for a safe haven that also provides some income during these uncertain times.

Kevin P. O'Sullivan *May 15, 2020*

(A) Fiscal years end September 30th.
(B) Dil. EPS. Quarterly EPS may not sum. Excludes nonrecurring: '04, (79¢); '05, (11¢); '06, (35¢); '07, (35¢); '08, (11¢); '09, 4¢; '10, 55¢; '12, 23¢; '13, 68¢; '14, (26¢); '15 ($3.81); '16 ($4.10); '17, ($4.88); '18, ($10.41); '19, ($7.79); '20, ($1.78). Next egs. report due early August.
(C) Dividends paid in late December, late March, late June, and late September. ■ DRIP available.
(D) Includes intangibles. In FY'19: $38.4 billion, $141.82 a share. (E) In millions.

Company's Financial Strength	A++
Stock's Price Stability	95
Price Growth Persistence	85
Earnings Predictability	100

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BROWN-FORMAN 'B' NYSE-BFB

RECENT PRICE 57.39 | P/E RATIO 31.2 (Trailing: 32.1 / Median: 26.0) | RELATIVE P/E RATIO 2.33 | DIV'D YLD 1.2% | VALUE LINE

TIMELINESS 3 Lowered 3/27/20
SAFETY 1 Raised 5/21/93
TECHNICAL 2 Raised 3/27/20
BETA .80 (1.00 = Market)

High	14.8	19.5	21.9	28.4	30.7	39.2	44.4	41.4	55.3	59.6	69.0	72.9
Low	9.3	13.0	16.6	20.5	24.4	29.4	34.7	35.1	35.0	45.1	44.6	44.7

Target Price Range 2023 | 2024 | 2025

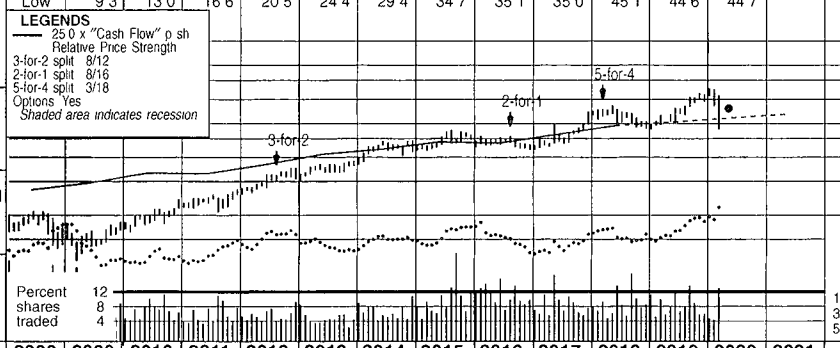
18-Month Target Price Range
Low-High: $50-$82 Midpoint (% to Mid): $66 (15%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	90	(+55%)	13%
Low	75	(+30%)	8%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	256	271	259
to Sell	219	216	245
Hld's(000)	148717	152583	153816



% TOT. RETURN 3/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	6.4	-26.1
3 yr	55.8	-16.7
5 yr	63.8	-5.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
4.05	3.44	3.84	4.57	4.41	4.48	4.76	5.11	5.33	5.61	6.01	6.25	6.24	6.75	6.97	7.10	7.45	7.80	Sales per sh A	9.25
.63	.70	.75	.87	.87	.94	1.06	1.05	1.17	1.33	1.41	1.54	1.51	1.68	1.87	1.95	2.05	2.15	"Cash Flow" per sh	3.45
.52	.62	.67	.76	.77	.82	.95	.95	1.07	1.22	1.28	1.38	1.37	1.54	1.73	1.80	1.90	2.00	Earnings per sh B	3.25
.18	.22	.24	.27	.30	.31	.33	.36	.39	.44	.48	.52	.56	.61	.65	.66	.69	.74	Div'ds Decl'd per sh C■	.88
.09	.09	.10	.07	.10	.07	.08	.11	.18	.24	.23	.22	.23	.26	.25	.50	.60	.70	Cap'l Spending per sh	.90
2.29	2.72	2.72	3.05	3.23	3.44	3.79	3.88	3.05	3.81	3.65	3.16	2.85	2.74	3.45	3.65	3.90	4.05	Book Value per sh D	5.35
571.35	574.05	577.67	565.28	562.98	551.11	543.71	532.78	534.28	533.64	521.75	494.36	480.11	481.00	477.17	478.50	476.50	475.00	Common Shs Outst'g E	465.00
19.7	22.5	22.3	19.7	17.8	16.1	17.9	21.4	24.1	24.7	28.4	28.8	27.6	30.4	29.3		Bold figures are		Avg Ann'l P/E Ratio	25.0
1.04	1.20	1.20	1.05	1.07	1.07	1.14	1.34	1.53	1.39	1.49	1.45	1.45	1.53	1.58		Value Line		Relative P/E Ratio	1.40
1.8%	1.6%	1.6%	1.8%	2.2%	2.4%	1.9%	1.8%	1.5%	1.4%	1.3%	1.3%	1.5%	1.3%	1.3%		estimates		Avg Ann'l Div'd Yield	1.1%

CAPITAL STRUCTURE as of 1/31/20
Total Debt $2297 mill **Due in 5 Yrs** $220 mill
LT Debt $2293 mill **LT Interest** $60 mill

(Total interest coverage: 21.1x) (54% of Cap'l)
Leases, Uncapitalized Annual rentals $23 mill.
Pension Assets-4/19 $754 mill
Obligations $958 mill
Pfd Stock None
Common Stock 478,139,410 shs. (incl 169,039,764 Cl. 'A' voting shs.)
as of 2/29/20
MARKET CAP: $27.4 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
2586.0	2723.0	2849.0	2991.0	3134.0	3089.0	2994.0	3248.0	3324.0	3400	3550	3700	Sales ($mill) A	4300
29.5%	30.7%	32.5%	33.6%	35.1%	35.4%	34.6%	35.1%	35.5%	35.8%	36.0%	36.5%	Operating Margin	37.5%
55.0	49.0	51.0	50.0	51.0	56.0	58.0	64.0	58.0	65.0	70.0	75.0	Depreciation ($mill)	95.0
523.4	513.0	576.0	659.0	684.0	707.5	669.0	746.0	835.0	865	920	960	Net Profit ($mill)	1500
31.0%	32.5%	31.7%	30.4%	31.7%	29.5%	28.3%	26.6%	19.9%	20.0%	21.0%	21.0%	Income Tax Rate	23.0%
20.2%	18.8%	20.2%	22.0%	21.8%	22.9%	22.3%	23.0%	25.1%	25.4%	25.9%	25.9%	Net Profit Margin	34.8%
1269.0	1345.0	1348.0	1616.0	1296.0	1442.0	1381.0	1734.0	2016.0	2025	2050	2075	Working Cap'l ($mill)	2125
504.0	503.0	997.0	997.0	748.0	1230.0	1689.0	2341.0	2290.0	2300	2200	2100	Long-Term Debt ($mill)	2000
2060.0	2069.0	1628.0	2032.0	1905.0	1562.0	1370.0	1316.0	1647.0	1750	1850	1925	Shr. Equity ($mill)	2500
21.0%	20.5%	22.6%	22.2%	26.3%	26.2%	22.8%	21.3%	22.3%	22.0%	23.5%	24.5%	Return on Total Cap'l	34.0%
25.4%	24.8%	35.4%	32.4%	35.9%	45.3%	48.8%	56.7%	50.7%	49.0%	50.0%	50.0%	Return on Shr. Equity	60.0%
16.7%	15.5%	22.5%	21.0%	22.5%	28.3%	28.8%	NMF	31.9%	31.0%	32.0%	32.0%	Retained to Com Eq	43.5%
34%	37%	36%	35%	37%	38%	41%	104%	37%	36%	36%	37%	All Div'ds to Net Prof	27%

CURRENT POSITION ($MILL.)	2017	2018	1/31/20
Cash Assets	239	307	276
Receivables	639	609	732
Inventory (LIFO)	1379	1520	1668
Other	298	283	318
Current Assets	2555	2719	2994
Accts Payable	154	150	558
Debt Due	215	150	4
Other	452	403	102
Current Liab	821	703	664

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '23-'25
Sales	4.5%	4.5%	5.0%
"Cash Flow"	7.5%	7.5%	10.5%
Earnings	8.0%	7.5%	11.0%
Dividends	8.5%	9.0%	5.5%
Book Value	--	-3.5%	8.5%

Fiscal Year Begins	QUARTERLY SALES ($ mill.) A Jul.31	Oct.31	Jan.31	Apr.30	Full Fiscal Year
2017	723	914	878	733	3248
2018	766	910	904	744	3324
2019	766	989	899	746	3400
2020	787	995	975	793	3550
2021	820	1025	995	860	3700

Fiscal Year Begins	EARNINGS PER SHARE A B Jul.31	Oct.31	Jan.31	Apr.30	Full Fiscal Year
2017	.36	.49	.44	.23	1.54
2018	.41	.52	.47	.33	1.73
2019	.39	.59	.48	.34	1.80
2020	.42	.60	.50	.38	1.90
2021	.44	.62	.54	.40	2.00

Cal-endar	QUARTERLY DIVIDENDS PAID C■ Apr.31	Jul.30	Oct.30	Jan.31	Full Year
2016	.136	.136	.146	.146	.56
2017	.146	.146	.146	.157	.59
2018	.157	.157	.158	.166	.64
2019	.166	.166	.166	.174	.67
2020	.174				

BUSINESS: Brown-Forman is engaged in the production and marketing of distilled spirits and wines. Major brands include *Jack Daniel's, Finlandia, Canadian Mist,* and *Korbel.* In the U.S., sells spirits either through wholesale distributors or directly to state governments in those states that control alcohol sales. Sold Hartmann luggage business, 5/07; Lenox tableware division, 9/05; minority stake in Glenmorangie PLC, 11/04. Acquired Slane Castle Irish Whiskey 6/15. Acquired Bennach 6/16. Non-U.S. sales represent 53% of total revenue. Has 4,700 employees. Off. & dir. own about 6.5% of 'A' and 31.2% of 'B' shares (6/19 Proxy). CEO: Lawson Whiting. Inc.: DE. Address: 850 Dixie Highway, Louisville, KY 40201-1080. Tel.: 502-585-1100. Internet: www.brown-forman.com.

Brown-Forman shares have declined roughly 15% in price since our January review. Investors have likely reacted to the company's tempered fiscal 2019 full-year guidance (year ends April 30th) and cautious outlook. Notably, the global spread of COVID-19 is expected to impact operations in the near term. Indeed, Brown-Forman anticipates that lower manufacturing activities at its production plants will lead to supply-chain disruptions for the foreseeable future. Additionally, in light of economic concerns, consumers may adopt more constrained spending habits for nonessential items such as alcoholic beverages.

The company has certain headwinds to overcome. Ongoing trade uncertainties and increased tariffs may contribute to near-term challenges. Also, falling demand for Brown-Forman's traditional *Jack Daniel's* label is a concern. Too, weakening economic conditions in countries such as Mexico indicate that top- and bottom-line contributions from these emerging markets will probably lessen. Lastly, higher costs for ingredients, such as agave, have led to increased manufacturing expenses for tequila labels *Herradura* and *el Jimador.*

There are measures being implemented that should help improve operating results. First, pricing initiatives ought to alleviate tariff-related and manufacturing burdens. Additionally, brand building and a growing portfolio of well-sought-after premium (*Woodford Reserve*) and ready-to-drink, on trend, offerings (*Jack Daniel's Tennessee Apple*) are expected to facilitate sales growth in the 2%-4% range in fiscal 2019, 2020, and 2021 (years end April 30th). Moreover, management's ongoing efforts to maintain cost discipline through efficiency actions, such as improved route-to-market distributions ought to support bottom-line growth in the 4%-5% range over the next three years.

Despite the recent stock-price decline, long-term investors should wait for a better entry point. At present, these high-quality shares possess below average capital appreciation over the 2023-2025 pull. Moreover, ongoing turmoil in the global markets makes near-term stock-price volatility a likelihood.

Nira Maharaj *April 17, 2020*

(A) Excludes excise taxes. Fiscal yr. ends April 30th of foll. cal. year. (B) Dil. earnings. Excls. nonrec. gain (loss): '04, 2¢; '05, 4¢; '06, 3¢; '09, (3¢); '10, 14¢; '12, 3¢; '15, 70¢; '17, (6¢). May not sum due to rounding. Next earnings report due early June. (C) Div'ds paid early April, July, Oct., and Jan. ■ Co. Div'd reinvestment plan available. Special dividend of $1.00 paid on 4/2/18. (D) Incl. intangibles. In '18: $1398.0 mill., $2.92/sh. (E) In mills., adj. for splits.

Company's Financial Strength	A
Stock's Price Stability	90
Price Growth Persistence	85
Earnings Predictability	100

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BIO-RAD LABS 'A' NYSE-BIO C

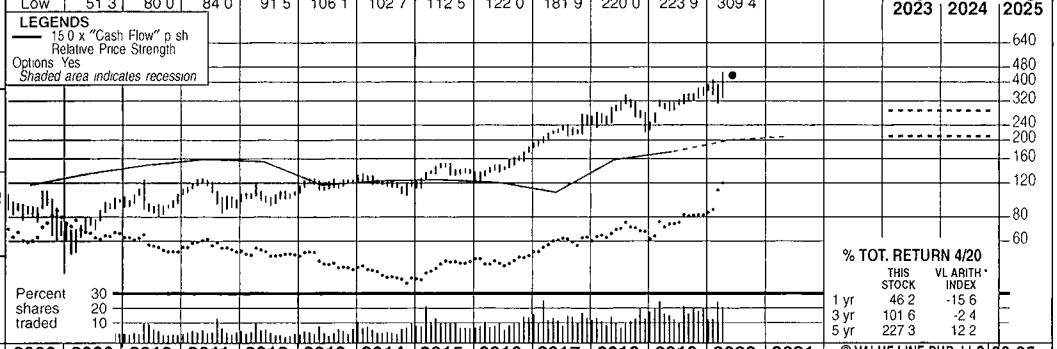
RECENT PRICE 434.04 | P/E RATIO NMF (Trailing: 61.4 Median: 41.0) | RELATIVE P/E RATIO NMF | DIV'D YLD Nil | VALUE LINE

TIMELINESS 1 Raised 2/28/20
SAFETY 2 Raised 11/22/13
TECHNICAL 2 Raised 4/24/20
BETA 80 (1 00 = Market)

High	101 0	125 0	127 0	118 0	127 2	134 1	152 4	184 9	273 9	345 2	376 4	450 9
Low	51 3	80 0	84 0	91 5	106 1	102 7	112 5	122 0	181 9	220 0	223 9	309 4

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 15 0 x "Cash Flow" p sh
Relative Price Strength
Options Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$264-$513	$389 (-10%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	285	(-35%)	-10%
Low	210	(-50%)	-17%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	141	201	212
to Sell	183	127	159
Hld's(000)	18717	19256	18924

% TOT. RETURN 4/20

	THIS STOCK	VL ARITH * INDEX
1 yr	46 2	-15 6
3 yr	101 6	-2 4
5 yr	227 3	12 2

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
42 19	45 03	47 62	54 35	64 58	64.82	69 19	73 53	72 65	74 11	74 74	68 78	69 93	72 52	76 83	77 25	*80.80*	*89.50*	Sales per sh	*108.65*
5 20	5 25	5 63	6.25	7 83	8 95	9 89	10 61	10 33	7.82	8 20	8 34	8 08	7 16	10 56	11 61	*13.35*	*13.85*	"Cash Flow" per sh	*15.60*
3 01	2 94	3 56	3 69	4 24	5 20	5 91	6 26	5 72	2 69	3 05	3 85	3 23	2 15	5 85	7 15	*7.50*	*8.75*	Earnings per sh A	*9.95*
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*Nil*	*Nil*	Div'ds Decl'd per sh	*Nil*
2 34	1 37	2 00	2 25	3 10	2.43	3 13	3 64	5 13	3 88	4.16	3 81	4 78	3 74	4 36	3 29	*5.60*	*5.65*	Cap'l Spending per sh	*6.15*
23 10	25 09	30 92	36 14	38 09	45 76	55 17	61 84	70 60	75 99	75 09	84 83	87 46	98 38	134 91	192 32	*151.10*	*160.45*	Book Value per sh	*191.85*
25 83	26 23	26 50	26 88	27 32	27 53	27 85	28 20	28 48	28 78	29 10	29 36	29 58	29 79	29 80	29 93	*29.95*	*29.95*	Common Shs Outst'g B	*30.00*
18 4	18 9	19 5	22 5	20.4	15 1	16 0	17.3	18.0	44 1	39 7	35 7	46 1	NMF	47.2	44 3	*Bold figures are*		Avg Ann'l P/E Ratio	*25.0*
97	1 01	1 05	1.19	1 23	1 01	1.02	1 09	1 15	2 48	2 09	1 80	2 42	NMF	2 55	2 39	*Value Line*		Relative P/E Ratio	*1.30*
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*estimates*		Avg Ann'l Div'd Yield	*Nil*

CAPITAL STRUCTURE as of 12/31/19
Total Debt $439 8 mill **Due in 5 Yrs** $429 0 mill
LT Debt $13 6 mill. **LT Interest** $20.7 mill.
(Total interest coverage 3 9x) (1 % of Cap'l)

Leases, Uncapitalized Annual rentals $42.1 mill

No Defined Benefit Pension Plan.

Common Stock 29,925,336 shs
including 5,085,621 super-voting class 'B' shares C
as of 2/24/20
MARKET CAP: $13.0 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
1927 1	2073 5	2069.2	2132 7	2175 0	2019 4	2068 2	2160 2	2289 4	2311 7	*2300*	*2480*	Sales ($mill)	*3260*
20 8%	20 1%	18 7%	14 8%	13 8%	14 8%	12 5%	12 8%	14 3%	17 8%	*13.0%*	*14.0%*	Operating Margin	*13.0%*
108 9	121 0	130 4	147 2	149 9	131 8	142 9	148 7	138 1	134 2	*140*	*145*	Depreciation ($mill)	*165*
166 4	178 2	163 8	77 8	88 8	113 1	96 0	64.5	176 7	213 1	*225*	*270*	Net Profit ($mill)	*310*
26 5%	24 5%	26 5%	30 8%	32.5%	22.5%	12.3%	41 0%	11 2%	24 1%	*22.0%*	*22.0%*	Income Tax Rate	*22.2%*
8 6%	8 6%	7 9%	3 6%	4.1%	5.6%	4 6%	3 0%	7 7%	9 2%	*10.7%*	*10.1%*	Net Profit Margin	*9.5%*
1308 8	1339 1	1460 0	1260 4	1269 6	1336 2	1373 2	1474 0	1572 7	1274 7	*1550*	*1560*	Working Cap'l ($mill)	*1650*
731.1	731.7	732 4	435 6	435 7	435 7	434 2	434 6	438 9	13 6	*265*	*250*	Long-Term Debt ($mill)	*250*
1536 7	1743 9	2010 7	2186.7	2185 2	2490 5	2586 8	2930 3	4020 3	5755 1	*4525*	*4805*	Shr. Equity ($mill)	*5755*
8 7%	8 3%	6 9%	4 1%	3 8%	4 2%	3 5%	2 2%	4 2%	3 9%	*4.5%*	*5.0%*	Return on Total Cap'l	*5.5%*
10 8%	10 2%	8 1%	3 6%	4 1%	4 5%	3 7%	2 2%	4 4%	3 7%	*5.0%*	*5.5%*	Return on Shr. Equity	*5.5%*
10 8%	10 2%	8.1%	3 6%	4 1%	4.5%	3 7%	2 2%	4 4%	3 7%	*5.0%*	*5.5%*	Retained to Com Eq	*5.5%*
--	--	--	--	--	--	--	--	--	--	*Nil*	*Nil*	All Div'ds to Net Prof	*Nil*

CURRENT POSITION ($MILL.)	2017	2018	12/31/19
Cash Assets	760 5	850 4	1120 2
Receivables	464 8	392 4	392 7
Inventory (Avg Cst)	594 8	583 8	554 0
Other	156 5	196 9	113 3
Current Assets	1976 6	2023 5	2180 2
Accts Payable	135.2	122 5	107 0
Debt Due	4	5	426 2
Other	367 1	327 8	372 3
Current Liab	502 7	450 8	905 5

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	2 0%	0 5%	*4.5%*
"Cash Flow"	2 5%	2 0%	*6 5%*
Earnings	1.5%	5 5%	*11 5%*
Dividends	--	--	*Nil*
Book Value	13 5%	14 0%	*2 0%*

Cal-endar	QUARTERLY SALES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	500 1	504 7	535 0	620 4	2160 2
2018	551 5	575 9	545 1	616 9	2289 4
2019	554 0	572 6	560 6	624 4	2311 7
2020	*546*	*517*	*608*	*629*	*2300*
2021	*620*	*620*	*620*	*620*	*2480*

Cal-endar	EARNINGS PER SHARE AD Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	41	17	73	84	2 15
2018	1 17	1 64	91	2 13	5 85
2019	1 65	1 49	1 61	2 32	7 15
2020	*1.60*	*1.60*	*1.85*	*2.45*	*7.50*
2021	*1.90*	*2.10*	*2.15*	*2.60*	*8.75*

Cal-endar	QUARTERLY DIVIDENDS PAID Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	NO CASH DIVIDENDS BEING PAID				
2017					
2018					
2019					
2020					

BUSINESS: Bio-Rad Laboratories manufactures and sells products used in two major business segments Clinical Diagnostics produces test kits and equipment used in diagnosing and monitoring diseases (62% of '19 sales); Life Sciences products are used to separate and analyze complex chemicals (38%). Bio-Rad is the world's leading producer of BSE (mad-cow disease) tests International sales accounted for 62% of '19 total Acquired diagnostic business from Biotech, 7/10 Has approximately 8,250 employees Officers & directors own 13 1% of A shares, 80.5% of B shares (4/19 proxy) President & CEO Norman Schwartz Incorporated Delaware Address 1000 Alfred Nobel Drive, Hercules, CA 94547 Telephone 510-724-7000 Internet www.bio-rad com.

We expect that Bio-Rad will report mixed results for the first quarter. (It is scheduled to report earnings after we go to press) The company has announced several certifications for the use of certain tools in testing for COVID-19. At the same time, it likely experienced some level of disruption to its business We estimate that sales and share net declined modestly from the previous year to $546 million and $1.60, respectively. First-quarter sales are typically down seasonally, reflecting the capital intensive nature of the business. Given the number of announcements regarding the use of its tools in testing for the coronavirus (see below), sales are likely to ramp into the latter half of the year. Our sales and earnings estimates for full-year 2020 are $2.3 billion and $7.50.

The company is well positioned to support testing for COVID-19. It has partnered with labs worldwide engaged in testing for the virus. A commonly used system is Bio-Rad's Real-Time qPCR Detection System, which is to be used in conjunction with the company's reagents. It has also launched a serology assay that detects coronavirus antibodies in patient samples. Its QX200 Droplet Digital PCR systems has been judged in clinical studies to offer greater sensitivity and precision than competing platforms. Given the focus on high volume testing as a means to reopen the economy, the FDA has granted Bio-Rad's SARS-CoV2 serology test an emergency use authorization, which should further support its adoption. In short, we see momentum for the company growing through yearend and into 2021 as governments around the world seek to contain the virus in the absence of a vaccine. As such, our top- and bottom-line estimates for 2021 are $2.48 billion and $8.75 per share.

Bio-Rad has announced the acquisition of Celsee, Inc. The latter company offers instruments and consumables for the isolation, detection and analysis of single cells Founded in 2011 and based in Ann Arbor, MI, Celsee offers the Genesis System, which is used to isolate, analyze, and interpret cell behavior.

Bio-Rad shares are ranked 1 (Highest) for Timeliness. Appreciation potential to 2023-2025 is below average, however.

Glenn Pierr Johnson *May 15, 2020*

(A) Diluted earnings Excludes nonrecurring gains/ (losses) '04, ($0 43), '05, $0 25, '06, ($0 12), '07, ($0 29), '08, ($1 01) '12, $0 43 '13, ($0.30), '16 ($2 28), '18, $35 78. Next earnings report due mid-July (B) In millions (C) Share price data for Bio-Rad Class A shares only Class B shares have 10x voting power of Class A, Class B shareholders elect 75% of board of directors (D) Quarterly figures may not sum due to rounding

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	60
Earnings Predictability	40

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BLACK KNIGHT, INC. NYSE-BKI

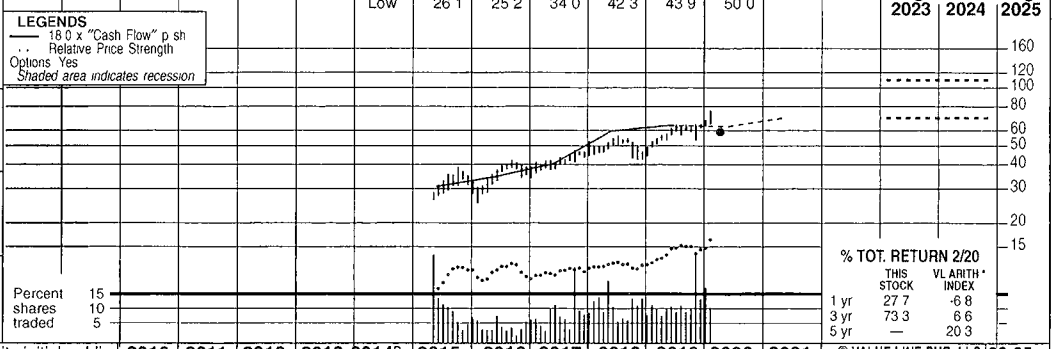
RECENT PRICE 58.95 | P/E RATIO 29.6 (Trailing: 29.8 Median: NMF) | RELATIVE P/E RATIO 2.24 | DIV'D YLD Nil | VALUE LINE

TIMELINESS 1 Raised 3/6/20
SAFETY 3 New 10/14/16
TECHNICAL 1 Raised 4/10/20
BETA .95 (1.00 = Market)

High	38.8	42.2	47.6	56.4	64.8	76.4					
Low	26.1	25.2	34.0	42.3	43.9	50.0					

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 18.0 x "Cash Flow" p sh
. . . Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$49-$73	$61 (5%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	110	(+85%)	17%
Low	70	(+20%)	5%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	177	170	208
to Sell	149	153	168
Hld's(000)	133551	135142	141169

% TOT. RETURN 2/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	27.7	-6.8
3 yr	73.3	6.6
5 yr	—	20.3

Black Knight, Inc. completed its initial public offering on May, 26, 2015 with 20,700,000 Class 'A' shares being sold to the public at $24.50 per share. The lead underwriters were J.P. Morgan, BofA Merrill Lynch and Wells Fargo. In September 2017, 84 million Class 'B' shares were distributed by Fidelity National Financial

2010	2011	2012	2013	2014[B]	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
--	--	--	--	--	6.08	6.67	6.85	7.46	7.86	*8.10*	*8.55*	Revenues per sh	*10.50*
--	--	--	--	--	1.71	1.93	2.24	3.31	3.55	*3.50*	*3.90*	"Cash Flow" per sh	*4.95*
--	--	--	--	--	.99	1.15	1.38	1.87	1.99	*2.00*	*2.15*	Earnings per sh A	*3.00*
--	--	--	--	--	--	--	--	--	--	--	*Nil*	Div'ds Decl'd per sh	*Nil*
--	--	--	--	--	.63	.52	.53	.69	.69	*.80*	*.75*	Cap'l Spending per sh	*.85*
--	--	--	--	--	5.35	5.69	11.14	11.96	12.68	*13.85*	*15.00*	Book Value per sh C	*17.25*
--	--	--	--	--	153.13	153.92	153.43	149.36	149.70	*148.00*	*147.00*	Common Shs Outst'g D	*145.00*
--	--	--	--	--	32.8	30.4	29.7	26.6	29.1	*Bold figures are*		Avg Ann'l P/E Ratio	*30.0*
--	--	--	--	--	1.65	1.60	1.49	1.44	1.58	*Value Line*		Relative P/E Ratio	*1.65*
--	--	--	--	--	--	--	--	--	--	*estimates*		Avg Ann'l Div'd Yield	*Nil*
--	--	--	--	852.1	930.7	1026.0	1051.6	1114.0	1177.2	*1200*	*1260*	Revenues ($mill)	*1525*
--	--	--	--	25.6%	61.7%	53.9%	56.9%	56.8%	58.0%	*57.5%*	*59.5%*	Operating Margin	*59.0%*
--	--	--	--	188.8	194.3	208.3	206.5	217.0	236.2	*225*	*255*	Depreciation ($mill)	*280*
--	--	--	--	d106.3	68.2	88.1	137.7	277.8	295.4	*295*	*315*	Net Profit ($mill)	*435*
--	--	--	--	--	37.7%	36.8%	37.2%	23.7%	22.5%	*25.0%*	*25.0%*	Income Tax Rate	*24.0%*
--	--	--	--	NMF	7.3%	8.6%	13.1%	24.9%	25.1%	*24.7%*	*25.1%*	Net Profit Margin	*28.5%*
--	--	--	--	27.9	178.5	112.1	49.1	27.1	d5.3	*60.0*	*65.0*	Working Cap'l ($mill)	*90.0*
--	--	--	--	2070.7	1618.0	1506.8	1379.0	1284.2	1465.1	*1300*	*1000*	Long-Term Debt ($mill)	*800*
--	--	--	--	917.0	818.7	875.7	1708.8	1786.5	1898.5	*2050*	*2200*	Shr. Equity ($mill)	*2500*
--	--	--	--	NMF	4.6%	5.1%	5.4%	9.9%	9.7%	*10.0%*	*11.0%*	Return on Total Cap'l	*14.0%*
--	--	--	--	NMF	8.3%	10.1%	8.1%	15.6%	15.6%	*14.5%*	*14.5%*	Return on Shr. Equity	*17.5%*
--	--	--	--	NMF	8.3%	10.1%	8.1%	15.6%	15.6%	*14.5%*	*14.5%*	Retained to Com Eq	*17.5%*
--	--	--	--	--	--	--	--	--	--	*Nil*	*Nil*	All Div'ds to Net Prof	*Nil*

CAPITAL STRUCTURE as of 12/31/19
Total Debt $1544.2 mill **Due in 5 Yrs** $1554.2 mill
LT Debt $1465.1 mill. **LT Interest** $60.2 mill
(Total interest coverage: 4.6x)
(44% of Cap'l)

Leases, Uncapitalized Annual rentals $11.1 mill

No Defined Benefit Pension Plan

Pfd Stock None

Common Stock 150,011,817 shs
as of 2/27/20

MARKET CAP: $8.8 billion (Large Cap)

CURRENT POSITION ($MILL.)	2017	2018	12/31/19
Cash Assets	16.2	20.3	15.4
Receivables	201.8	172.3	175.1
Other	62.7	73.5	65.0
Current Assets	280.7	266.1	255.5
Accts Payable	65.0	67.8	65.3
Debt Due	55.1	52.5	79.1
Other	111.5	118.7	116.4
Current Liab	231.6	239.0	260.8

ANNUAL RATES of change (per sh)	Past 10 Yrs	Past 5 Yrs	Est'd '17-'19 to '23-'25
Revenues	--	--	*6.0%*
"Cash Flow"	--	--	*8.5%*
Earnings	--	--	*9.5%*
Dividends	--	--	*Nil*
Book Value	--	--	*6.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	258.1	262.2	263.8	267.5	1051.6
2018	270.3	276.6	281.7	285.4	1114.0
2019	283.1	294.9	299.1	300.1	1177.2
2020	*285*	*295*	*305*	*315*	*1200*
2021	*300*	*310*	*320*	*330*	*1260*

Cal-endar	EARNINGS PER SHARE A Mar. 31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	.30	.35	.36	.37	1.38
2018	.43	.46	.48	.50	1.87
2019	.44	.49	.51	.54	1.99
2020	*.45*	*.50*	*.50*	*.55*	*2.00*
2021	*.47*	*.52*	*.57*	*.59*	*2.15*

Cal-endar	QUARTERLY DIVIDENDS PAID Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016					
2017	NO CASH DIVIDENDS BEING PAID				
2018					
2019					
2020					

BUSINESS: Black Knight, Inc provides integrated technology, workflow automation, and data and analytics to the mortgage industry The company's solutions facilitate and automate many of the business processes across the entire mortgage loan life cycle, from origination until asset disposition Its business is organized into two segments Software Solutions (86% of 2019 sales), and Data and Analytics (14%) Has about 4,900 employees Officers/directors own 4.4% of common stock T Rowe Price, 14.8%, Fidelity Management, 8.9%, The Vanguard Group, 8.3% (4/19 proxy) Chairman, William P Foley II; Chief Executive Officer Anthony Jabbour Address: 601 Riverside Avenue, Jacksonville, Florida 32204 Tel (904) 854-8100. Internet www.blackknightinc.com

Shares of Black Knight, Inc. have pulled back from record highs. After posting peak earnings in the fourth quarter of 2019, the stock soared to over $75 per share. However, the broader market collapse sparked by the coronavirus outbreak has driven BKI markedly lower.

Fourth-quarter results were solid. Black Knight generated revenues of $300.1 million, which was in line with our call and climbed 5% year over year. The larger of the company's operating segments, Software Solutions, ticked up about 4%. The growth there was spurred by increased MSP (mortgage servicing platforms) clients, and average revenue per loan. On the downside, some client deconversions cut into revenues. Business was even better on the Data & Analytics side, which jumped double digits. That division benefited from a large number of refinances. Meanwhile, adjusted earnings of $0.54 per share topped our estimate by $0.06. A lower-than-expected tax rate aided profits.

We expect tepid growth in the near term. This year, we are calling for Black Knight's top line to advance roughly 2% and for earnings to be basically flat. In 2021, our estimates suggest revenue and earnings growth will pick up. Still, it is too early to tell what the impact of the coronavirus will have on the housing and refinance markets.

New solutions will be key to drive long-term growth. Black Knight has been successful in developing innovative software products in the mortgage servicing space and has more on tap For instance, the company has incorporated artificial intelligence in some of its solutions. Now, the company is set to unveil a next-generation customer service solution that it acquired from Quicken Loans. These types of developments are critical in helping to add clients and often open up significant cross-selling opportunities.

These shares carry our Highest rank for Timeliness (1). Although the stock is pegged to outpace the broader market averages in the year ahead, near-term price performance may be choppy due to the uncertain economic climate. Looking further out, 3- to 5-year capital appreciation is subpar at the recent quotation.

Kevin P. O'Sullivan *April 10, 2020*

(A) Diluted earnings Quarterly earnings may not sum to total due to rounding and/or changes in shares outstanding. Excludes nonrecurring gains/(losses): '15, (70¢), '16, (48¢), '17, 9¢, '18, (73¢), '19, ($1.26) Next earnings report expected in late April
(B) 2014 information is pro forma
(C) Includes intangibles. In 2019: $2917.4 mill., $19.47/sh
(D) In millions.

Company's Financial Strength	B+
Stock's Price Stability	80
Price Growth Persistence	100
Earnings Predictability	NMF

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BROADRIDGE FIN'L NYSE-BR

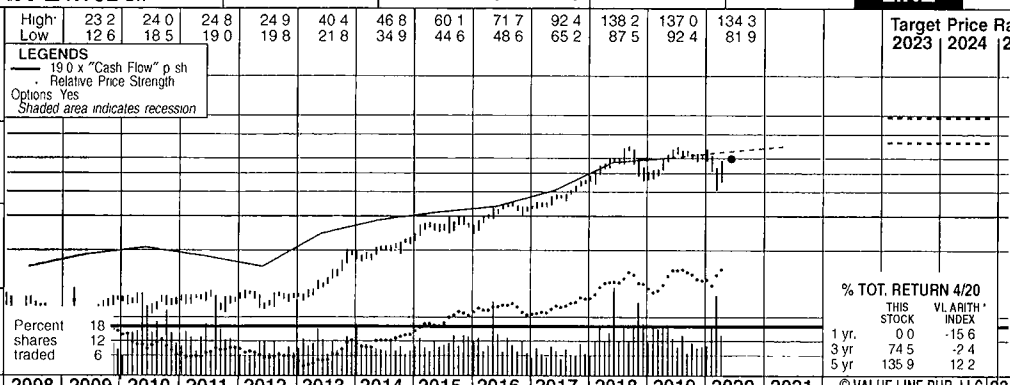
RECENT PRICE 119.26 | P/E RATIO 22.1 (Trailing: 25.9 Median: 21.0) | RELATIVE P/E RATIO 1.26 | DIV'D YLD 1.8% | VALUE LINE 432

TIMELINESS 2 Raised 4/24/20
SAFETY 2 New 2/26/16
TECHNICAL 5 Lowered 5/8/20
BETA .85 (1.00 = Market)

High	23.2	24.0	24.8	24.9	40.4	46.8	60.1	71.7	92.4	138.2	137.0	134.3
Low	12.6	18.5	19.0	19.8	21.8	34.9	44.6	48.6	65.2	87.5	92.4	81.9

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 19.0 x "Cash Flow" p sh
. Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range
Low-High: $81-$174 | Midpoint (% to Mid): $128 (5%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	195	(+65%)	15%
Low	145	(+20%)	7%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	273	270	371
to Sell	345	328	271
Hld's(000)	101743	99748	98395

Percent shares traded 18 12 6

% TOT. RETURN 4/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	0.0	-15.6
3 yr.	74.5	-2.4
5 yr.	135.9	12.2

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
--	--	--	15.53	15.91	15.47	17.10	17.52	18.46	20.43	21.41	22.79	24.49	35.56	37.23	38.16	*39.15*	*42.40*	Revenues per sh A	*50.00*
--	--	--	1.70	1.74	2.01	2.18	1.97	1.74	2.57	3.02	3.31	3.54	4.29	6.00	6.35	*6.90*	*7.60*	"Cash Flow" per sh	*8.70*
--	--	--	1.42	1.36	1.58	1.62	1.34	.98	1.69	2.12	2.32	2.53	2.70	4.19	4.66	*5.00*	*5.55*	Earnings per sh AB	*6.50*
--	--	--	.06	.24	.28	.56	.60	.64	.72	.84	1.08	1.20	1.32	1.46	1.94	*2.16*	*2.33*	Div'ds Decl'd per sh C	*2.85*
--	--	--	.23	.29	.19	.33	.24	.27	.32	.34	.43	.49	.73	.66	.44	*.72*	*.75*	Cap'l Spending per sh	*.80*
--	--	--	3.81	5.31	6.53	6.25	6.45	6.82	6.86	8.05	7.85	8.84	8.62	9.41	9.86	*10.80*	*12.05*	Book Value per sh D	*13.85*
--	--	--	139.30	140.40	139.30	129.20	123.70	124.80	119.00	119.50	118.20	118.30	116.50	116.30	114.30	*115.00*	*112.00*	Common Shs Outst'g E	*112.00*
--	--	--	14.1	14.8	10.3	13.0	16.4	22.8	14.0	16.8	20.4	22.4	25.3	22.4	24.4	*Bold figures are*		Avg Ann'l P/E Ratio	*26.0*
--	--	--	75	89	69	83	1.03	1.45	.79	.88	1.03	1.18	1.27	1.21	1.31	*Value Line*		Relative P/E Ratio	*1.45*
--	--	--	3%	1.2%	1.7%	2.7%	2.7%	2.9%	3.0%	2.4%	2.3%	2.1%	1.9%	1.6%	1.7%	*estimates*		Avg Ann'l Div'd Yield	*1.7%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $2079.7 mill. **Due in 5 Yrs** $975 mill.
LT Debt $1679.9 mill. **LT Interest** $55.0 mill.

(Total interest coverage: 14.0x)
(58% of Cap'l)

Leases, Uncapitalized Annual rentals $46.8 mill.
Pfd Stock None

Common Stock 114,817,479 shs
as of 5/1/20

MARKET CAP: $13.7 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
2209.2	2166.9	2303.5	2430.8	2558.0	2694.2	2897.0	4142.6	4329.9	4362.2	*4500*	*4750*	Revenues ($mill)	*5600*
18.5%	16.2%	16.5%	17.8%	20.3%	21.3%	18.0%	17.0%	18.8%	22.0%	*21.0%*	*22.0%*	Operating Margin	*22.0%*
57.0	72.3	92.0	93.4	97.4	104.3	111.0	173.1	193.3	172.6	*200*	*210*	Depreciation ($mill)	*245*
225.1	171.8	125.0	212.1	263.0	287.1	307.5	326.8	504.1	553.5	*595*	*640*	Net Profit ($mill)	*730*
34.2%	36.3%	37.8%	34.4%	33.5%	34.6%	34.4%	33.0%	21.9%	21.1%	*20.0%*	*20.0%*	Income Tax Rate	*20.0%*
10.2%	7.9%	5.4%	8.7%	10.3%	10.7%	10.6%	7.9%	11.6%	12.7%	*13.0%*	*13.5%*	Net Profit Margin	*13.0%*
506.0	d31.3	367.1	337.5	396.2	352.5	596.1	244.7	213.8	239.7	*265*	*300*	Working Cap'l ($mill)	*400*
324.1	124.3	524.4	524.5	524.1	689.4	897.6	1102.1	1053.4	1470.4	*1680*	*1650*	Long-Term Debt ($mill)	*1100*
807.1	797.3	850.5	816.0	961.7	927.8	1045.5	1003.8	1094.3	1127.5	*1245*	*1350*	Shr. Equity ($mill)	*1550*
20.3%	19.0%	9.6%	16.3%	18.5%	18.5%	16.6%	16.5%	24.4%	22.2%	*20.5%*	*21.5%*	Return on Total Cap'l	*27.5%*
27.9%	21.5%	14.7%	26.0%	27.3%	30.9%	29.4%	32.6%	46.1%	49.1%	*48.0%*	*47.5%*	Return on Shr. Equity	*47.0%*
19.6%	12.2%	5.5%	15.5%	17.3%	17.8%	16.2%	17.4%	30.9%	30.4%	*26.0%*	*26.5%*	Retained to Com Eq	*26.5%*
30%	44%	62%	40%	37%	43%	45%	47%	33%	38%	*43%*	*42%*	All Div'ds to Net Prof	*44%*

CURRENT POSITION ($MILL.)	2018	2019	3/31/20
Cash Assets	263.9	273.2	402.1
Receivables	615.0	664.0	814.7
Inventories	--	--	--
Other	112.2	105.1	144.2
Current Assets	991.1	1042.3	1361.0
Accts Payable	191.8	711.7	737.2
Debt Due	--	--	399.8
Other	585.5	90.9	118.0
Current Liab.	777.3	802.6	1255.0

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	9.0%	13.0%	*5.0%*
"Cash Flow"	12.0%	18.0%	*8.0%*
Earnings	10.0%	19.0%	*9.0%*
Dividends	23.5%	16.5%	*10.5%*
Book Value	6.0%	5.0%	*7.0%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) A Sep.30	Dec.31	Mar.31	Jun.30	Full Fiscal Year
2017	895.3	892.6	1008.9	1345.8	4142.6
2018	924.8	1012.8	1071.9	1320.4	4329.9
2019	972.8	953.4	1224.8	1211.2	4362.2
2020	948.6	968.7	1249.9	*1332.8*	*4500*
2021	*1010*	*1030*	*1335*	*1375*	*4750*

Fiscal Year Ends	EARNINGS PER SHARE AB Sep.30	Dec.31	Mar.31	Jun.30	Full Fiscal Year
2017	.28	.25	.63	1.57	2.70
2018	.54	.79	1.00	1.86	4.19
2019	.79	.56	1.59	1.72	4.66
2020	.68	.53	1.67	*2.12*	*5.00*
2021	*.75*	*.85*	*1.80*	*2.15*	*5.55*

Cal-endar	QUARTERLY DIVIDENDS PAID C Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.30	.30	.33	.33	1.26
2017	.33	.33	.365	.365	1.43
2018	.365	.365	.485	.485	1.70
2019	.485	.485	.540	.540	2.05
2020	.540				

BUSINESS: Broadridge Financial Solutions, Inc. is a leading provider of investor communication services, as well as technology-related solutions for the financial services industry. The bulk of its customers are in the United States, Canada, and the United Kingdom. On behalf of its clients, Broadridge processes and distributes proxy materials, regulatory reports, sales & educational content, newsletters, trade confirmations, and account statements. Incorporated: DE. Has about 11,000 employees. President & CEO: Timothy Gokey. Officers/directors own 2.2% of the common stock, BlackRock Inc., 8.2%; Vanguard, 12.4%; Janus, 5.8% (10/19 proxy). Address: 1981 Marcus Avenue, Lake Success, NY 11042. Telephone: (516) 472-5400. Internet: www.broadridge.com.

Broadridge Financial Solutions posted mixed third-quarter results in the face of challenging economic conditions. Recurring fee revenues rose 9% in the period, with new sales contributing over half the advance. The impact of the coronavirus did not prevent the onboarding of new business in March. Relatively high market volatility related to the crisis drove trade processing growth. But, this was largely offset by a coronavirus-related shift of certain proxy work from the fiscal third quarter to the fiscal fourth quarter. Customer communications and fulfillment revenues rose 3%, as the decline in equity markets triggered increased portfolio rebalancing, which then drove a 24% rise in the volume of prospectuses Broadridge sent out. Meanwhile, weak event activity trends experienced in the first half of the year have continued and are now being exacerbated by the outbreak. This caused the lowest event activity in six years during the quarter. The decline offset the solid recurring revenue performance to a degree, and total revenue only increased 2% year over year as a result.

Public companies have quickly shifted their annual meetings online. Broadridge pioneered virtual shareholder meetings (VSMs) in 2009, and steadily grew the number to 326 last year. So far in 2020, more than 1,500 clients have contracted with Broadridge for VSMs. During these meetings the company validates shareholders, moderates questions, and enables voting, all in real time.

Guidance looks decent. Organic revenue growth is expected to improve meaningfully this quarter thanks to strong stock record growth, the proxy timing shift, and increased demand for VSMs. Still, event-driven revenue is expected to decline more than originally anticipated, and the company is guiding total revenue for the full year at the low end of the prior 3% to 6% range. Along a similar vein, adjusted earnings-per-share growth will likely clock in at 5% to 7%, down from the prior guidance range of 8%.

These shares are timely. The company stands to benefit from increased market volatility. Its strong client retention and healthy balance sheet are other advantages in this turbulent environment.

Kevin Downing *May 22, 2020*

(A) Fiscal years end June 30th.
(B) Fully diluted earnings. Excludes discontinued ops: '12, ($0.01); '11, ($0.02); '10, ($0.26). Next earnings report due in early August. May not sum due to rounding.
(C) Dividends historically paid early March, June, Sept., and December.
(D) Includes intangibles. In 2019: $2.1 bill. or $17.99/sh.
(E) In millions.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	90
Earnings Predictability	70

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CBOE GLOBAL MKTS. CBOE-CBOE

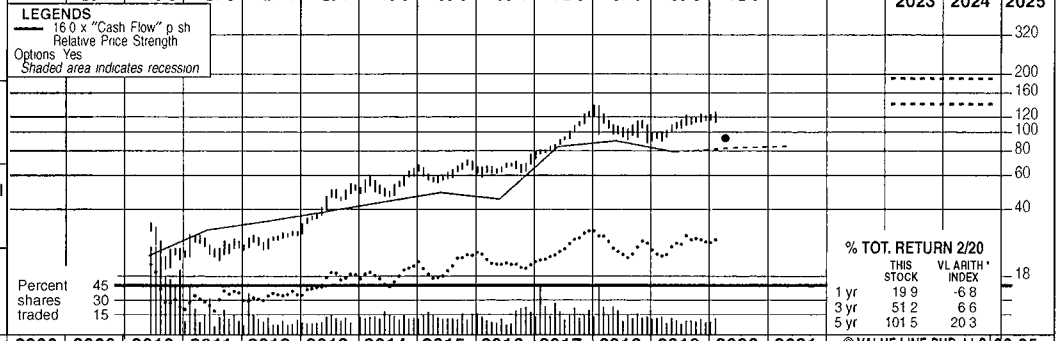
RECENT PRICE 93.03 | P/E RATIO 27.2 (Trailing: 27.9 Median: 25.0) | RELATIVE P/E RATIO 2.06 | DIV'D YLD 1.5% | VALUE LINE

TIMELINESS 3 Lowered 2/21/20
SAFETY 2 Raised 1/13/17
TECHNICAL 2 Raised 3/20/20
BETA .65 (1.00 = Market)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High	34.2	29.8	31.0	54.8	65.4	72.5	77.3	128.3	138.5	124.9	127.9	
Low	19.6	21.5	24.4	29.7	46.5	55.0	58.4	72.5	87.9	89.5	72.0	

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 16.0 x "Cash Flow" p sh
Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$91-$141	$116 (25%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	190	(+105%)	21%
Low	140	(+50%)	12%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	195	192	228
to Sell	190	176	164
Hld's(000)	96100	91958	90983

Percent shares traded 45 30 15

% TOT. RETURN 2/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	19.9	-6.8
3 yr	51.2	6.6
5 yr	101.5	20.3

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
--	--	--	--	--	--	4.85	5.72	5.87	6.59	7.35	7.73	8.08	19.77	24.81	22.56	*23.80*	*24.55*	Revenues per sh	*31.80*
--	--	--	--	--	--	1.44	1.96	2.17	2.43	2.73	3.06	2.83	5.26	5.64	4.95	*5.20*	*5.30*	"Cash Flow" per sh	*9.30*
--	--	--	--	--	--	1.03	1.52	1.78	1.99	2.21	2.46	2.27	3.69	3.76	3.34	*3.50*	*3.60*	Earnings per sh A	*7.25*
--	--	--	--	--	--	.20	.44	.54	.66	.78	.88	.96	1.04	1.16	1.34	*1.44*	*1.44*	Div'ds Decl'd per sh B	*1.80*
--	--	--	--	--	--	.26	.33	.34	.33	.60	.48	.55	.33	.33	.32	*.65*	*.70*	Cap'l Spending per sh	*.75*
--	--	--	--	--	--	1.95	2.66	2.74	3.28	2.98	3.16	3.91	27.59	29.04	30.32	*33.45*	*35.30*	Book Value per sh B	*54.55*
--	--	--	--	--	--	90.09	88.77	87.27	86.77	84.00	82.09	81.29	112.74	111.60	110.66	*110.00*	*110.00*	Common Shs Outst'g C	*110.00*
--	--	--	--	--	--	24.0	16.8	15.7	21.7	24.4	25.5	29.2	25.6	28.7	32.4	*Bold figures are*		Avg Ann'l P/E Ratio	*22.5*
--	--	--	--	--	--	1.53	1.05	1.00	1.22	1.28	1.28	1.53	1.29	1.55	1.76	*Value Line*		Relative P/E Ratio	*1.25*
--	--	--	--	--	--	8%	1.7%	1.9%	1.5%	1.4%	1.4%	1.4%	1.1%	1.1%	1.2%	*estimates*		Avg Ann'l Div'd Yield	*1.1%*

CAPITAL STRUCTURE as of 12/31/19
Total Debt $867.6 mill Due in 5 Yrs. $575 mill
LT Debt $867.6 mill LT Interest $60.0 mill
(21% of Cap'l)
(Tot. Int. Cov.: 15.0x)

Leases, Uncapitalized Annual rentals $10.4 mill
No Defined Benefit Pension Plan

Pfd Stock None

Common Stock 110,435,193 shs
as of 2/14/20

MARKET CAP: $10.3 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
437.1	508.1	512.3	572.1	617.2	634.5	656.9	2229.1	2768.8	2496.1	*2620*	*2700*	Revenues ($mill)	*3500*
46.3%	55.4%	55.6%	57.0%	58.2%	58.4%	51.7%	25.3%	29.0%	28.6%	*30.0%*	*32.0%*	Operating Margin	*35.0%*
30.0	34.2	31.6	34.6	39.9	46.3	44.4	192.2	204.0	176.6	*180*	*185*	Depreciation ($mill)	*225*
99.4	139.4	157.4	176.0	189.7	205.0	185.7	400.6	425.2	370.8	*390*	*400*	Net Profit ($mill)	*800*
39.6%	41.9%	35.1%	38.0%	38.7%	36.7%	39.4%	NMF	25.6%	26.0%	*27.0%*	*25.0%*	Income Tax Rate	*25.0%*
22.7%	27.4%	30.7%	30.8%	30.7%	32.3%	28.3%	18.0%	15.4%	14.9%	*14.9%*	*14.8%*	Net Profit Margin	*22.9%*
61.1	137.4	150.7	201.4	170.4	130.1	145.3	100.7	87.8	326.0	*160*	*200*	Working Cap'l ($mill)	*500*
--	--	--	--	--	--	--	1237.9	915.6	867.6	*875*	*875*	Long-Term Debt ($mill)	*800*
175.9	236.3	239.1	284.5	250.1	259.6	317.9	3110.6	3241.0	3355.6	*3680*	*3885*	Shr. Equity ($mill)	*6000*
56.8%	59.2%	65.8%	61.9%	75.9%	79.0%	58.4%	9.7%	10.7%	9.2%	*8.5%*	*8.5%*	Return on Total Cap'l	*12.0%*
56.5%	59.0%	65.8%	61.9%	75.9%	79.0%	58.4%	12.9%	13.1%	11.1%	*10.5%*	*10.5%*	Return on Shr. Equity	*13.5%*
45.3%	41.9%	45.8%	41.3%	49.1%	50.7%	33.7%	9.1%	9.1%	6.6%	*6.5%*	*6.0%*	Retained to Com Eq	*10.0%*
20%	29%	30%	33%	35%	36%	42%	29%	31%	40%	*41%*	*40%*	All Div'ds to Net Prof	*25%*

BALANCE SHEET ($MILL.)	2017	2018	12/31/19
Cash Assets	190.8	310.8	300.3
Accounts Receivable	217.3	287.3	234.7
Other	26.6	85.6	72.6
Current Assets	434.7	683.7	607.6
Accounts Payable	153.8	198.5	171.9
Debt Due	--	299.8	--
Other	180.2	97.6	109.7
Current Liab.	334.0	595.9	281.6

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	--	27.5%	*6.0%*
"Cash Flow"	--	16.5%	*10.0%*
Earnings	--	12.5%	*12.5%*
Dividends	--	12.5%	*7.5%*
Book Value	--	57.5%	*11.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	356.2	640.8	611.4	620.7	2229.1
2018	777.7	667.5	575.9	747.7	2768.8
2019	601.5	620.6	675.4	598.6	2496.1
2020	*620*	*625*	*685*	*690*	*2620*
2021	*625*	*650*	*700*	*725*	*2700*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.16	.60	.53	2.41	3.69
2018	1.04	.73	.76	1.23	3.76
2019	.85	.78	.94	.77	3.34
2020	*.90*	*.80*	*.95*	*.85*	*3.50*
2021	*.90*	*.85*	*.95*	*.90*	*3.60*

Cal-endar	QUARTERLY DIVIDENDS PAID B Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.23	.23	.25	.25	.96
2017	.25	.25	.27	.27	1.04
2018	.27	.27	.31	.31	1.16
2019	.31	.31	.36	.36	1.34
2020	.36				

BUSINESS: Cboe Global Markets, Inc. is a large exchange holding company. It offers a diverse range of products in multiple asset classes, and operates in five primary business segments: Options, U.S. equities, futures, European Equities, and Global FX. Transaction fees (from contracts or shares traded on exchanges) composed 62.9% of 2019 revenues, and regulatory fees, market data, connectivity fees also contributed to revenues. 2/17, Acq. Bats Global Markets. Off./dir. own 1.1% of stock, T. Rowe Price, 13.9%, Vanguard, 10.4%, BlackRock, 7.0%, FMR, 5.3% (4/19 proxy). Has 842 employees. Inc.: DE. Chairman/CEO: Edward T. Tilly. Pres.: Christopher R. Concannon. Address: 400 South LaSalle St., Chicago, IL 60605. Telephone: 312-786-5600. Internet: www.cboe.com.

Cboe Global Markets closed 2019 on a soft note. Revenues pulled back 20% during the fourth quarter, and the top line was down 10% for the full year. Likewise, share net shed 37% in the December period, and the bottom line contracted 11% in 2019. Lower trading volume and softness in Cboe's proprietary products, especially in comparison to the dynamic growth recorded in the year-ago period, caused much of the company's recent setback. Too, unfavorable foreign currency effects and lower transaction revenues hurt results across its business lines.

We imagine the company will rebound in the coming quarters, despite market headwinds. The sudden spread of the coronavirus pandemic has roiled across the globe, and will probably weigh on global markets in the months to come. Still, Cboe has been working hard to ensure business as usual and to keep its markets open and in order. Moreover, acquisition synergies, ongoing expense controls, and management's other strategic growth measures should bolster totals. In all, we look for share earnings and revenues to both recover about 5% this year. What's more, the top and bottom lines ought to climb at a low single-digit clip through 2021.

Cboe has been widening its footprint. It closed on the acquisitions of real-time risk analytics company Hanweck and portfolio platform provider FT Options in early February. Additionally, Cboe has inked an agreement to purchase EuroCCP, a leading European equities clearing house. That deal ought to close in the back half of 2020, and the company will probably bolster its pan-European business to extend its geographic reach. In the meantime, the company has been ramping up research & development and investing heavily in technological advances in order to strengthen its product roster and improve the trading platforms.

This quality issue is ranked 3 (Average) for year-ahead price performance. These shares have fallen precipitously over the past few months, like much of the broader market averages. However, the recent dip in value has helped widen CBOE's long-term capital appreciation potential.

Orly Seidman *April 10, 2020*

(A) Diluted earnings. Next earnings report due early May. 2017 EPS does not sum due to rounding. (B) Dividends historically paid in mid-March, June, September, and December. (C) In millions.

Company's Financial Strength	A
Stock's Price Stability	85
Price Growth Persistence	95
Earnings Predictability	45

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CADENCE DESIGN NDQ-CDNS

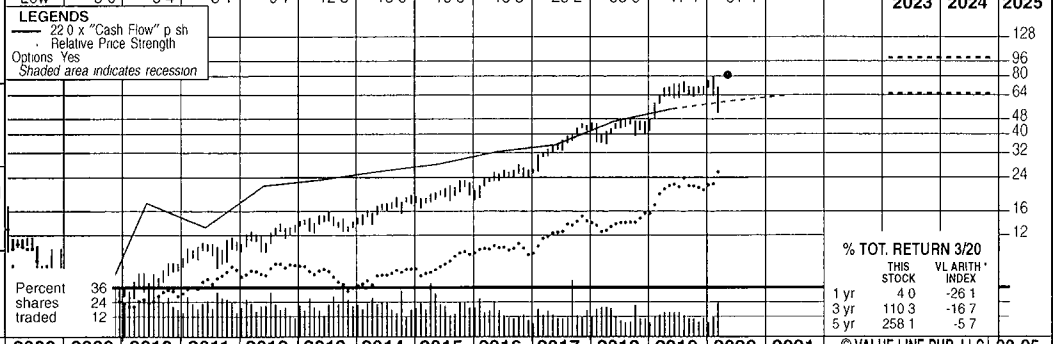
RECENT PRICE 81.31 | P/E RATIO 35.5 (Trailing: 36.1 / Median: 20.0) | RELATIVE P/E RATIO 2.20 | DIV'D YLD Nil | VALUE LINE

TIMELINESS 2 Raised 4/10/20
SAFETY 3 Raised 2/20/09
TECHNICAL 3 Lowered 10/25/19
BETA 1 05 (1 00 = Market)

High	8 2	8 7	11 7	13 8	16 0	19 5	23 3	28 0	45 6	47 4	75 3	82 0
Low	3 0	5 4	8 1	9 7	12 3	13 6	16 5	18 3	25 2	35 5	41 4	51 4

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 22 0 x "Cash Flow" p sh
· Relative Price Strength
Options Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$53-$121	$87 (5%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	100	(+25%)	6%
Low	65	(-20%)	-5%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	291	265	266
to Sell	237	240	262
Hld's(000)	245019	242682	241105

% TOT. RETURN 3/20

	THIS STOCK	VL ARITH * INDEX
1 yr	4 0	-26 1
3 yr	110 3	-16 7
5 yr	258 1	-5 7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
4 41	4 73	5 40	5 88	4 03	3.17	3 50	4 22	4 73	5 07	5 42	5 50	6 53	6 89	7 64	8 35	*9.15*	*9.80*	Revenues per sh A	*12.25*
1 02	1 20	1 05	1 55	d6 69	d.21	80	60	99	1 06	1 17	1 28	1 48	1 60	2 11	2 46	*2.70*	*2.90*	"Cash Flow" per sh	*3.50*
66	83	46	1.01	d7 29	d 58	48	27	77	86	.94	1 09	1 21	1 40	1 87	2 20	*2.45*	*2.60*	Earnings per sh	*3.25*
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*Nil*	*Nil*	Div'ds Decl'd per sh	*Nil*
23	26	25	30	38	15	14	12	13	.16	14	14	19	21	22	27	*.30*	*.30*	Cap'l Spending per sh	*.30*
6 26	6 57	6 18	7 57	40	40	1 04	1 51	3 26	4 01	4 57	4 45	2 67	3 51	4 60	7 51	*8.50*	*9.55*	Book Value per sh C	*13.75*
271 56	280 96	274 91	274 69	257 86	268.65	267 12	272 68	280 64	288 13	291 58	309 39	278 10	282 07	280 02	279 86	*280.00*	*280.00*	Common Shs Outst'g D	*275.00*
21 4	18 1	38 0	20 3	--	--	14 4	36 7	15 5	16 2	17 6	18 3	19 7	25 3	22 8	29 3	*Bold figures are*		Avg Ann'l P/E Ratio	*25.0*
1 13	96	2 05	1 08	--	--	92	2 30	99	91	93	92	1 03	1 27	1 23	1 59	*Value Line*		Relative P/E Ratio	*1.40*
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*estimates*		Avg Ann'l Div'd Yield	*Nil*

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
936 0	1149 8	1326 4	1460 1	1580 9	1702 1	1816 1	1943 0	2138 0	2336 3	*2565*	*2750*	Revenues ($mill) A	*3375*
10 6%	19 9%	27 3%	27 9%	28 8%	29 9%	29.1%	30 5%	33 3%	35 1%	*35.5%*	*35.0%*	Operating Margin	*35.0%*
88 3	91 6	60 7	54 2	54 7	53 9	59 1	59 0	65 4	69 7	*75.0*	*80.0*	Depreciation ($mill)	*95.0*
126 5	72 2	216 7	252 1	287.0	340 9	351 2	392 6	525 5	617 6	*685*	*725*	Net Profit ($mill)	*900*
--	24 3%	26 0%	26.0%	26 0%	23 0%	23 0%	23 0%	16 0%	16 0%	*16.0%*	*16.0%*	Income Tax Rate	*16.0%*
13.5%	6 3%	16 3%	17 3%	18 2%	20 0%	19.3%	20 2%	24 6%	26 4%	*26.7%*	*26.4%*	Net Profit Margin	*26.7%*
181 8	48 6	173 9	72 9	458 6	428 5	116.4	337.6	242.1	496 9	*350*	*300*	Working Cap'l ($mill)	*350*
406 4	131 9	--	--	348 7	348 8	643 5	644 4	345 3	346 0	*350*	*350*	Long-Term Debt ($mill)	*350*
276 7	411.1	915 2	1156 1	1333 6	1376.1	741 8	989 2	1288 4	2102 9	*2375*	*2675*	Shr. Equity ($mill) C	*3775*
20 9%	17 0%	24 2%	22 5%	17 5%	20.4%	26 2%	24 8%	32 9%	25 6%	*25.5%*	*24.0%*	Return on Total Cap'l	*22.0%*
45 7%	17 6%	23 7%	21 8%	21 5%	24.8%	47 4%	39 7%	40 8%	29 4%	*29.0%*	*27.0%*	Return on Shr. Equity	*24.0%*
45 7%	17 6%	23 7%	21 8%	21 5%	24 8%	47 4%	39 7%	40 8%	29 4%	*29 0%*	*27.0%*	Retained to Com Eq	*24.0%*
--	--	--	--	--	--	--	--	--	--	*Nil*	*Nil*	All Div'ds to Net Prof	*Nil*

CAPITAL STRUCTURE as of 3/28/20
Total Debt $696.2 mill. Due in 5 Yrs $700 mill
LT Debt $346 2 mill LT Interest $15 5 mill
(14% of Cap'l)

Leases, Uncapitalized: Annual rentals $29 3 mill.

No Defined Benefit Pension Plan

Common Stock 279,187,000 shares

MARKET CAP: $22.7 billion (Large Cap)

CURRENT POSITION ($MILL.)	2018	2019	3/28/20
Cash Assets	533 3	705 2	946.3
Receivables	297.1	304 5	284 1
Inventory (FIFO)	28.2	55 8	60 6
Other	92 5	103 8	108 5
Current Assets	951 1	1169 3	1399.5
Accts Payable	256 5	316 9	236 8
Debt Due	100 0	--	350 0
Deferred Revenue	352 5	355.5	425 6
Current Liab	709 0	672.4	1012.4

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	5 5%	8 5%	*8 0%*
"Cash Flow"	--	14 0%	*9 5%*
Earnings	--	16 5%	*10 0%*
Dividends	--	--	*Nil*
Book Value	6 5%	5 5%	*17 5%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) A Mar.Per	Jun.Per	Sep.Per	Dec.Per	Full Fiscal Year
2017	476 9	479 0	485 4	501 7	1943 0
2018	517 3	518 4	532 4	569 9	2138 0
2019	576 7	580.4	579.6	599 6	2336 3
2020	618.0	*590*	*650*	*707*	*2565*
2021	*675*	*685*	*685*	*705*	*2750*

Fiscal Year Ends	EARNINGS PER SHARE ABE Mar.Per	Jun.Per	Sep.Per	Dec.Per	Full Fiscal Year
2017	32	34	35	.39	1.40
2018	40	45	49	52	1 87
2019	54	57	54	54	2 20
2020	.60	*.52*	*.63*	*.70*	*2.45*
2021	*.63*	*.65*	*.65*	*.67*	*2.60*

Cal-endar	QUARTERLY DIVIDENDS PAID Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	NO CASH DIVIDENDS BEING PAID				
2017					
2018					
2019					
2020					

BUSINESS: Cadence Design Systems, Inc is a leading worldwide supplier of electronic design automation (EDA) software for integrated circuit and systems design and verification, used principally in the semiconductor industry The company's software tools and solutions enable engineers to design, analyze, place and route, and test integrated circuits, circuit boards, multichip modules, and other electronic systems R&D 40 1% of 2019 revenue Employed about 8,100 (12/28/19) Off. & dir own 2 6% of common stock; The Vanguard Group, 11 9%, BlackRock, Inc., 9 5%, MFS Company, 8 7% (3/20 Proxy) Chrmn. John B. Shoven, Ph D, Pres & CEO Lip-Bu Tan Inc DE Addr 2655 Seely Avenue, San Jose, CA 95134 Tel (408) 943-1234 Internet www cadence com

Cadence Design System's financial report for the March period generally made for good reading. The disruption caused by the coronavirus pandemic was still in the early stages in the first quarter, so the effect on the company's revenue and earnings was rather mild, with the top and bottom lines coming in well within most investors' expectations

The company offered a subdued forecast for the second quarter, but remained upbeat for 2020. Although Cadence is operating in full-remote mode, as are many of its customers, it has been able to keep productivity levels up nicely. In addition, a large portion of its electronic design automation products and services are offered on a subscription basis, so the company has all the advantages of the associated recurring revenue stream (85%-90% of the top line). Still, the wide range of shelter-in-place orders that are in effect may impede the physical delivery of some hardware and IP (intellectual property) orders in the June period. Since revenue from these sales is recognized on delivery, the company has scaled back its forecast and taken a conservative view on the second quarter. Nonetheless, Cadence has suggested that it can make up for the delays in this part of its business in the second half, provided it can begin gaining access to its customers' facilities sometime in the month of May.

Market support of Cadence stock has been vigorous. The company's long-term prospects are largely tied to R&D spending in the semiconductor industry, which is currently quite active and is likely to remain so for the foreseeable future, given the potential for the 5G communication protocol, artificial intelligence, hyperscale computing, and industrial IoT (Internet of Things) That said, the reality is there is much uncertainty regarding the depth and extent of the global economic recession that will follow in the wake of the coronavirus pandemic We have taken the company's lead and worked a strong second half into our estimates for 2020. We caution that such a sequence of events may turn out to be optimistic, and the stock's current valuation leaves little room for disappointment, making it best suited for aggressive accounts.

Charles Clark *May 8, 2020*

(A) Fiscal year ends Saturday closest to 12/31.
(B) Diluted earnings, non-GAAP from 2012
Excluded items: '04, d41¢, '05, d67¢, '12, 80¢; '13, d30¢; '14, d42¢, '15, d28¢; '16, d53¢, '17, d67¢, '18, d64¢ ; '19, 1 32
Next earnings report due late July.
(C) Including intangibles In '19 $661 9 mill, $2 35 a share (D) In millions
(E) Quarters may not sum to annual figure, due to rounding or changes in shares outstanding

Company's Financial Strength	A
Stock's Price Stability	70
Price Growth Persistence	95
Earnings Predictability	95

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CERNER CORP. NDQ-CERN

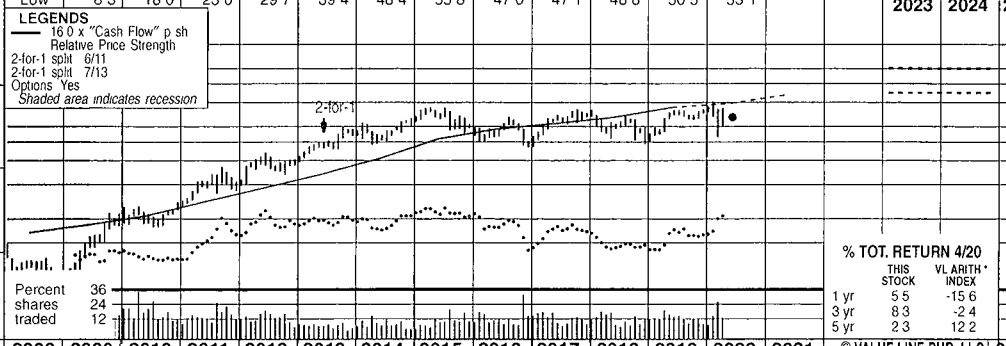
RECENT PRICE 67.28 | P/E RATIO 23.6 (Trailing: 24.2 Median: 30.0) | RELATIVE P/E RATIO 1.28 | DIV'D YLD 1.1% | VALUE LINE

TIMELINESS 1 Raised 4/17/20
SAFETY 2 Raised 3/13/15
TECHNICAL 2 Raised 5/15/20
BETA .90 (1.00 = Market)

High	21.5	24.4	37.2	44.2	59.4	66.4	75.7	67.5	73.9	73.4	74.1	80.9	
Low	8.3	18.0	23.0	29.7	39.4	48.4	55.8	47.0	47.1	48.8	50.5	53.1	

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 16.0 x "Cash Flow" p sh
Relative Price Strength
2-for-1 split 6/11
2-for-1 split 7/13
Options: Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$38-$78	$58 (-15%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	120	(+80%)	17%
Low	90	(+35%)	9%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	317	315	352
to Sell	338	338	345
Hld's(000)	266460	259658	256063

% TOT. RETURN 4/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	5.5	-15.6
3 yr	8.3	-2.4
5 yr	2.3	12.2

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
3.16	3.70	4.39	4.74	5.08	5.06	5.56	6.50	7.74	8.47	9.94	13.02	14.55	15.47	16.55	18.31	*18.35*	*19.85*	Revenues per sh	*23.50*
.53	.64	.72	.87	1.06	1.16	1.29	1.53	1.80	2.12	2.57	3.24	3.65	3.90	4.19	4.71	*4.95*	*5.50*	"Cash Flow" per sh	*6.50*
.22	.27	.31	.38	.52	.58	.70	.88	1.13	1.32	1.65	2.11	2.30	2.38	2.45	2.69	*2.85*	*3.30*	Earnings per sh B	*4.25*
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.36	*.72*	*.72*	Div'ds Decl'd per sh E	*1.00*
.15	.32	.42	.56	.33	.40	.31	.31	.53	1.03	.81	1.07	1.39	1.09	1.38	1.52	*.75*	*1.25*	Cap'l Spending per sh	*1.25*
2.04	2.42	2.93	3.53	4.04	4.79	5.72	6.81	8.23	9.21	10.42	11.38	11.92	14.39	15.20	13.89	*13.95*	*15.10*	Book Value per sh	*22.50*
293.10	314.06	313.57	320.59	324.17	330.26	332.96	339.13	344.18	343.82	342.33	339.96	329.64	332.46	324.31	310.91	*305.00*	*300.00*	Common Shs Outst'g D	*300.00*
26.0	32.1	35.1	36.2	21.1	25.7	30.0	33.5	33.1	37.3	34.8	31.5	24.6	26.6	25.0	24.6	*Bold figures are*		Avg Ann'l P/E Ratio	*25.0*
1.37	1.71	1.90	1.92	1.27	1.71	1.91	2.10	2.11	2.10	1.83	1.59	1.29	1.34	1.35	1.33	*Value Line*		Relative P/E Ratio	*1.40*
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5%	*estimates*		Avg Ann'l Div'd Yield	*.9%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $1338.4 mill **Due in 5 Yrs** $825.0 mill
LT Debt $1338.4 mill **LT Interest** $41.5 mill
(26% of Cap'l)

Leases, Uncapitalized Annual rentals $33.9 mill
No Defined Benefit Pension Plan
Pfd Stock None

Common Stock 304,348,600 shs.
as 4/23/20
MARKET CAP: $20.5 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
1850.2	2203.2	2665.4	2910.7	3402.7	4425.3	4796.5	5142.3	5366.3	5692.6	*5600*	*5950*	Revenues ($mill)	*7100*
29.9%	30.5%	29.8%	32.5%	33.6%	32.4%	31.9%	31.6%	28.9%	29.1%	*31.0%*	*32.0%*	Operating Margin	*32.5%*
193.3	212.6	222.6	263.5	302.4	360.7	413.7	491.8	540.2	603.0	*625*	*650*	Depreciation ($mill)	*700*
237.3	306.6	397.2	466.4	576.4	740.8	790.4	805.0	818.5	862.1	*880*	*1000*	Net Profit ($mill)	*1275*
34.5%	34.7%	32.4%	32.8%	32.4%	31.1%	30.2%	30.4%	21.1%	19.9%	*21.0%*	*21.0%*	Income Tax Rate	*21.0%*
12.8%	13.9%	14.9%	16.0%	16.9%	16.7%	16.5%	15.7%	15.3%	15.1%	*15.7%*	*16.8%*	Net Profit Margin	*18.0%*
840.2	1063.6	1210.4	1121.3	1714.5	1049.9	774.0	1590.6	1356.1	1069.2	*1000*	*1250*	Working Cap'l ($mill)	*1500*
67.9	86.8	136.6	111.7	62.9	563.4	537.6	515.1	438.8	1038.4	*1350*	*1500*	Long-Term Debt ($mill)	*1500*
1905.3	2310.7	2833.7	3167.7	3566.0	3870.4	3927.9	4785.3	4928.4	4317.3	*4250*	*4525*	Shr. Equity ($mill)	*6800*
12.2%	12.9%	13.5%	14.3%	15.9%	16.9%	17.8%	15.3%	15.3%	16.2%	*16.0%*	*17.0%*	Return on Total Cap'l	*15.5%*
12.5%	13.3%	14.0%	14.7%	16.2%	19.1%	20.1%	16.8%	16.6%	20.0%	*20.5%*	*22.0%*	Return on Shr. Equity	*19.0%*
12.5%	13.3%	14.0%	14.7%	16.2%	19.1%	20.1%	16.8%	16.6%	17.3%	*15.5%*	*17.0%*	Retained to Com Eq	*14.5%*
--	--	--	--	--	--	--	--	--	13%	*25%*	*22%*	All Div'ds to Net Prof	*24%*

CURRENT POSITION ($MILL.)	2018	2019	3/31/20
Cash Assets	775.4	541.8	398.8
Receivables	1172.6	1139.6	1151.0
Inventory (FIFO)	25.0	23.2	23.5
Other	345.8	392.0	390.3
Current Assets	2318.8	2096.6	1963.6
Accts Payable	293.5	273.4	296.0
Debt Due	4.9	--	--
Deferred Revenue	399.2	360.0	316.6
Other	265.1	394.0	405.9
Current Liab	962.7	1027.4	1018.5

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs	Est'd '17-'19 to '23-'25
Revenues	13.0%	14.0%	*6.0%*
"Cash Flow"	15.5%	14.5%	*7.5%*
Earnings	17.5%	13.0%	*9.0%*
Dividends	--	--	*42.5%*
Book Value	13.5%	9.5%	*7.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) A Mar.Per	Jun.Per	Sep.Per	Dec.Per	Full Year
2017	1260.5	1292.0	1276.0	1313.8	5142.3
2018	1292.9	1367.7	1340.0	1365.7	5366.3
2019	1389.9	1431.1	1429.4	1442.2	5692.6
2020	1411.7	*1365*	*1400*	*1423.3*	*5600*
2021	*1450*	*1475*	*1500*	*1525*	*5950*

Cal-endar	EARNINGS PER SHARE ABC Mar.Per	Jun.Per	Sep.Per	Dec.Per	Full Year
2017	.59	.61	.61	.58	2.38
2018	.58	.62	.63	.63	2.45
2019	.61	.66	.66	.75	2.69
2020	.71	*.62*	*.74*	*.78*	*2.85*
2021	*.75*	*.82*	*.83*	*.90*	*3.30*

Cal-endar	QUARTERLY DIVIDENDS PAID E Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	--	--	--	--	--
2017	--	--	--	--	--
2018	--	--	--	--	--
2019	--	--	18	18	36
2020	18	18			

BUSINESS: Cerner Corp. designs, develops, markets, installs, and supports clinical and management information systems. Cerner's systems are designed and developed using a single, unified information architecture. *Cerner Millennium.* Cerner's software and systems are focused on the clinical side of healthcare and are targeted at hospitals and integrated delivery networks. R&D expense: 12.9% of '19 revenues. Contract backlog $6.0 billion (12/28/19). Employed about 27,400 (12/19). Stock owners: BlackRock, Inc., 10.7%, The Vanguard Group, 7.5% (4/20 proxy). Chairman & CEO: Brent Shafer. CFO: Marc G. Naughton. Incorporated: DE. Address: 2800 Rockcreek Pkwy., North Kansas City, MO 64117. Telephone: (816) 201-1024. Internet: www.cerner.com.

At this writing, Cerner estimates the largest impact from the disruption caused by COVID-19 will be in the second quarter. The company is currently forecasting that the effect will be about $185 million this year (including $30 million in the March period), with $95 million likely to be realized in the current interim. This amount reflects the expectation of reduced sales activity in the quarter combined with lower utilization in its professional services business, since its consultants will not have full access to its customers' facilities. Although Cerner is looking for the balance of $60 million to affect the second half, it also expects that business activity will pick up in the third and fourth quarters, and earnings growth should return in the final six months.

We have made changes to our revenue and earnings estimates for this year. We have cut our revenue target for 2020 by $285 million. This reduction includes the $185 million specific to the disruption due to the coronavirus pandemic mentioned above, $40 million due to the sale of assets located in Germany and Spain, and $60 million due to our taking a more conservative view on the second half. Meanwhile, our earnings estimate of $2.85 a share is within Cerner's current forecast, but down $0.70 from the figure published with our report of early March. The company's adjusted operating margin (inclusive of depreciation) will be affected by the pandemic this year. Nonetheless, it should widen about 150 basis points, to around 20%, as Cerner continues to benefit from its ongoing streamlining process and manages through the current difficulties.

What about Cerner stock? It has rebounded nicely in recent weeks, as investors grew more comfortable with the company's near-term prospects. Cerner still has good visibility into its sales pipeline, and the reductions in revenues taken this year are seen as being delayed, rather than lost. Meanwhile, the company's strong financial position affords it the ability to grow by acquisition, while also maintaining internal investments and its quarterly dividend. These positives have not gone unnoticed, though, and those considering new commitments will have to shoulder a premium.

Charles Clark *June 5, 2020*

(A) Fiscal year ends on the Saturday closest to December 31st.
(B) Fully-diluted earnings, non-GAAP EPS from 2014. Excl. items: '05, 1¢; '06, 5¢; '08, 10¢; '13, d19¢; '14, d15¢; '15, d57¢; '16, d45¢; '17, 19¢; '18, d56¢; '19, d$1.03. Next earnings report due late July.
(C) Quarters may not sum to annual figure, due to rounding or to changes in diluted shares outstanding.
(D) In millions, adjusted for stock splits.
(E) Initial dividend declared 5/30/19.

Company's Financial Strength	A+
Stock's Price Stability	85
Price Growth Persistence	65
Earnings Predictability	95

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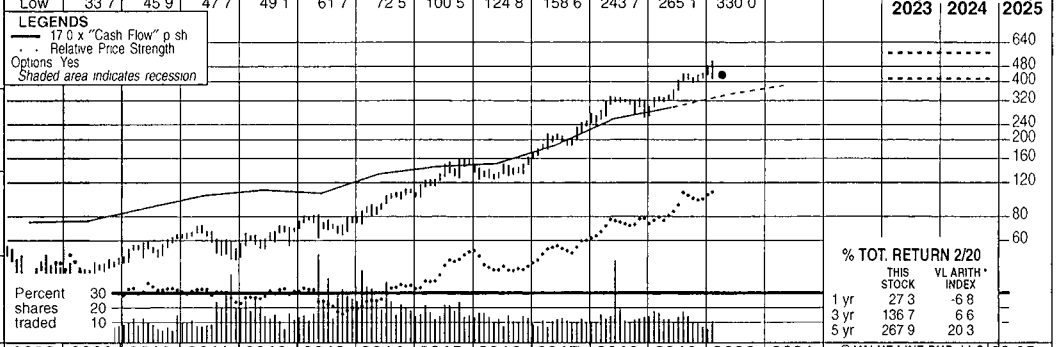
CHEMED CORP. NYSE-CHE

RECENT PRICE 432.56 | P/E RATIO 27.1 (Trailing: 31.0 Median: 19.0) | RELATIVE P/E RATIO 2.05 | DIV'D YLD 0.3% | VALUE LINE

TIMELINESS 1 Raised 9/6/19
SAFETY 2 Raised 10/11/19
TECHNICAL 3 Raised 3/13/20
BETA .85 (1.00 = Market)

High	49.1	65.0	72.3	72.1	82.0	112.0	160.1	164.1	251.0	336.0	445.1	513.8				
Low	33.7	45.9	47.7	49.1	61.7	72.5	100.5	124.8	158.6	243.7	265.1	330.0				

LEGENDS
— 17.0 x "Cash Flow" p sh
. . . Relative Price Strength
Options: Yes
Shaded area indicates recession



Target Price Range 2023 | 2024 | 2025

18-Month Target Price Range
Low-High: $415-$622 | Midpoint (% to Mid): $519 (20%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	565	(+30%)	7%
Low	415	(-5%)	Nil

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	162	187	203
to Sell	189	176	165
Hld's(000)	14038	14321	14387

Percent shares traded 30 20 10

% TOT. RETURN 2/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	27.3	-6.8
3 yr	136.7	6.6
5 yr	267.9	20.3

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
29.09	35.31	39.44	45.91	51.26	52.23	60.18	71.15	77.17	80.37	86.22	91.88	97.42	103.92	112.31	121.59	*137.40*	*150.00*	Revenues per sh	*178.55*
1.48	2.77	3.09	4.24	4.40	4.47	5.21	6.06	6.47	6.23	7.84	8.56	8.86	11.02	15.07	17.29	*20.30*	*22.65*	"Cash Flow" per sh	*26.80*
.78	1.95	2.16	3.04	3.05	3.24	3.55	4.10	4.62	4.16	5.57	6.33	6.48	8.43	11.93	13.95	*16.30*	*17.80*	Earnings per sh A	*21.30*
.24	.24	.24	.24	.24	.36	.52	.60	.68	.76	.84	.92	1.00	1.08	1.16	1.24	*1.32*	*1.40*	Div'ds Decl'd per sh B■	*2.00*
.72	.99	.85	1.11	1.16	.94	1.21	1.55	1.92	1.67	2.58	2.63	2.46	4.01	3.33	3.33	*3.85*	*4.35*	Cap'l Spending per sh	*5.70*
13.14	14.64	16.32	15.21	16.58	20.94	21.71	21.71	24.46	25.53	26.72	30.55	32.38	33.69	37.25	45.58	*54.85*	*66.65*	Book Value per sh	*85.70*
25.28	26.24	25.83	23.96	22.41	22.79	21.28	19.06	18.53	17.58	16.89	16.80	16.19	16.04	15.87	15.94	*15.50*	*15.00*	Common Shs Outst'g C	*14.00*
35.0	21.1	21.4	18.4	13.7	13.0	15.6	14.9	13.6	17.7	17.0	20.7	21.4	23.5	25.1	26.5	*Bold figures are*		Avg Ann'l P/E Ratio	*23.0*
1.85	1.12	1.16	.98	.82	.87	.99	.93	.87	.99	.89	1.04	1.12	1.18	1.36	1.44	*Value Line*		Relative P/E Ratio	*1.30*
9%	6%	5%	4%	6%	9%	.9%	1.0%	1.1%	1.0%	9%	7%	.7%	5%	4%	3%	*estimates*		Avg Ann'l Div'd Yield	*.4%*

CAPITAL STRUCTURE as of 12/31/19

Total Debt $90.0 mill. Due in 5 Yrs $90.0 mill.
LT Debt $90.0 mill. LT Interest $4.5 mill.
(Total int. coverage: over 25.0x) (11% of Cap'l)

Leases, Uncapitalized Annual rentals $44.3 mill.
No Defined Benefit Pension Plan

Pfd Stock None

Common Stock 16,055,361 shares
as of 2/14/20
MARKET CAP: $6.9 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
1280.5	1356.0	1430.0	1413.3	1456.3	1543.4	1576.9	1666.7	1782.6	1938.6	*2130*	*2250*	Revenues ($mill)	*2500*
13.5%	13.5%	13.1%	11.7%	13.8%	14.1%	13.8%	15.2%	17.1%	17.9%	*19.0%*	*19.0%*	Operating Margin	*19.0%*
29.0	29.5	30.5	32.4	33.1	33.5	34.6	35.6	38.9	45.2	*50.0*	*55.0*	Depreciation ($mill)	*65.0*
81.8	86.0	89.3	77.2	99.3	110.3	108.7	141.1	200.4	230.5	*265*	*285*	Net Profit ($mill)	*310*
38.9%	38.8%	38.8%	37.6%	39.0%	38.8%	38.6%	24.6%	22.8%	24.6%	*25.0%*	*25.0%*	Income Tax Rate	*25.0%*
6.4%	6.3%	6.2%	5.5%	6.8%	7.1%	6.9%	8.5%	11.2%	11.9%	*12.4%*	*12.7%*	Net Profit Margin	*12.4%*
47.5	5.4	50.9	d139.3	d1.0	d20.5	d1.9	d17.4	d31.9	d71.5	*Nil*	*5.0*	Working Cap'l ($mill)	*20.0*
159.2	166.8	174.9	- -	141.3	83.8	100.0	91.2	89.2	90.0	*100*	*100*	Long-Term Debt ($mill)	*100*
462.0	413.7	453.3	448.9	451.4	513.3	524.1	540.4	591.3	726.6	*850*	*1000*	Shr. Equity ($mill)	*1200*
14.1%	16.0%	15.4%	17.2%	17.5%	18.8%	17.7%	22.7%	29.7%	28.5%	*28.0%*	*26.0%*	Return on Total Cap'l	*24.0%*
17.7%	20.8%	19.7%	17.2%	22.0%	21.5%	20.7%	26.1%	33.9%	31.7%	*31.0%*	*28.5%*	Return on Shr. Equity	*26.0%*
15.1%	17.8%	16.8%	14.1%	18.8%	18.4%	17.6%	22.9%	30.7%	29.0%	*28.5%*	*26.5%*	Retained to Com Eq	*23.5%*
15%	15%	15%	18%	14%	14%	15%	12%	9%	9%	*8%*	*8%*	All Div'ds to Net Prof	*9%*

CURRENT POSITION ($MILL.)	2017	2018	12/31/19
Cash Assets	11.1	4.8	6.2
Receivables	113.8	119.5	143.8
Inventory (LIFO)	5.3	5.7	7.5
Other	45.9	29.8	33.2
Current Assets	176.1	159.8	190.7
Accts Payable	48.4	50.2	51.1
Debt Due	10.0	- -	- -
Other	135.1	141.5	211.1
Current Liab	193.5	191.7	262.2

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	8.5%	6.5%	*8.5%*
"Cash Flow"	12.5%	16.0%	*13.0%*
Earnings	14.0%	19.0%	*14.0%*
Dividends	15.5%	9.0%	*12.5%*
Book Value	8.5%	8.5%	*14.5%*

Cal-endar	QUARTERLY SALES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	405.9	415.1	417.4	428.3	1666.7
2018	439.2	441.8	444.1	457.5	1782.6
2019	462.1	473.6	480.6	522.3	1938.6
2020	*525*	*530*	*530*	*545*	*2130*
2021	*555*	*560*	*560*	*575*	*2250*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1.82	2.15	2.15	2.31	8.43
2018	2.72	2.81	3.07	3.35	11.93
2019	2.92	3.36	3.46	4.22	13.95
2020	*3.65*	*4.05*	*4.05*	*4.55*	*16.30*
2021	*4.00*	*4.40*	*4.40*	*5.00*	*17.80*

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.24	.24	.26	.26	1.00
2017	.26	.26	.28	.28	1.08
2018	.28	.28	.30	.30	1.16
2019	.30	.30	.32	.32	1.24
2020	.32				

BUSINESS: Chemed Corporation operates two wholly owned subsidiaries: VITAS Healthcare Corp. (66% of '19 sales) and Roto-Rooter (34%). VITAS provides end-of-life care in about 170 locations in 17 states and the District of Columbia. About 93% of sales are derived from Medicare and Medicaid. Roto-Rooter, through more than 100 company-owned and 400 independent franchise operations, provides plumbing, drain cleaning, and water restoration services. Sold Service America, 12/04. Has about 16,600 employees. Officers & directors own 4.0% of stock; Vanguard, 11.5% (4/19 proxy). Chrmn.: George J. Walsh III. Pres. and CEO: Kevin J. McNamara. Inc.: DE. Addr.: 255 East Fifth Street, Suite 2600, Cincinnati, OH 45202. Tel.: 513-762-6690. Internet: www.chemed.com.

Chemed reported solid results for the final quarter of 2019. The top line grew 14% to $522 million. Sales in the hospice business, VITAS, climbed 11%, helped by gains of 5.4% in admissions, 6.1% in average daily census, and 5.5% in reimbursement rate. Meanwhile, Roto-Rooter's sales rose 21%, to $182 million. Excluding the contribution of recent acquisitions, sales grew 8%. Operating profitability improved 1.4 percentage points to 19.9%, mostly on cost controls at VITAS. Earnings per share of $4.22 climbed 26%. Results were $0.11 ahead of our estimate, owing to a stronger gross margin than we were modeling.

Prospects for this year seem strong. Given the nature of the businesses, we suspect management's guidance, issued in mid-February, is still reasonable, despite the subsequent coronavirus disruptions. For VITAS, the outlook for admissions may be slightly lower, as end-of-life patients who contract the disease are treated in the hospital, instead of spending time in hospice. And VITAS is likely to incur some additional costs to implement infection-control measures at its facilities. Meanwhile, Roto-Rooter, as a provider of essential services, has been operational through the crisis. Some routine, non-emergency jobs may be deferred into the second half. For the year, management was expecting growth in hospice revenue of 8.5%-9.5%. Admissions and average daily census were estimated to rise 3.5%-4.5%. Roto-Rooter sales were expected to climb 13%-14%, fueled by 4%-5% organic growth in the core plumbing and drain-cleaning business, 6%-7% growth in water restoration services (our estimate), and the contribution of recently acquired franchises. We are modeling sales of $1.39 billion and $740 million for VITAS and Roto-Rooter, for growth at the low ends of guidance for each. As for earnings, management looks for share net of $16.20-$16.50. For the year, our earnings estimate has moved from $15.50 to $16.30, representing an annual increase of 17%.

These shares hold our Highest rank for year-ahead performance. The stock has held its price well through the market downturn, slipping just 7% since our January report. Appreciation potential out to 2023-2025 seems limited.

Christopher Joseph, CFA *April 10, 2020*

(A) Diluted earnings. Excl. nonrecurring & disc. ops.: '06, (21¢); '07, (54¢); '08, 1¢; '17, ($2.57); '18, 30¢; '19, (64¢). Includes capital gains (losses): '04, 34¢; '05, (59¢); '06, (26¢); '07, ($3.49). Quarterly figures may not sum to total due to rounding. Next earnings report due late April.
(B) Div'ds historically paid in early March, June, Sept. & Dec. ■ Div'd reinvest. plan avail.
(C) In millions, adjusted for split.

Company's Financial Strength	A
Stock's Price Stability	85
Price Growth Persistence	95
Earnings Predictability	80

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CME GROUP NDQ-CME

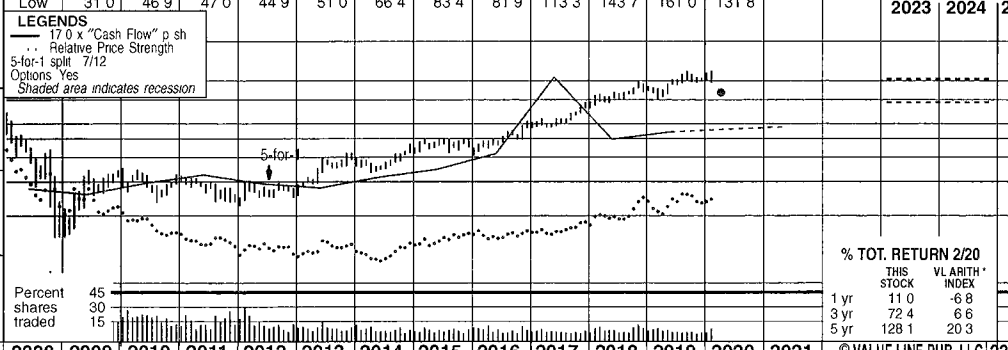
RECENT PRICE 173.99 | P/E RATIO 28.7 (Trailing: 29.4 Median: 22.0) | RELATIVE P/E RATIO 2.17 | DIV'D YLD 2.0% | VALUE LINE

TIMELINESS 3 Lowered 2/21/20
SAFETY 2 Raised 4/17/15
TECHNICAL 3 Raised 4/10/20
BETA 65 (1.00 = Market)

High	69 2	70 6	64 7	60 9	84 7	93 9	100 9	124 0	155 3	197 1	224 9	225 4
Low	31 0	46 9	47 0	44 9	51 0	66 4	83 4	81 9	113 3	143 7	161 0	131 8

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 17 0 x "Cash Flow" p sh
.. Relative Price Strength
5-for-1 split 7/12
Options Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$180-$267	$224 (30%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	205	(+20%)	6%
Low	155	(-10%)	Nil

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	421	408	521
to Sell	469	457	402
Hld's(000)	308243	306218	308261

% TOT. RETURN 2/20

	THIS STOCK	VL ARITH * INDEX
1 yr	11 0	-6 8
3 yr	72 4	6 6
5 yr	128 1	20 3

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
4 29	5 32	6 26	6 59	7 71	7 86	8 99	9 92	8 78	8 67	9 20	9.87	10.63	10 74	12 08	13 62	*14.00*	*14.45*	Revenues per sh A	*16.65*
1 60	2 15	2 76	2 99	3 26	3 04	3 47	3 83	3 45	3 28	3 72	4 08	4.92	12 31	5 83	6 36	*6.60*	*6.80*	"Cash Flow" per sh	*9.55*
1 28	1 76	2 32	3 15	3 20	2 66	3.09	3 41	3 02	2 92	3 35	3 69	4 53	11 94	5 71	5 91	*6.10*	*6.30*	Earnings per sh B	*9.00*
21	37	50	69	92	92	92	1 12	1 79	1.80	1 88	2 00	2 40	2 64	2 80	3 00	*3.40*	*3.50*	Div'ds Decl'd per sh C	*3.60*
.39	50	50	.61	60	47	48	52	43	37	42	34	.27	24	33	69	*.65*	*.65*	Cap'l Spending per sh	*.25*
4.75	6 47	8 72	46 19	56 27	58 04	60 02	65 18	64 55	62 43	61 82	61 00	60 14	66 07	72.64	73 09	*75.95*	*78.40*	Book Value per sh D	*100.00*
171 06	172 98	174 18	266 41	332.10	332 56	334 24	330 64	331 83	338 85	338.45	336.94	338.24	339 24	356 82	357.47	*358.50*	*359.00*	Common Shs Outst'g E	*360.00*
21 3	30 6	40 0	36 6	24 9	20 2	19 1	16 4	17.9	23 7	22 8	25 4	22 1	10 6	29 6	32 8	*Bold figures are*		Avg Ann'l P/E Ratio	*20.0*
1 13	1 63	2 16	1 94	1 50	1 35	1 22	1 03	1 14	1.33	1 20	1 28	1 16	53	1 60	1 78	*Value Line*		Relative P/E Ratio	*1.10*
8%	7%	5%	6%	1.2%	1 7%	1 6%	2 0%	3 3%	2 6%	2 5%	2 1%	2.4%	2 1%	1 7%	1 5%	*estimates*		Avg Ann'l Div'd Yield	*2.0%*

CAPITAL STRUCTURE as of 12/31/19
Total Debt $3743 2 mill **Due In 5 Yrs** $1070 mill
LT Debt $3743 2 mill **LT Interest** $435 0 mill
(Tot Int. Coverage: 16 1x) (13% of Cap'l)

Leases, Uncapitalized Annual rentals $63.8 mill.
Pension Assets-12/19 $345.9 mill
Oblig. $324 2 mill.

Pfd. Stock None
Common Stock 358,402,226 shs
as of 2/12/20
Excl 3,138 Class B shs Three seats on the board of dir are voted on by Class B shareholders only

MARKET CAP: $62.4 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
3003 7	3280 6	2914 6	2936 3	3112.5	3326 8	3595 2	3644 7	4309 4	4868 0	*5020*	*5180*	Revenues ($mill) A	*6000*
66 0%	65 5%	58 8%	60 4%	61 1%	63 7%	64 9%	66 5%	63 3%	56 4%	*58.0%*	*60.0%*	Operating Margin	*75.0%*
129 9	128 5	136 9	135 1	132 6	129.2	129 2	113 0	118 7	158 6	*165*	*175*	Depreciation ($mill)	*200*
1028 4	1137 6	1006 3	976 8	1127 1	1247 0	1534 1	4063.4	1962 2	2116.5	*2200*	*2275*	Net Profit ($mill)	*3240*
41 2%	42 0%	38 8%	38 9%	36 4%	36 3%	32 9%	--	29 3%	21 3%	*24.5%*	*24.5%*	Income Tax Rate	*24.5%*
34 2%	34 7%	34 5%	33 3%	36 2%	37.5%	42.7%	111 5%	45 5%	43 5%	*43.8%*	*44.0%*	Net Profit Margin	*54.0%*
606 3	1330 6	1101 0	1094 6	1014 1	1080 0	1085 9	1233 6	614 1	1045 3	*1250*	*1425*	Working Cap'l ($mill)	*1750*
2104 8	2106 8	2106 8	2107 2	2107.9	2241 4	2231 2	2233 1	3826 8	3743 2	*3700*	*3600*	Long-Term Debt ($mill)	*3500*
20060	21552	21419	21155	20924	20552	20341	22412	25919	26129	*27225*	*28150*	Shr. Equity ($mill)	*36000*
5.0%	5 1%	4 6%	4 5%	5 2%	5 7%	7 1%	16 7%	6 9%	7 4%	*7.0%*	*7.0%*	Return on Total Cap'l	*8.0%*
5.1%	5.3%	4.7%	4 6%	5 4%	6 1%	7 5%	18 1%	7.6%	8 1%	*8.0%*	*8.0%*	Return on Shr. Equity	*9.0%*
3.6%	3.5%	1.9%	1 8%	2 4%	2 8%	4 2%	14 5%	3 8%	4 2%	*3.5%*	*3.5%*	Retained to Com Eq	*5.5%*
30%	33%	59%	61%	56%	54%	45%	20%	49%	48%	*55%*	*55%*	All Div'ds to Net Prof	*40%*

CURRENT POSITION ($MILL.)	2017	2018	12/31/19
Cash Assets F	1993 7	1447.4	1634 6
Receivables	359 7	553 3	491 8
Other	44553 1	39886 0	37567.8
Current Assets	46906 5	41886 7	43692.3
Accts Payable	31 3	53.9	61 9
Debt Due	--	574 2	--
Other	45641 6	40582.4	38460 0
Current Liab	45672 0	41272 6	38522 5

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	5 0%	6 5%	*5 5%*
"Cash Flow"	10 0%	18.5%	*2 5%*
Earnings	10 0%	20 5%	*2 5%*
Dividends	13.0%	9.0%	*4 0%*
Book Value	3 0%	2.5%	*6 0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	929 3	924 6	890 8	900 0	3644 7
2018	1109 0	1059 6	904 2	1236 6	4309 4
2019	1179 6	1272 7	1277 3	1138 4	4868 0
2020	*1225*	*1285*	*1300*	*1210*	*5020*
2021	*1300*	*1315*	*1325*	*1240*	*5180*

Cal-endar	EARNINGS PER SHARE B Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	1 18	1 22	91	8 63	11 94
2018	1 76	1 66	1 21	1 09	5 71
2019	1 39	1 43	1.78	1 31	5 91
2020	*1.45*	*1.50*	*1.80*	*1.35*	*6.10*
2021	*1.50*	*1.60*	*1.85*	*1.35*	*6.30*

Cal-endar	QUARTERLY DIVIDENDS PAID C Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.60	60	.60	.60	2 40
2017	66	66	66	66	2 64
2018	70	70	70	70	2 80
2019	75	75	75	75	3 00
2020	85				

BUSINESS: CME Group Inc is the world's largest and most diversified derivatives marketplace It enables clients to trade futures, options, cash, and over-the-counter (OTC) markets, optimize portfolios, and analyze date It offers a range of global benchmark products across major asset classes, incl interest rates, equity indexes, foreign exchange (FX), agricultural commodities, energy, and metals. Clearing/transaction fees (81% of '19 rev), Market data (11%), and Other (8%) Acq. CBOT Holdings, 7/07, NYMEX, 8/08 Employs 4,360 Off /dir own 1 2% of stock, Cap'l World, 10 0%; Vanguard, 7 9%, BlackRock, 7 1% (3/20 proxy) Inc DE. Chair/CEO· Terrence A Duffy Addr 20 S Wacker Dr , Chicago, IL 60606 Tel 312-930-1000 Internet www cmegroup com

Despite facing operating headwinds, CME Group should make some progress in the near term. The company gained a fair amount of ground in the back half of last year, as the integration of acquisitions took hold. Ultimately, it closed 2019 on solid footing with share earnings climbing 4%, on a 13% revenue advance for the full year. Looking ahead, we imagine the exchange operator will persist and build on these gains, regardless of ongoing macroeconomic pressures and increased market volatility following the onslaught of the novel coronavirus pandemic across the globe. The company ought to adapt its operations to the changing marketplace. All told, we continue to look for the top and bottom lines to increase at a low single-digit clip this year and next.

The company has been better positioning itself for the long haul. CME has been building on synergies from the NEX Group acquisition (completed in late 2018). And it has focused on increasing efficiencies across its platforms and businesses, which ought to bolster margins moving forward. Looking ahead, we believe that management will focus on technological enhancements, to roll out innovative new products and improving client services. In addition, CME should continue widening its geographic footprint and diversifying its offerings to extend its market reach.

The board of directors raised the dividend. CME hiked the regular payout 13%, to $0.85 a share in March. The company has a long history of declaring large special dividends during the final quarter of the year (sometimes payable during the first period), though the variable nature of the payout does not ensure predictable returns.

These quality shares do not stand out at this juncture. Since our last review, the issue has fallen a notch in our Timeliness Ranking System, and CME ought to pace the broader market averages in the near term. All in all, the stock pulled back roughly 15% in value since the start of the year, but even at the recent quotation, the equity's capital appreciation potential over the 2023-2025 time frame is nothing to write home about.

Orly Seidman *April 10, 2020*

(A) Through '05, rev are net of securities lending int expense (B) Based on dil shs. EPS may not sum due to rounding Excl n/r items '07, (72¢), '08, ($3 88), '09, (88¢) Next earnings report due late Apr (C) Div'ds hist paid in late Mar , Jun , Sept , and Dec Special divd's 10/10/08. $5 00, 3/26/12 $3.00, 12/28/12, $1 30, 1/14/14 $2 60, 1/13/15 $2 00, 1/12/16 $2 90, 1/12/17 $3 25, 1/28/18 $1 75, 1/16/19 $1 75, 1/15/20 $2.50 (D) Incl. intang In 2019: $33 035 bill , $92 41/sh (E) In mill , adj for split (F) Incl. collateral from securities lending.

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	75
Earnings Predictability	35

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COOPER COS. NYSE-COO

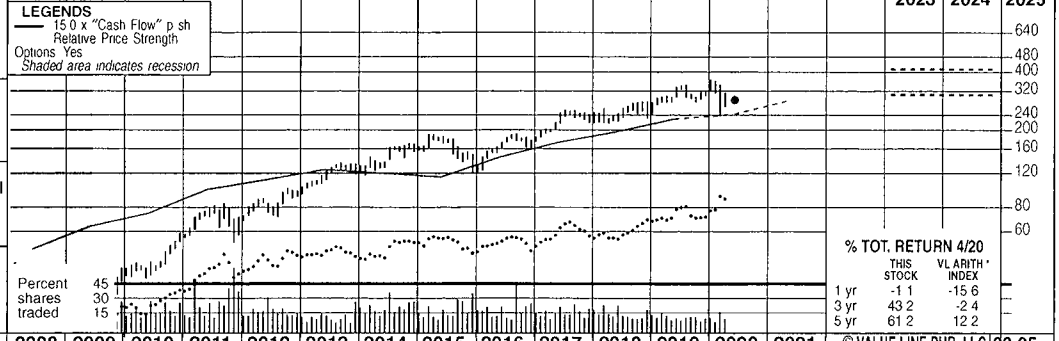
RECENT PRICE 287.09 | P/E RATIO 23.6 (Trailing: 31.6 Median: 25.0) | RELATIVE P/E RATIO 1.42 | DIV'D YLD Nil | VALUE LINE

TIMELINESS 3 Lowered 3/20/20
SAFETY 2 Raised 2/20/15
TECHNICAL 2 Raised 4/24/20
BETA .95 (1.00 = Market)

High	39.0	59.1	84.2	100.9	135.4	171.5	190.0	191.0	256.4	283.2	344.3	365.7	
Low	16.5	34.3	52.6	68.0	93.5	116.9	121.0	119.3	174.0	216.5	241.7	236.7	

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 15.0 x "Cash Flow" p sh
Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$296-$489	$393 (35%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	415	(+45%)	10%
Low	305	(+5%)	2%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	266	234	234
to Sell	222	252	239
Hld's(000)	47876	47641	47906

% TOT. RETURN 4/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	-1.1	-15.6
3 yr	43.2	-2.4
5 yr	61.2	12.2

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
15.04	17.97	19.10	21.01	23.38	23.88	25.28	27.82	29.83	31.54	33.69	34.86	40.32	43.83	51.48	54.04	*57.45*	*63.10*	Sales per sh A	*72.35*
3.33	3.13	2.84	1.62	3.25	4.27	4.98	6.59	7.42	8.36	8.00	7.66	9.68	11.50	13.04	15.23	*16.10*	*19.10*	"Cash Flow" per sh	*21.60*
2.59	2.04	1.44	d.25	1.43	2.21	2.89	4.50	5.05	5.95	5.51	4.14	5.59	7.52	6.91	9.33	*11.00*	*13.00*	Earnings per sh B	*15.00*
.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	*.06*	*.06*	Div'ds Decl'd per sh E	*.06*
1.24	2.61	3.44	4.06	2.75	2.08	1.61	2.17	2.06	3.54	4.67	4.71	3.13	2.61	3.94	5.95	*4.25*	*6.70*	Cap'l Spending per sh	*4.25*
16.70	28.36	30.66	31.46	31.16	34.05	36.37	40.49	45.69	48.15	50.41	51.74	55.34	65.08	67.23	73.90	*81.65*	*92.00*	Book Value per sh D	*115.95*
32.59	44.90	44.97	45.25	45.48	45.24	45.83	47.85	48.44	50.34	50.98	51.56	48.79	48.80	49.20	49.10	*49.00*	*48.90*	Common Shs Outst'g C	*47.00*
21.2	34.5	36.3	--	25.3	10.7	13.5	15.1	15.6	18.9	25.2	40.5	28.4	28.1	34.4	31.4	*Bold figures are*		Avg Ann'l P/E Ratio	*24.0*
1.12	1.84	1.96	--	1.52	.71	.86	.95	.99	1.06	1.33	2.04	1.49	1.41	1.86	1.72	*Value Line*		Relative P/E Ratio	*1.35*
1%	1%	1%	1%	2%	3%	2%	1%	1%	1%	NMF	NMF	NMF	NMF	NMF	NMF	*estimates*		Avg Ann'l Div'd Yield	*NMF*

CAPITAL STRUCTURE as of 1/31/20
Total Debt $1776.7 mil. Due in 5 Yrs $1776.7 mil.
LT Debt $1233.7 mil. LT Interest $81.2 mil.
(33% of Cap'l)

Leases, Operating $37.5 million

Pension Assets-10/19 $136.0 mil.
Oblig. $189.7 mil.

Common Stock 53,330,450 shs.
as of 2/26/20

MARKET CAP: $15.7 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
1158.5	1330.8	1445.1	1587.7	1717.8	1797.1	1966.8	2139.0	2532.8	2653.4	*2815*	*3085*	Sales ($mill) A	*3400*
24.5%	26.9%	27.3%	28.5%	28.0%	23.8%	26.6%	28.9%	28.6%	30.5%	*31.0%*	*31.5%*	Operating Margin	*34.5%*
94.0	98.1	111.2	125.3	138.2	191.4	198.3	188.4	299.5	281.2	*250*	*300*	Depreciation ($mill)	*310*
134.1	217.4	248.3	295.5	269.9	203.5	273.9	372.9	341.9	466.7	*540*	*635*	Net Profit ($mill)	*705*
11.9%	10.1%	9.7%	7.4%	8.3%	4.8%	7.0%	5.4%	5.4%	2.2%	*29.0%*	*18.0%*	Income Tax Rate	*18.0%*
11.6%	16.3%	17.2%	18.6%	15.7%	11.3%	13.9%	17.4%	13.5%	17.6%	*19.2%*	*20.6%*	Net Profit Margin	*20.7%*
291.8	273.2	395.3	425.9	349.4	272.6	398.0	557.1	554.4	52.8	*675*	*155*	Working Cap'l ($mill)	*1050*
592.0	327.5	348.4	301.7	1280.8	1105.8	1107.4	1149.3	1985.7	1262.6	*2250*	*2100*	Long-Term Debt ($mill)	*2500*
1666.8	1937.5	2213.2	2423.5	2569.9	2667.5	2699.9	3175.7	3307.6	3628.4	*4000*	*4500*	Shr. Equity ($mill)	*5450*
6.8%	10.0%	9.9%	11.0%	7.1%	5.6%	7.5%	9.0%	7.2%	10.2%	*9.5%*	*10.0%*	Return on Total Cap'l	*10.0%*
8.0%	11.2%	11.2%	12.2%	10.5%	7.6%	10.1%	11.7%	10.3%	12.9%	*13.5%*	*14.0%*	Return on Shr. Equity	*13.0%*
7.9%	11.1%	11.1%	12.1%	10.4%	7.5%	10.0%	11.7%	10.2%	12.8%	*13.5%*	*14.0%*	Retained to Com Eq	*13.0%*
2%	1%	1%	1%	1%	1%	1%	1%	1%	1%	*1%*	*1%*	All Div'ds to Net Prof	*NMF*

CURRENT POSITION ($MILL.)	2018	2019	1/31/20
Cash Assets	77.7	89.0	76.8
Receivables	374.7	435.3	408.0
Inventory	468.8	506.9	526.5
Other	169.7	132.2	138.6
Current Assets	1090.9	1163.4	1149.9
Accts Payable	146.4	150.1	141.7
Debt Due	37.1	563.7	543.0
Other	353.0	396.8	383.8
Current Liab	536.5	1110.6	1068.5

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	8.0%	9.5%	*8.0%*
"Cash Flow"	16.0%	11.0%	*11.0%*
Earnings	21.5%	7.5%	*14.5%*
Dividends	--	--	*Nil*
Book Value	8.0%	7.5%	*11.0%*

Fiscal Year Ends	QUARTERLY SALES ($ mill.) A Jan.31	Apr.30	Jul.31	Oct.31	Full Fiscal Year
2017	499.1	522.4	556.0	561.5	2139.0
2018	590.0	631.3	660.0	651.5	2532.8
2019	628.1	654.3	679.4	691.6	2653.4
2020	646.2	*699.6*	*739.6*	*729.6*	*2815*
2021	*725*	*760*	*800*	*800*	*3085*

Fiscal Year Ends	EARNINGS PER SHARE A B Jan.31	Apr.30	Jul.31	Oct.31	Full Fiscal Year
2017	1.53	2.12	2.09	1.78	7.52
2018	1.63	1.23	2.03	2.02	6.91
2019	2.07	2.45	2.40	2.42	9.33
2020	1.82	*2.86*	*3.11*	*3.21*	*11.00*
2021	*3.00*	*3.25*	*3.30*	*3.45*	*13.00*

Cal-endar	QUARTERLY DIVIDENDS PAID E Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.03	--	.03	--	.06
2017	.03	--	.03	--	.06
2018	.03	--	.03	--	.06
2019	.03	--	.03	--	.06
2020	.03				

BUSINESS: The Cooper Companies has two operating segments. CooperVision (74% of 2019 revenues) manufactures and markets soft contact lenses for the worldwide vision correction market. Specializes in lenses for astigmatism, presbyopia, and ocular dryness. Cooper Surgical (26%) develops and markets medical devices, diagnostic products, and surgical instruments and accessories used primarily by gynecologists and obstetricians. Purchased PARAGARD, 11/17, Sauflon Pharm., 8/14, Ocular Sci., 1/05. Employs 11,800. Off./dir. own 1.7% of stock, T. Rowe Price, 11.5%, Vanguard, 10.5% (2/19 Proxy). Chair.: A.T. Bernder, CEO & Pres.: A. White. Inc.: DE. Addr.: 6140 Stoneridge Mall Rd., Pleasanton, CA 94588. Tel.: 949-597-4700. Internet: www.coopercos.com.

The Cooper Companies reported mixed first-quarter results for 2020. Share net came in at $1.82, which was well below our $2.30 estimate, and 12% lower than the previous-year period. However, sales increased 3%, year over year, to $646.2 million, owing to a 3% advance at the Cooper Visions unit and a 2% gain at Cooper Surgical. These segments reported sales of $465.2 million and $161 million, respectively.

Our near-term view remains in line with company guidance. For fiscal 2020, Cooper still expects total revenues to range between $2.77 billion and $2.82 billion, which is consistent with our top-line call. The company continues to see Cooper Visions as its primary growth driver, and expects it to generate between $2.0 billion to $2.1 billion revenue in fiscal 2020.

The company announced a new five-year $2.14 billion senior credit facility. The credit facility is comprise of a $1.29 billion revolving line of credit and a $1.0 billion term loan. Proceeds from the refinancing will be used to retire all indebtedness under the company's existing $1.0 billion term loan. Notably, this new loan is 25 basis points lower than Coopers' previous borrowing rate. The facility also extends maturity dates, reduces pricing, and provides additional funds that can be readily available.

Looking ahead, the company is well positioned for consistent growth. With Cooper having available capital to expand its product arsenal, the company ought to progress harmoniously in its respective segments. Importantly, Cooper is an industry leader in the surgical and vision spaces, and we expect that it will maintain its favorable position over the years ahead.

Cooper Companies is ranked 3 (Average) for Timeliness. Our 3- to 5-year earnings prospects appear to be auspicious, as well. Notably, the company holds an A for Financial Strength and a 2 for Safety, which are favorable attributes during uncertain macroeconomic conditions. Due to the recent global pandemic, shares of Cooper Companies have fallen. However, at the current discounted price, we believe it would be an opportunistic time for buy-and-hold investors to purchase shares of COO.

Gabriel Muenzer *May 15, 2020*

(A) Fiscal year ends October 31st.
(B) Diluted earnings. Excludes non-recurring (charges)/gain: '05, ($0.10); '06, ($0.34); '07, ($2.37); '08, ($0.83); '09, ($0.08); '10, ($0.46); '11, $0.13; '18,($4.12). GAAP as of '14. Next earnings report due early June. (C) In millions.
(D) Includes intangibles. On 1/31/20: $3,963.4 billion, $80.27 a share.
(E) Dividends paid Feb. and early Aug.

Company's Financial Strength	A
Stock's Price Stability	85
Price Growth Persistence	100
Earnings Predictability	60

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DOLBY LABORATORIES NYSE-DLB

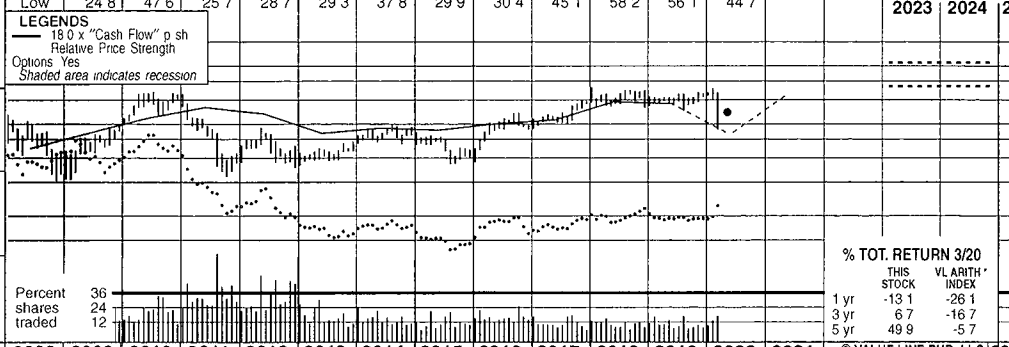
RECENT PRICE 55.11 | P/E RATIO 26.7 (Trailing: 27.8 Median: 22.0) | RELATIVE P/E RATIO 2.74 | DIV'D YLD 1.6% | VALUE LINE

TIMELINESS 3 Lowered 8/16/19
SAFETY 2 Raised 4/20/18
TECHNICAL 3 Lowered 4/10/20
BETA 95 (1 00 = Market)

High	48 0	70 1	68 9	45 8	38 9	47 3	43 6	55 0	63 3	74 3	70 2	73 2	
Low	24 8	47 6	25 7	28 7	29 3	37 8	29 9	30 4	45 1	58 2	56 1	44 7	

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 18 0 x "Cash Flow" p sh
Relative Price Strength
Options Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$58-$92	$75 (35%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	100	(+80%)	17%
Low	75	(+35%)	10%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	147	155	171
to Sell	159	147	128
Hld's(000)	59287	59468	59566

% TOT. RETURN 3/20

	THIS STOCK	VL ARITH* INDEX
1 yr	-13 1	-26 1
3 yr	6 7	-16 7
5 yr	49 9	-5 7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
--	3 16	3 65	4.37	5 69	6 32	8 25	8 79	9 04	8 94	9 39	9 61	10 11	10 59	11.35	12 40	*12.00*	*13.65*	Revenues per sh A	*15.65*
--	61	95	1.43	1.99	2 39	2 85	3.25	3.01	2 38	2 54	2 48	2 67	2 80	3 47	3 40	*2.35*	*3.85*	"Cash Flow" per sh	*5.10*
--	50	80	1.26	1 74	2 11	2 46	2 75	2 46	1 84	1 99	1 75	1 81	1 95	2.59	2 44	*1 50*	*2.90*	Earnings per sh A B	*4.00*
--	--	--	--	--	--	--	--	--	--	--	40	48	56	64	76	*.88*	*.96*	Div'ds Decl'd per sh E	*1.40*
--	14	08	10	12	12	34	44	1 63	26	77	1 56	99	98	71	96	*1.00*	*1.10*	Cap'l Spending per sh	*1.25*
--	4 44	5 54	7 23	9 33	11 78	13.17	15 30	16 79	14 55	16 72	17 89	19 43	20 92	21 21	23 04	*23.15*	*24.60*	Book Value per sh C	*29.35*
--	103 91	107 26	110 25	112 47	113 85	111 86	108 74	102 44	101 76	102 29	101 04	101 42	102 16	103 24	100 14	*100.00*	*99.00*	Common Shs Outst'g D	*96.00*
--	39 8	24 7	25 2	24 7	16 2	22 4	18 4	14 6	17 8	20 6	22 3	23 0	25 7	24 6	26 4	*Bold figures are*		Avg Ann'l P/E Ratio	*22.0*
--	2 12	1.33	1.34	1 49	1 08	1 42	1 15	93	1 00	1 08	1 12	1 21	1 29	1.33	1 45	*Value Line*		Relative P/E Ratio	*1.20*
--	--	--	--	--	--	--	--	--	--	--	1 0%	1 2%	1 1%	1 0%	1 2%	*estimates*		Avg Ann'l Div'd Yield	*1.1%*

CAPITAL STRUCTURE as of 12/27/19
Total Debt None

Leases, Uncapitalized· Annual rentals $17 3 mill

No Defined Benefit Pension Plan

Pfd Stock None

Common Stock 100,968,980 shs as of 1/24/20
Includes 36,224,820 Class B shs.
(Each Class B share entitled to 10 votes)

MARKET CAP: $5.6 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
922 7	955 5	926 3	909.7	960.2	970 6	1025 7	1081 5	1171 9	1241 6	*1200*	*1350*	Revenues ($mill) A	*1500*
50 3%	49 6%	43 8%	32 8%	34.1%	29 1%	30.9%	32 0%	32 5%	30 5%	*22.0%*	*31.0%*	Operating Margin	*35.0%*
34 9	44 0	43 9	53 2	53 3	69 1	85 2	84 3	81 3	85 1	*85.0*	*95.0*	Depreciation ($mill)	*105*
283 4	309 3	264 3	189 3	206 1	181 4	185 9	201 8	276 8	255 2	*150*	*285*	Net Profit ($mill)	*385*
35 3%	29 5%	28 1%	24 1%	24.4%	25 4%	21 0%	21 1%	11 3%	9 5%	*19.5%*	*21.0%*	Income Tax Rate	*21.0%*
30 7%	32 4%	28 5%	20 8%	21.5%	18.7%	18.1%	18 7%	23 6%	20 5%	*12.5%*	*21.3%*	Net Profit Margin	*25.6%*
894 6	999 2	813 5	639.9	816 5	708.6	546 6	765 6	1029 9	1074 6	*1020*	*1075*	Working Cap'l ($mill)	*1240*
--	--	--	--	--	--	--	--	--	--	*Nil*	*Nil*	Long-Term Debt ($mill)	*Nil*
1473 7	1663 5	1720 3	1481 1	1710 0	1807 1	1970 3	2136 7	2189 6	2307.4	*2315*	*2435*	Shr. Equity ($mill)	*2815*
19 2%	18 6%	15 4%	12 8%	12 1%	10 0%	9 4%	9 4%	12 6%	11 1%	*6.5%*	*12.0%*	Return on Total Cap'l	*13.5%*
19 2%	18 6%	15.4%	12 8%	12 1%	10 0%	9 4%	9 4%	12 6%	11 1%	*6.5%*	*12.0%*	Return on Shr. Equity	*13.5%*
19 2%	18 6%	15 4%	12 8%	12 1%	7 8%	7 0%	6 8%	9 6%	7 7%	*2.5%*	*8.0%*	Retained to Com Eq	*9.0%*
--	--	--	--	--	23%	26%	28%	24%	30%	*59%*	*33%*	All Div'ds to Net Prof	*35%*

CURRENT POSITION ($MILL.)	2018	2019	12/27/19
Cash Assets	1103 4	924 7	923 4
Receivables	137.2	189.1	191.0
Inventory (Avg Cst)	26.2	32.3	29 1
Other	35 2	235 4	257.5
Current Assets	1302 0	1381.5	1401 0
Accts Payable	21 9	15.2	13 7
Debt Due	--	--	--
Other	250 2	291 7	279.8
Current Liab	272 1	306 9	293 5

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	7 5%	4 5%	*5 5%*
"Cash Flow"	5 0%	4 0%	*8.0%*
Earnings	3 0%	2 0%	*9 5%*
Dividends	--	--	*13.5%*
Book Value	8 5%	6 5%	*6 0%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) A Dec.Per	Mar.Per	Jun.Per	Sep.Per	Full Fiscal Year
2017	266 3	267 5	305 7	242 0	1081 5
2018	287 8	301 4	317 4	265 3	1171 9
2019	302 4	338 2	302 2	298 8	1241 6
2020	291.9	*300*	*300*	*308.1*	*1200*
2021	*325*	*350*	*350*	*325*	*1350*

Fiscal Year Ends	EARNINGS PER SHARE A B Dec.Per	Mar.Per	Jun.Per	Sep.Per	Full Fiscal Year
2017	51	49	73	22	1 95
2018	69	66	78	46	2 59
2019	93	70	38	43	2 44
2020	47	*.30*	*.30*	*.43*	*1.50*
2021	*.60*	*.85*	*.85*	*.60*	*2.90*

Cal-endar	QUARTERLY DIVIDENDS PAID E Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	12	12	12	14	50
2017	14	14	14	16	.58
2018	16	16	16	19	67
2019	19	19	19	22	79
2020	22				

BUSINESS: Dolby Laboratories, Inc designs and supplies technologies for entertainment in the home, theater, car, and elsewhere The company develops sound technologies that create a more enjoyable listening experience and are used in movie soundtracks, DVDs, television, satellite and cable broadcasts, video games, and personal computers that provide surround sound and noise reduction. '19 international revenues 64% Has approximately 2,193 employees. Dagmar Dolby owns 99 8% of Class B shares and controls 85 0% of voting rights (12/19 Proxy). Chairman Peter Gotcher. President and CEO Kevin Yeaman Incorporated Delaware Address 100 Potrero Avenue, San Francisco, CA, 94103 Telephone 415-588-0200. Internet www dolby com

Dolby Laboratories likely posted weak fiscal second-quarter results (period ended March 27th). Revenues probably fell 11% from the prior-year period to $300 million, as the continued adoption of Dolby Atmos and Dolby Vision in the broadcast segment was offset by soft performances in a few other businesses. The coronavirus caused movie theaters to shut down in the United States and China, which probably caused lower Dolby Cinema revenues despite the technology being in more locations Reduced automotive-related revenues likely occurred due to the shutdown of several automaker production facilities. However, gaming-related income was probably higher at the end of the quarter due to more sales of systems. Gross margins have reached as high as 90%, though the company likely incurred higher costs, including SG&A and marketing expenses. These factors probably caused profits to drop to $0.30 per share during the period. The company will likely show additional weakness this year due to the effects of the coronavirus before its performance starts to potentially pick up. Overall, we have reduced our fiscal 2020 revenue outlook by $70 million, to $1.2 billion, and our share-net estimate by $1.20, to $1.50.

The long-term outlook is much brighter. Dolby's technology is being integrated into more broadcasts, and a growing number of sporting events will help drive revenue growth Too, Dolby Atmos will be in around 5,000 movie theaters, as customers have committed to installing that many. While many theatrical releases have been delayed recently, the eventual rollout of these titles ought to help the movie industry bounce back. What's more, the Dolby Vision product should be used in more 4K televisions in the coming years. Overall, we see earnings reaching $2.90 per share in 2021 and $4.00 per share by the 2023-2025 period.

Shares of Dolby are neutrally ranked for Timeliness. This stock holds below-average 3- to 5-year appreciation potential, having slipped less than the broader market in the past three months. The dividend yield is modest, too. However, Dolby's strong finances are a positive amid the difficult market conditions.

John E. Seibert III *April 17, 2020*

(A) Fiscal year ends last Friday in September
(B) Diluted earnings per share May not sum due to rounding Next egs report due late April. Excl. nonrecur. (loss) '18, ($1 55).
(C) Incl intangibles In 2019 $515 2 million, $5 14 per share
(D) In millions.
(E) Qtly dividend initiated 11/14 Dividends paid in February, May, August, and November Company paid a special dividend of $4 00/share on December 27, 2012.

Company's Financial Strength	A
Stock's Price Stability	85
Price Growth Persistence	35
Earnings Predictability	70

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LAUDER (ESTEE) COS. NYSE-EL

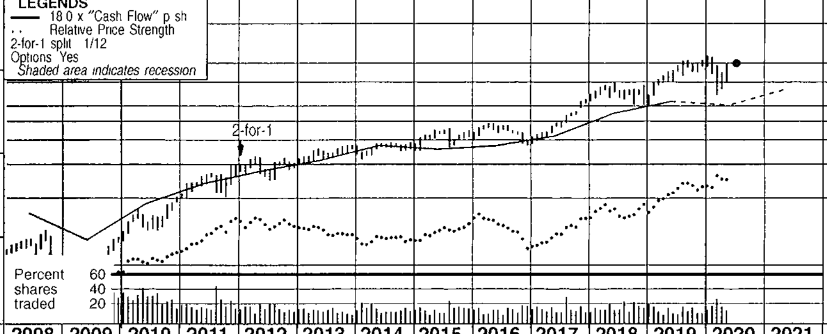
RECENT PRICE **200.43** | P/E RATIO **36.3** (Trailing: 38.0 Median: 25.0) | RELATIVE P/E RATIO **1.84** | DIV'D YLD **Nil** | **VALUE LINE**

TIMELINESS **2** Lowered 6/5/20
SAFETY **2** Raised 1/4/02
TECHNICAL **3** Lowered 6/12/20
BETA .90 (1.00 = Market)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High	25 3	40 7	60 4	65 6	75 8	78 0	91 7	97 5	130 4	158 8	208 3
Low	9 9	23 8	39 8	49 8	59 9	63 6	70 4	75 3	76 3	121 6	121 5

(Last column: High 220 4, Low 137.0)

LEGENDS
— 18.0 x "Cash Flow" p sh
.. Relative Price Strength
2-for-1 split 1/12
Options: Yes
Shaded area indicates recession



18-Month Target Price Range
Low-High: $123-$265 | Midpoint (% to Mid): $194 (-5%)

Target Price Range 2023 | 2024 | 2025

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	245	(+20%)	6%
Low	180	(-10%)	-2%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	443	467	411
to Sell	415	428	527
Hld's(000)	202069	198891	201630

% TOT. RETURN 5/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	23 5	-1 3
3 yr	116.1	5 2
5 yr	139 4	18 7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
12 79	14.34	15 26	18.11	20 32	18 62	19 80	22 59	25 09	26 28	28 77	28 76	30 62	32 12	37 27	41 16	*41.85*	*48.05*	Sales per sh A	*60.00*
1 25	1 43	1 45	1 69	1 86	1 35	2 08	2 66	3 09	3 50	4 17	4 00	4 16	4 65	6 06	7 02	*6.75*	*8.20*	"Cash Flow" per sh	*10.20*
82	95	96	1 08	1 20	71	1 38	1 85	2 27	2 58	3.06	2 82	2 96	3 35	4 51	5.34	*5.20*	*6.60*	Earnings per sh A	*8.50*
15	20	20	25	28	28	28	38	53	1 08	78	92	1 14	1 32	1 48	1 72	*Nil*	*1.97*	Div'ds Decl'd per sh E	*2.60*
46	52	62	80	92	71	69	90	1 09	1 19	1.34	1 26	1.43	1 37	1.71	2.06	*.85*	*1.50*	Cap'l Spending per sh	*1.75*
3 83	3 83	3 83	3 09	4 25	4 17	4 95	6 74	7 06	8 48	10.11	9 72	9 71	11.91	12.77	12.15	*12.20*	*12.85*	Book Value per sh B	*14.30*
452.88	441 98	423 56	388 54	389 22	393.40	393 67	389 93	387 20	387 41	381.31	374 88	367 76	368 10	367 15	361.10	*360.00*	*358.00*	Common Shs Outst'g C	*350.00*
24 5	22 8	19 2	19 9	18 4	24 3	18 1	21 6	24 1	24.2	23 2	27 9	29.7	25 9	28.2	27 7	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*25.0*
1 29	1 21	1 04	1 06	1 11	1 62	1 15	1 35	1 53	1 36	1 22	1 40	1 56	1 30	1 52	1 49			Relative P/E Ratio	*1.40*
8%	9%	1 1%	1 2%	1.2%	1 6%	1 1%	9%	1.0%	1 7%	1 1%	1 2%	1 3%	1 5%	1 2%	1.2%			Avg Ann'l Div'd Yield	*1.3%*

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
7795 8	8810.0	9713 6	10182	10969	10780	11262	11824	13683	14863	*15070*	*17200*	Sales ($mill)	*21000*
14 9%	16 7%	17 2%	18 6%	20 2%	18 7%	18 0%	18 2%	20 4%	21.5%	*19.0%*	*19.0%*	Operating Margin	*19.5%*
263 7	294 4	295 8	336 9	384 6	409 3	414 7	464.0	531.0	557 0	*565*	*575*	Depreciation ($mill)	*590*
555 1	741.7	900 9	1019 8	1204 1	1088 9	1114 6	1249 0	1695 0	1977 0	*1870*	*2365*	Net Profit ($mill)	*2975*
29 9%	33 1%	31 5%	30 6%	32 0%	29 9%	27 9%	22 3%	22 3%	21.5%	*23.0%*	*23.0%*	Income Tax Rate	*23.0%*
7 1%	8 4%	9 3%	10 0%	11 0%	10 1%	9 9%	10 6%	12 4%	13 3%	*12.4%*	*13.8%*	Net Profit Margin	*14.2%*
1548 8	1743 2	1729 3	2362 6	2768 5	2332 9	1544 6	2141 0	2858 0	2607 0	*3400*	*3500*	Working Cap'l ($mill)	*3700*
1205 0	1080 1	1069 1	1326 0	1324 7	1607 5	1910 0	3383 0	3361 0	2896 0	*4600*	*4500*	Long-Term Debt ($mill)	*3800*
1948 4	2629 4	2733 2	3286.9	3854.9	3643 2	3571 9	4384 0	4688.0	4386 0	*4400*	*4600*	Shr. Equity ($mill)	*5000*
18.8%	20 8%	24 5%	22.7%	23 7%	21 3%	21 0%	16 7%	21 8%	28 0%	*21.0%*	*26.0%*	Return on Total Cap'l	*34.0%*
28 5%	28 2%	33 0%	31 0%	31.2%	29.9%	31 2%	28 5%	36 2%	45 1%	*43.0%*	*51.0%*	Return on Shr. Equity	*59.0%*
22 9%	22 6%	25 5%	18 3%	23 4%	20 3%	19 4%	17 4%	24 5%	31 2%	*28.0%*	*30.0%*	Retained to Com Eq	*45.0%*
20%	20%	23%	41%	25%	32%	38%	39%	32%	31%	*Nil*	*30%*	All Div'ds to Net Prof	*31%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $6201 0 mill **Due in 5 Yrs** $1749 0 mill.
LT Debt $4674 0 mill **LT Interest** $138 0 mill
(52% of Cap'l)
Leases, Uncapitalized Annual rentals $421 0 mill
Pension Assets-6/19 $1409 0 mill **Oblig.** $1597.0 mill
Pfd Stock None
Common Stock 359,998,626 shs as of 4/24/20
(Class A 224,763,197 shs., Class B 135,235,429 shs., have 10 votes and are conv into Cl A shs on a share-for-share basis.)
MARKET CAP: $72.2 billion (Large Cap)

CURRENT POSITION ($MILL.)	2018	2019	3/31/20
Cash Assets	2715	2987	4876
Receivables	1487	1831	1846
Inventory (FIFO)	1618	2006	2087
Other	348	388	424
Current Assets	6168	7212	9233
Accts Payable	1182	1490	1162
Debt Due	183	516	1527
Other	1945	2599	2992
Current Liab	3310	4605	5681

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	7 0%	6.5%	*9 0%*
"Cash Flow"	13 5%	10.5%	*12 0%*
Earnings	16 0%	11 0%	*14 0%*
Dividends	19.0%	13.5%	*12.0%*
Book Value	12.5%	7 5%	*4 0%*

Fiscal Year Ends	QUARTERLY SALES ($ mill.) A D Sep.30	Dec.31	Mar.31	Jun.30	Full Fiscal Year
2017	2865	3208	2857	2894	11824
2018	3274	3744	3370	3295	13683
2019	3524	4005	3744	3590	14863
2020	3895	4624	3345	*3206*	*15070*
2021	*4200*	*4995*	*3930*	*4075*	*17200*

Fiscal Year Ends	EARNINGS PER SHARE A D Sep.30	Dec.31	Mar.31	Jun.30	Full Fiscal Year
2017	79	1 15	80	61	3 35
2018	1 21	1 52	1 17	61	4 51
2019	1 41	1 74	1 55	64	5 34
2020	1 67	2 11	85	*.57*	*5.20*
2021	*1.85*	*2.25*	*1.70*	*.80*	*6.60*

Cal-endar	QUARTERLY DIVIDENDS PAID E Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	30	30	30	34	1.24
2017	34	34	34	38	1.40
2018	38	38	38	.43	1 57
2019	43	43	43	48	1 77
2020	48				

BUSINESS: The Estee Lauder Companies Inc makes and markets skin care, makeup, fragrance, and hair care products worldwide. Brand names include *Estee Lauder*, *Clinique*, *Aramis*, *Prescriptives*, *Origins*, *M.A.C*, *Bobbi Brown essentials*, and *Aveda*. EL is the global licensee for *Tommy Hilfiger* fragrances and cosmetics. Sells mostly through upscale dept. stores and perfumeries, specialty retailers, and pharmacies. Int'l bus. 96% of '19 op. inc., 68% of sales. Sales by product: makeup, 39.0%, skin care, 44.0%, frag., 12.0%, hair care, 5.0%, Has about 48,000 employees. Off. & dir. control 30.7% of voting stock (10/19 Proxy). Chairman: William P. Lauder. CEO: Fabrizio Freda. Inc.: DE. Addr.: 767 Fifth Ave., NY, NY 10153. Tel.: 212-572-4200. Internet: www.elcompanies.com.

Estee Lauder's fiscal third-quarter (year ends June 30th) fortunes were battered by the COVID-19 pandemic. The company posted March-interim earnings of $0.85 a share, well below our estimate and the year-ago result, on an 11% drop in sales. Excluding the impact of foreign currency, net sales dipped 9%. A lion's share of this lackluster top-line comparison may be attributed to the closure of retail stores that came about due to the coronavirus pandemic. The only real bright spot during the March interim was the inclusion of sales from the company's recent acquisition of Have&Be Co. Ltd., a Seoul-based, global skin care company behind Dr. Jart+ and men's grooming brand Do The Right Thing, which contributed about two percentage points to reported net sales. And Lauder expects the majority of retail stores to remain closed in the final stanza of fiscal 2020, with traffic bouncing back when stores reopen around the world. As a result, we have trimmed our fiscal 2020 share net estimate by $0.55, to $5.20 a share, on sales of $15.07 billion, down from our earlier call of $15.9 billion.

And the company has taken a number of steps to maintain capital. To wit, Lauder expects to pare capital investments by roughly $250 million to $300 million in the current fiscal year. Notably, tothe company has temporarily ceased repurchases of its class A common stock and suspended the quarterly cash dividend that was slated to be paid this June. Moreover, Lauder raised an additional $2.2 billion of cash by borrowing the full amount under its $1.5 billion revolving credit facility and issued $700 million of senior unsecured notes.

Short-term investors may find this an attractive entry point. Indeed, this stock carries a Timeliness rank of 2 (Above Average), making it a recommended choice for the coming six to 12 months.

On the other hand, we suggest those with an eye toward 2023-2025 wait on the sidelines for the time being. Despite a 9% drop in its value since our mid-March review (versus a 1.4% uptick in the S&P 500 Index over the same period), the equity still offers uninspiring long-term capital-appreciation potential.

Kenneth A. Nugent *June 12, 2020*

(A) Diluted earnings. Fiscal year ends June 30th. Excl. non-rec. losses: '06, ($0.15), '09, ($0.31); '10, ($0.38); disc. ops., '04, ($0.14); '06, ($0.43), '11, ($0.21), '16, ($0.03). Next earnings report due Aug 20th. (B) Includes intangibles. In '19: $3,071.0 mill., $8.51/share. (C) In millions, adjusted for stock split. (D) Year-end sales or earnings may not tally due to rounding. (E) Dividend paid in fourth quarter through 2012, quarterly thereafter. Div'd suspended on May 1st, 2020.

Company's Financial Strength	A
Stock's Price Stability	90
Price Growth Persistence	85
Earnings Predictability	80

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ESCO TECHNOLOGIES NYSE-ESE

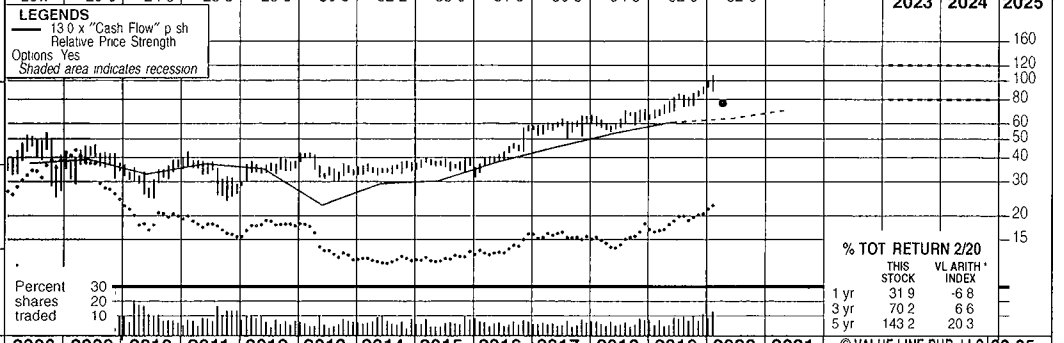
RECENT PRICE 76.55 | P/E RATIO 23.6 (Trailing: 24.8 / Median: 22.0) | RELATIVE P/E RATIO 1.79 | DIV'D YLD 0.4% | VALUE LINE

TIMELINESS 3 Lowered 2/14/20
SAFETY 3 New 1/31/03
TECHNICAL 3 Lowered 4/3/20
BETA .95 (1.00 = Market)

High	46.9	39.1	43.2	39.5	42.4	38.4	40.0	58.8	65.9	71.5	93.2	107.1
Low	29.0	24.5	23.8	28.5	30.3	32.2	33.6	31.5	50.3	54.3	62.9	62.6

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 13.0 x "Cash Flow" p sh
Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$62-$120	$91 (20%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	120	(+55%)	12%
Low	80	(+5%)	2%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	86	95	98
to Sell	77	74	84
Hld's(000)	24693	24561	24688

Percent shares traded 30 20 10

% TOT. RETURN 2/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	31.9	-6.8
3 yr	70.2	6.6
5 yr	143.2	20.3

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
16.37	16.79	17.74	20.49	23.91	23.44	22.92	26.04	25.83	18.53	20.27	20.81	22.22	26.55	29.78	31.29	*30.40*	*33.40*	Sales per sh A	*40.00*
1.97	2.18	1.88	2.23	2.88	3.01	2.53	2.85	2.69	1.74	2.25	2.34	2.91	3.48	4.11	4.70	*4.90*	*5.45*	"Cash Flow" per sh	*7.05*
1.46	1.66	1.19	1.34	1.80	1.86	1.68	1.95	1.73	1.17	1.60	1.59	1.98	2.22	2.76	3.13	*3.25*	*3.65*	Earnings per sh AB	*5.00*
--	--	--	--	--	--	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32	*.32*	*.32*	Div'ds Decl'd per sh C	*.36*
.47	.67	1.43	1.93	1.10	.54	.51	.51	.55	.52	.49	.48	.54	1.15	1.16	1.75	*1.75*	*1.60*	Cap'l Spending per sh	*2.00*
11.93	12.95	14.55	16.14	17.95	19.59	20.98	22.55	23.69	22.75	22.14	22.63	23.92	26.01	29.31	31.80	*36.55*	*39.00*	Book Value per sh D	*48.00*
25.78	25.56	25.87	25.74	26.09	26.41	26.50	26.64	26.65	26.45	26.21	25.82	25.72	25.83	25.91	25.98	*26.00*	*25.00*	Common Shs Outst'g E	*25.00*
17.0	25.6	40.9	31.9	23.3	20.5	19.3	18.2	19.1	31.0	21.6	23.2	19.7	25.2	22.1	22.7	*Bold figures are*		Avg Ann'l P/E Ratio	*20.0*
.90	1.36	2.21	1.69	1.40	1.37	1.23	1.14	1.22	1.74	1.14	1.17	1.03	1.27	1.19	1.24	*Value Line*		Relative P/E Ratio	*1.10*
--	--	--	--	--	--	1.0%	.9%	1.0%	.9%	.9%	.9%	.8%	.6%	.5%	.5%	*estimates*		Avg Ann'l Div'd Yield	*.4%*

CAPITAL STRUCTURE as of 12/31/19
Total Debt $150.0 mill. Due in 5 Yrs $20.0 mill
LT Debt $130.0 mill. LT Interest $8.0 mill
(Total interest coverage: 7.1x) (12% of Cap'l)

Leases, Uncapitalized: Annual rentals $6.4 mill.
Pension Assets-9/19 $77.2 mill. Oblig. $100.1 mill.
Preferred Stock None
Common Stock 25,989,029 shares as of 1/31/20

MARKET CAP: $2.0 billion (Mid Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
607.5	693.7	688.4	490.1	531.1	537.3	571.5	685.7	771.6	813.0	*790*	*835*	Sales ($mill) A	*1000*
16.2%	14.1%	12.1%	16.2%	16.7%	17.1%	19.7%	17.8%	18.6%	18.9%	*21.0%*	*21.0%*	Operating Margin	*22.5%*
22.1	23.5	24.8	14.8	16.4	18.6	23.6	32.2	37.8	40.1	*45.0*	*45.5*	Depreciation ($mill)	*51.0*
44.9	52.5	46.9	31.3	42.6	41.7	51.3	57.6	68.6	81.9	*83.0*	*91.0*	Net Profit ($mill)	*125*
35.6%	31.8%	34.6%	37.0%	31.5%	32.2%	30.5%	33.2%	26.7%	20.5%	*24.0%*	*24.0%*	Income Tax Rate	*23.0%*
7.4%	7.6%	6.8%	6.4%	8.0%	7.8%	9.0%	8.4%	8.9%	10.1%	*10.5%*	*10.9%*	Net Profit Margin	*12.5%*
109.4	122.6	139.2	163.5	148.9	155.1	165.4	197.8	195.5	243.6	*220*	*225*	Working Cap'l ($mill)	*275*
104.0	75.0	65.0	122.0	20.0	30.0	90.0	255.0	200.0	265.0	*125*	*100*	Long-Term Debt ($mill)	*100*
556.0	600.7	631.3	601.7	580.2	584.2	615.1	671.9	759.4	826.2	*950*	*975*	Shr. Equity ($mill)	*1200*
7.0%	7.9%	6.8%	4.5%	7.2%	6.9%	7.4%	6.4%	7.6%	7.9%	*8.0%*	*9.0%*	Return on Total Cap'l	*10.0%*
8.1%	8.7%	7.4%	5.2%	7.3%	7.1%	8.3%	8.6%	9.0%	9.9%	*8.5%*	*9.5%*	Return on Shr. Equity	*10.5%*
6.9%	7.3%	6.1%	3.8%	5.9%	5.7%	7.0%	7.3%	7.9%	8.9%	*8.0%*	*8.5%*	Retained to Com Eq	*9.5%*
14%	16%	18%	27%	20%	20%	16%	14%	12%	10%	*10%*	*9%*	All Div'ds to Net Prof	*7%*

CURRENT POSITION ($MILL.)	2018	2019	12/31/19
Cash Assets	30.5	61.8	96.7
Receivables	163.7	174.4	160.7
Inventory (FIFO)	135.4	128.8	134.0
Other	66.4	130.2	106.9
Current Assets	396.0	495.2	498.3
Accts Payable	63.0	71.4	53.1
Debt Due	20.0	21.3	20.0
Other	117.5	158.9	178.9
Current Liab.	200.5	251.6	252.0

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '22-'24
Sales	2.5%	6.5%	*5.5%*
"Cash Flow"	4.0%	13.0%	*9.5%*
Earnings	5.0%	12.5%	*11.0%*
Dividends	--	--	*2.0%*
Book Value	5.0%	5.0%	*8.5%*

Fiscal Year Ends	QUARTERLY SALES ($ mill.) A Dec. 31	Mar. 31	Jun. 30	Sep. 30	Full Fiscal Year
2017	146.3	161.2	171.2	207.0	685.7
2018	173.5	174.8	192.2	231.1	771.6
2019	182.6	193.9	199.8	236.7	813.0
2020	171.7	*185*	*195*	*238.3*	*790*
2021	*180*	*205*	*210*	*240*	*835*

Fiscal Year Ends	EARNINGS PER SHARE AB Dec. 31	Mar. 31	Jun. 30	Sep. 30	Full Fiscal Year
2017	.47	.45	.51	.79	2.22
2018	.33	.48	.73	1.22	2.76
2019	.47	.76	.81	1.09	3.13
2020	.43	*.70*	*.90*	*1.22*	*3.25*
2021	*.55*	*.80*	*1.00*	*1.30*	*3.65*

Cal-endar	QUARTERLY DIVIDENDS PAID C Mar. 31	Jun. 30	Sep. 30	Dec. 31	Full Year
2016	.08	.08	.08	.08	.32
2017	.08	.08	.08	.08	.32
2018	.08	.08	.08	.08	.32
2019	.08	.08	.08	.08	.32
2020	.08				

BUSINESS: ESCO Technologies, Inc. is a supplier of special purpose solutions for electric, gas, and water utilities, including hardware and software to support advanced metering applications and intelligent instrumentation. It operates: Aerospace & Defense (40% of fiscal 2019 sales), Utility Solutions Group (26%), Test (23%) and Packaging (11%) segments. Acquired Doble (11/07), LDIC (7/08), Mayday Manufacturing (11/16). Employs about 3,239. Off. & dir. own 2.6% of stock, BlackRock, 16.3%, T. Rowe Price Associates, 11.0%, Vanguard Group, 10.1%, Dimensional Fund Advisors, 6.6% (12/19 Proxy). Chairman & CEO & President: Victor L. Richey. Inc.: MO. Addr.: 9900A Clayton Road, St. Louis, MO 63124. Tel.: 314-213-7200. Internet: www.escotechnologies.com.

ESCO Technologies began fiscal 2020 (year ends September 30th) on a solid note. Indeed, the company registered first-quarter top- and bottom-line tallies above our expectations. The company generated sales of $171.7 million, which bested our call by nearly $7 million and increased 5% on a comparable basis. (ESCO sold its Technical Packaging division earlier this year). The company's largest operating unit, Aerospace and Defense (formerly Filtration), performed the best, rising a hearty 17%. The unit received nice contributions from its business with the U.S. Navy. The remaining operating units did not fare as well, as the Test unit was flat and the Utility Solutions Group (USG) dipped roughly 5%. The subpar USG sales figure was largely the result of the timing of certain customer projects. Meanwhile, adjusted earnings of $0.43 per share beat our target of $0.40. Margins were generally in line with expectations.

We have tweaked our fiscal 2020 estimates and introduced our 2021 figures. We have trimmed $5 million from this year's top-line estimate to $790 million but kept our earnings call intact. The second half of the year should be bolstered by orders for the Columbia Class of submarines. For next fiscal year we are calling for mid-single-digit sales gains and share earnings to advance around 12%. However, it is still too early to gauge what the impact of the coronavirus outbreak will have on ESCO.

Finances are in good shape. The sale of the Technical Packaging unit netted ESCO roughly $160 million. With that cash, the company lowered its debt markedly. What's more, the company will have increased flexibility to pursue strategic acquisitions.

These shares have slipped one notch in our Timeliness Ranking System to 3 (Average). The stock has been reeling of late, primarily due to the recent overall market slump, the result of the coronavirus outbreak, and is only slated to track the broader market averages in the year ahead. Looking further out, 3- to 5-year capital appreciation potential is subpar, based on our long-term earnings projections. Furthermore, the paltry yield will not attract income-oriented accounts.

Kevin P. O'Sullivan *April 10, 2020*

(A) Fiscal years end September 30th.
(B) Diluted earnings. Excludes nonrecurring gains/(losses): '04, 4¢; '07, (6¢); '16, (24¢); '17, (15¢); '18, 78¢; '19, (3¢); '20, (2¢). Excludes discontinued operations: '04, (8¢); '08, (2¢); '13, ($2.13); '20 ($2.91). Next earnings report due early May.
(C) Dividends historically paid late Jan., Apr., July, and Oct. (D) Includes intangibles. In '19: $802.3 mill., $30.88 a share. (E) In millions.

Company's Financial Strength	B+
Stock's Price Stability	80
Price Growth Persistence	50
Earnings Predictability	70

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EXPONENT, INC. NYSE-EXPO

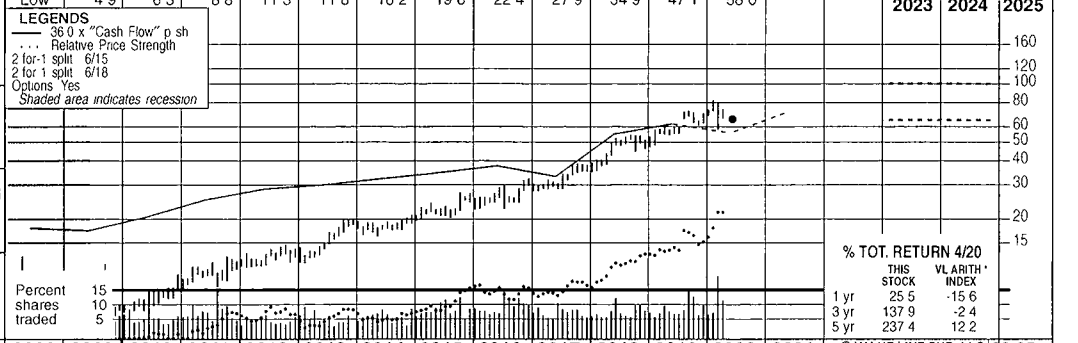
RECENT PRICE 65.77 | P/E RATIO 45.4 (Trailing: 43.0 Median: 27.0) | RELATIVE P/E RATIO 2.58 | DIV'D YLD 1.2% | VALUE LINE 437

TIMELINESS 2 Raised 3/27/20
SAFETY 3 New 2/21/20
TECHNICAL 1 Raised 5/15/20
BETA .85 (1.00 = Market)

High	7.7	10.3	12.8	14.7	20.1	21.0	27.4	32.4	38.6	54.6	72.7	82.8
Low	4.9	6.3	8.8	11.3	11.8	16.2	19.6	22.4	27.9	34.9	47.1	58.0

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 36.0 x "Cash Flow" p sh
... Relative Price Strength
2 for-1 split 6/15
2 for-1 split 6/18
Options: Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$65-$100	$83 (25%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	100	(+50%)	12%
Low	65	(Nil)	1%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	130	129	132
to Sell	111	119	135
Hld's(000)	46386	46643	46643

Percent shares traded 15 10 5

% TOT. RETURN 4/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	25.5	-15.6
3 yr	137.9	-2.4
5 yr	237.4	12.2

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
2.37	2.40	2.86	3.57	4.18	4.15	3.96	4.64	5.05	5.36	5.92	6.08	6.15	6.75	7.37	8.06	*7.20*	*8.45*	Revenues per sh	*10.25*
.25	.27	.30	.42	.50	.48	.57	.70	.79	.83	.90	.97	1.05	.92	1.53	1.72	*1.55*	*2.00*	"Cash Flow" per sh	*2.50*
.18	.20	.21	.31	.37	.37	.46	.56	.65	.69	.74	.80	.88	.77	1.33	1.53	*1.45*	*1.75*	Earnings per sh AD	*2.30*
--	--	--	--	--	--	--	--	--	.15	.25	.30	.36	.42	.52	.64	*.76*	*.84*	Div'ds Decl'd per sh	*1.15*
.04	.05	.05	.06	.10	.04	.04	.07	.09	.12	.10	.10	.28	.09	.32	.45	*.30*	*.35*	Cap'l Spending per sh	*.40*
1.83	2.06	2.11	2.30	2.34	2.73	3.28	3.51	4.10	4.50	4.75	5.11	5.34	5.61	6.10	6.77	*6.65*	*6.90*	Book Value per sh B	*7.85*
64.05	64.77	58.85	57.44	54.76	54.95	55.98	53.20	52.82	52.26	51.48	51.44	51.19	51.54	51.50	51.76	*54.00*	*55.00*	Common Shs Outst'g C	*60.00*
18.0	16.7	19.7	18.6	20.9	18.0	17.0	19.0	19.5	22.8	25.2	28.3	30.1	42.1	34.8	40.0	*Bold figures are*		Avg Ann'l P/E Ratio	*36.0*
.95	.89	1.06	.99	1.26	1.20	1.08	1.19	1.24	1.28	1.33	1.42	1.58	2.12	1.88	2.16	*Value Line*		Relative P/E Ratio	*2.00*
--	--	--	--	--	--	--	--	--	1.0%	1.3%	1.3%	1.4%	1.3%	1.1%	1.0%	*estimates*		Avg Ann'l Div'd Yield	*1.4%*

CAPITAL STRUCTURE as of 4/3/20
Total Debt Nil

Leases, Uncapitalized: Annual rentals $6.9 mil

No Defined Benefit Pension Plan

Pfd Stock None

Common Stock 51,545,910 shares
MARKET CAP: $3.4 billion (Mid Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
221.9	246.7	266.6	280.0	304.7	312.8	315.1	347.8	379.5	417.2	*390*	*465*	Revenues ($mill)	*615*
31.1%	32.9%	32.2%	30.8%	36.3%	38.1%	26.6%	27.7%	25.8%	22.0%	*26.0%*	*27.0%*	Operating Margin	*30.0%*
4.3	4.4	4.7	5.0	5.4	6.1	6.1	6.3	6.3	6.8	*5.0*	*10.0*	Depreciation ($mill)	*10.0*
27.5	32.7	37.2	38.6	40.7	43.6	47.5	41.3	72.3	82.5	*80.0*	*100*	Net Profit ($mill)	*140*
41.1%	40.4%	39.7%	39.6%	40.1%	38.7%	31.3%	49.9%	22.6%	20.9%	*20.0%*	*20.0%*	Income Tax Rate	*20.0%*
12.4%	13.3%	14.0%	13.8%	13.4%	13.9%	15.1%	11.9%	19.0%	19.8%	*20.5%*	*21.5%*	Net Profit Margin	*22.8%*
136.9	137.8	163.6	179.5	187.1	192.3	193.8	222.4	228.3	240.0	*235*	*280*	Working Cap'l ($mill)	*370*
.0	--	0	--	--	1.9	--	--	--	--	*Nil*	*Nil*	Long-Term Debt ($mill)	*Nil*
183.8	186.7	216.4	235.1	244.3	262.8	273.3	289.1	313.9	350.3	*360*	*380*	Shr. Equity ($mill)	*470*
15.0%	17.5%	17.2%	16.4%	16.7%	16.5%	17.4%	14.3%	23.0%	23.5%	*22.0%*	*26.5%*	Return on Total Cap'l	*30.0%*
15.0%	17.5%	17.2%	16.4%	16.7%	16.6%	17.4%	14.3%	23.0%	23.5%	*22.0%*	*26.5%*	Return on Shr. Equity	*30.0%*
15.0%	17.5%	17.2%	13.1%	11.3%	10.6%	10.5%	6.7%	14.3%	14.0%	*11.0%*	*14.0%*	Retained to Com Eq	*15.0%*
--	--	--	21%	32%	36%	40%	53%	38%	41%	*51%*	*47%*	All Div'ds to Net Prof	*50%*

CURRENT POSITION ($MILL)	2018	2019	4/3/20
Cash Assets	208.6	176.4	105.6
Receivables	105.8	120.1	127.2
Inventory	--	--	--
Other	12.2	67.5	60.6
Current Assets	326.6	364.0	293.4
Accts Payable	12.3	4.7	14.0
Debt Due	--	--	--
Other	86.0	119.3	63.1
Current Liab	98.3	124.0	77.1

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	6.5%	6.0%	*5.5%*
"Cash Flow"	11.0%	8.5%	*10.5%*
Earnings	13.0%	9.5%	*11.5%*
Dividends	--	--	*13.5%*
Book Value	9.5%	7.0%	*3.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	84.1	87.8	87.6	88.3	347.8
2018	96.5	95.6	95.3	92.1	379.5
2019	99.1	106.5	101.5	110.1	417.2
2020	106.0	*80.0*	*95.0*	*109*	*390*
2021	*110*	*115*	*120*	*120*	*465*

Cal-endar	EARNINGS PER SHARE AD Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.31	.26	.27	d.07	.77
2018	.37	.34	.32	.30	1.33
2019	.42	.39	.36	.36	1.53
2020	.49	*.25*	*.35*	*.36*	*1.45*
2021	*.45*	*.45*	*.45*	*.40*	*1.75*

Cal-endar	QUARTERLY DIVIDENDS PAID Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.09	.09	.09	.09	.36
2017	.105	.105	.105	.105	.42
2018	.13	.13	.13	.13	.52
2019	.16	.16	.16	.16	.64
2020	.19	.19			

BUSINESS: Exponent, Inc. is a science and engineering consulting company that provides solutions to complex problems. Its team of scientists, engineers, and business and regulatory consultants bring together more than 90 different technical disciplines to solve complicated issues facing industry and government. The company's services include analysis of product development, product recall, regulatory compliance, and the discovery of potential problems related to products, people, property, and impending litigation. Has 1,122 employees. Officers & directors own 2.2% of common stock; BlackRock, 15.1%, Vanguard, 10.4% (4/20 Proxy). CEO: Paul R. Johnston. Address: 149 Commonwealth Dr., Menlo Park, CA 94025. Tel.: (650) 326-9400. Internet: www.exponent.com.

Exponent met our top- and bottom-line estimates in the first quarter. The company did so despite the early onset impact of COVID-19, which spread throughout the world and caused the essential shutdown of many civic communities. Demand across the biomedical, biomechanical, and mechanical engineering practices remained strong, driving a 6% revenue increase for the Engineering and Other Scientific segment. Utilization was also trending upward through the first 10 weeks of the quarter, at about 73.5%. That said, once shelter-in-place orders were put into action, utilization fell to about 63%, and the outlook for the June period is looking increasingly grim.

The company is taking steps to maintain continuity as the COVID-19 pandemic plays out. Exponent has relegated a great deal of its staff to work-from-home status, and it is attempting to adapt its study designs to ensure that it can continue on with its research. Constraints surrounding user interactions have caused these endeavors to be put on hold, of late. Elsewhere, there is little that the company can do to combat the impact of the virus on its core demand channels.

The company maintains a healthy balance sheet. Exponent possesses more than $100 million in cash, and operates with zero debt. Depending upon the length of mandated quarantines, this stockpile ought to help the company maintain ample liquidity during the pandemic.

The Timeliness rank of Exponent stock has been raised a notch, to 2 (Above Average). While attracting new business may prove challenging in the near term, the company's track record of client retention should help it curtail losses and maintain a position from which it can take advantage of a potential market recovery.

We think investors with a buy-and-hold mentality can probably find more-appealing options elsewhere. Exponent shares have been able to maintain their relative strength during this most recent market downturn. However, we would wait for the company's contract with PS&E to turn into some potential new business before considering a position in EXPO stock.

Robert J. Scrudato *May 22, 2020*

(A) Diluted shares. May not sum due to rounding. Next earnings report late July.
(B) Incl. intang. In 2019, $8.6 mill., about $0.16/sh.
(C) In millions.
(D) Dividends historically paid in late March, June, September, and December.

Company's Financial Strength	B+
Stock's Price Stability	90
Price Growth Persistence	100
Earnings Predictability	65

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FORWARD AIR CORP. NDQ-FWRD

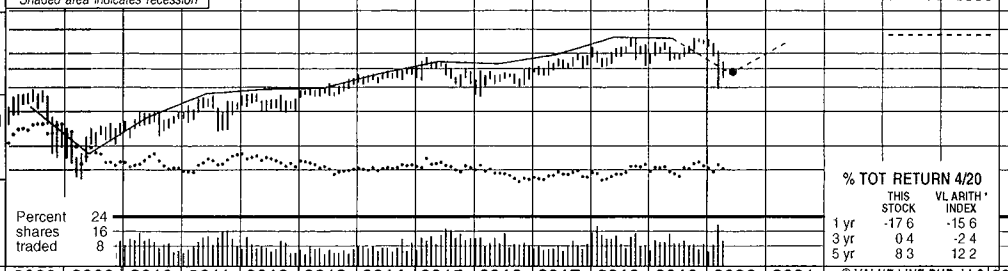
RECENT PRICE 48.17 | P/E RATIO 32.1 (Trailing: 17.8 Median: 21.0) | RELATIVE P/E RATIO 1.82 | DIV'D YLD 1.5% | VALUE LINE 320

TIMELINESS 3 Lowered 2/8/19
SAFETY 3 New 9/15/00
TECHNICAL 3 Raised 5/8/20
BETA .95 (1.00 = Market)

High	26.3	30.3	36.3	37.4	44.6	51.4	57.7	50.7	60.0	72.8	72.1	71.5
Low	13.5	21.9	23.7	29.7	35.3	41.4	40.5	36.0	45.9	51.0	53.2	39.6

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 15.5 x "Cash Flow" p sh
.. Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$41-$85	$63 (30%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	115	(+140%)	25%
Low	75	(+55%)	13%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	113	86	115
to Sell	108	119	103
Hld's(000)	26914	27195	27122

Percent shares traded 24 16 8

% TOT. RETURN 4/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	-17.6	-15.6
3 yr	0.4	-2.4
5 yr	8.3	12.2

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
8.71	10.23	11.61	13.71	16.42	14.42	16.67	18.79	20.02	21.38	25.81	31.40	32.65	37.37	46.29	50.64	*44.55*	*50.00*	Revenues per sh	*62.95*
1.27	1.72	1.90	1.95	2.05	1.18	1.81	2.40	2.52	2.56	3.05	3.52	3.42	3.81	4.70	4.64	*3.05*	*4.50*	"Cash Flow" per sh	*6.35*
1.05	1.39	1.55	1.50	1.47	.49	1.10	1.61	1.78	1.77	1.96	2.25	2.09	2.38	3.12	3.04	*1.50*	*2.75*	Earnings per sh A	*4.50*
--	.24	.28	.28	.28	.28	.28	.28	.34	.40	.48	.48	.51	.60	.63	.72	*.72*	*.80*	Div'ds Decl'd per sh D	*1.00*
.35	.70	.51	1.64	.92	.72	.52	.74	.73	1.16	1.31	1.33	1.40	1.30	1.48	1.01	*1.30*	*1.35*	Cap'l Spending per sh	*1.50*
5.59	5.70	6.10	5.99	7.49	7.75	8.82	10.05	12.05	14.28	15.32	16.70	16.59	18.11	19.39	20.72	*21.25*	*22.80*	Book Value per sh B	*31.50*
32.40	31.36	30.37	28.65	28.89	28.95	29.03	28.55	29.19	30.52	30.26	30.54	30.09	29.45	28.54	27.85	*27.50*	*27.00*	Common Shs Outst'g C	*27.00*
23.4	22.5	22.9	21.5	21.0	42.8	24.3	19.0	18.8	22.0	23.5	21.7	21.4	22.0	19.1	20.7	*Bold figures are*		Avg Ann'l P/E Ratio	*21.0*
1.24	1.20	1.24	1.14	1.26	2.85	1.55	1.19	1.20	1.24	1.24	1.09	1.12	1.11	1.03	1.12	*Value Line*		Relative P/E Ratio	*1.15*
--	8%	8%	9%	9%	1.3%	1.0%	9%	1.0%	1.0%	1.0%	1.0%	1.1%	1.1%	1.1%	1.1%	*estimates*		Avg Ann'l Div'd Yield	*1.0%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $310.2 mill. Due in 5 Yrs $67.3 mill.
LT Debt $251.3 mill. LT Interest $2.0 mill.
(23% of Cap'l)

Leases, Uncapitalized: $59.0 mill.

No Defined Benefit Pension Plan
Pfd Stock None
Common Stock 27,974,687 shs
as of 4/27/20
Options exercisable 5.6%
MARKET CAP: $1.3 billion (Mid Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
483.9	536.4	584.4	652.5	781.0	959.1	982.5	1100.8	1320.9	1410.4	*1225*	*1350*	Revenues ($mill)	*1700*
15.3%	18.3%	17.9%	16.5%	16.3%	13.9%	14.3%	13.6%	12.4%	11.4%	*8.0%*	*11.0%*	Operating Margin	*13.5%*
20.5	21.0	21.0	23.6	31.1	37.2	38.2	41.1	42.2	42.1	*44.0*	*46.0*	Depreciation ($mill)	*52.0*
32.0	47.5	52.7	54.5	61.2	70.2	64.7	71.3	92.1	87.1	*40.0*	*75.0*	Net Profit ($mill)	*120*
39.7%	38.0%	36.7%	35.1%	36.3%	25.5%	32.2%	33.6%	23.4%	25.0%	*25.0%*	*25.0%*	Income Tax Rate	*25.0%*
6.6%	8.9%	9.0%	8.3%	7.8%	7.3%	6.6%	6.5%	7.0%	6.2%	*3.3%*	*5.6%*	Net Profit Margin	*7.6%*
118.4	105.8	170.5	185.8	106.6	64.5	58.4	102.6	126.4	99.1	*120*	*160*	Working Cap'l ($mill)	*325*
50.9	3	1	--	1.3	28.9	7	40.6	47.3	72.2	*250*	*250*	Long-Term Debt ($mill)	*150*
256.1	286.9	351.7	435.9	463.6	510.1	499.1	533.5	553.2	577.2	*585*	*615*	Shr. Equity ($mill)	*850*
10.6%	16.6%	15.0%	12.6%	13.2%	13.2%	13.1%	12.5%	15.5%	13.6%	*5.0%*	*8.0%*	Return on Total Cap'l	*12.0%*
12.5%	16.6%	15.0%	12.5%	13.2%	13.8%	13.0%	13.4%	16.6%	15.1%	*7.0%*	*12.0%*	Return on Shr. Equity	*14.0%*
9.3%	13.7%	12.1%	9.7%	10.0%	10.9%	9.9%	10.0%	13.3%	11.5%	*3.5%*	*8.5%*	Retained to Com Eq	*11.0%*
25%	17%	19%	22%	24%	21%	24%	25%	20%	24%	*50%*	*29%*	All Div'ds to Net Prof	*23%*

CURRENT POSITION ($MILL.)	2018	2019	3/31/20
Cash Assets	25.7	64.8	77.3
Receivables	156.4	150.2	143.2
Inventory (FIFO)	2.2	2.1	--
Other	16.8	19.2	20.7
Current Assets	201.1	236.3	241.2
Accts Payable	34.6	30.0	26.6
Debt Due	3	52.0	58.9
Other	39.8	55.2	57.8
Current Liab.	74.7	137.2	143.3

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '23-'25
Revenues	11.0%	14.0%	*10.5%*
"Cash Flow"	7.5%	10.0%	*10.5%*
Earnings	5.5%	8.0%	*12.0%*
Dividends	7.5%	11.5%	*9.5%*
Book Value	10.5%	8.5%	*12.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	247.0	267.5	280.2	306.1	1100.8
2018	302.6	330.3	331.4	356.6	1320.9
2019	321.5	345.8	361.7	381.5	1410.4
2020	342.5	*270*	*285*	*327.5*	*1225*
2021	*325*	*325*	*325*	*375*	*1350*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.47	.64	.60	.65	2.38
2018	.60	.82	.76	.95	3.12
2019	.64	.78	.78	.85	3.04
2020	.30	*.15*	*.35*	*.70*	*1.50*
2021	*.50*	*.70*	*.70*	*.85*	*2.75*

Cal-endar	QUARTERLY DIVIDENDS PAID D Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.12	.12	.12	.15	.51
2017	.12	.15	.15	.15	.60
2018	.15	.15	.15	.18	.63
2019	.18	.18	.18	.18	.72
2020	.18				

BUSINESS: Forward Air Corp. provides scheduled ground transportation and related logistics services to the North American air freight and expedited less-than-truckload market. Services are a cost effective alternative to air transportation. Has a network of freight terminals located on or near airports in 85 U.S. and Canadian cities. Three principal segments: Forward Air (trucking), Forward Air Solutions (pool distribution), and Total Quality (security and temperature-contolled services). '19 avg. weekly volume: 48.6 million lbs. Employs 4,640. Off./dir. own 1.5% of common, BlackRock, 15.9%, Vanguard Group, 10.6% (3/20 proxy). Chrmn., Pres., and CEO: Thomas Schmitt. Inc.: TN. Address: 430 Airport Rd., Greenville, TN, 37745. Tel.: 423-636-7100. Internet: www.forwardair.com.

Forward Air's performance has reversed course. Despite higher revenues, the freight transportation company has delivered weaker earnings comparisons over the past couple of quarters. While demand in certain end markets has been positive, cost control has been a challenge, as the trucker's top-line mix has been hampered by slowing imports and broader weakness in air freight, particularly from Asia. Too, the onset of COVID-19 has exacerbated margin strain, as Forward Air's modal exposures to air freight, ocean freight, and physical retail have been notably disrupted by containment measures and shutdowns. In particular, the Pool segment, which is highly dependent on shopping malls, has faced a substantial decline in revenues. In fact, the company has furloughed 90% of the Pool business' workforce and is considering divesting the unit altogether. All told, given that much of the freight that typically moves through Forward Air's LTL network is not classified as "essential", the health crisis will likely weigh heavily on results for the remainder of this year.

Nonetheless, we are optimistic about a swift recovery in 2021. The freight mover is taking steps to fortify its competitive position once health concerns subside and the broader economy stabilizes. Efforts to integrate its Truckload and LTL operations, while capitalizing on opportunities that have arisen from supply chain disruptions in the Truckload brokerage space offer promise. Too, the integration of the company's Final Mile business into its LTL operations should benefit from the increase in online orders of heavy and bulky items. In addition, Forward Air should benefit from its flexible business model and streamlined operations, while pursuing new revenue channels in the business-to-business space. These efforts ought to help the company's bottom line bounce back by next year.

The company is in a solid financial position for long-term growth. A healthy balance sheet and ample cash reserves are positives. While some restructuring may cause pain initially, we believe enhanced operating efficiency should drive profits higher. Hence, the stock's 3- to 5-year appreciation potential is attractive.

Simon R. Shoucair *May 22, 2020*

(A) Diluted earnings. Excludes nonrecurring gain/(loss): '09, (15¢); '11, (1¢); '15, ($0.47); '16, ($1.19); '17, $0.53. Next earnings report due late July. Quarterly totals may not sum due to rounding and/or changes in diluted share count. Actual data has not been adjusted retroactively to reflect changes in accounting methods. (B) Includes intangibles. In 2019: $400.8 million, $14.39 a share. (C) In millions. (D) Dividends historically paid in late March and early June, September, and December.

Company's Financial Strength	B++
Stock's Price Stability	85
Price Growth Persistence	85
Earnings Predictability	90

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ALPHABET INC. NDQ-GOOG

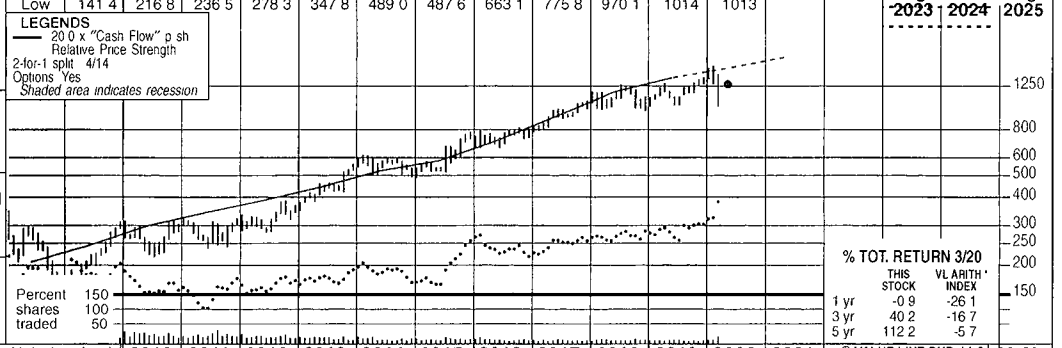
RECENT PRICE 275.88 | P/E RATIO 24.9 (Trailing: 24.7 Median: 24.0) | RELATIVE P/E RATIO 1.55 | DIV'D YLD Nil | VALUE LINE

TIMELINESS 2 Lowered 5/8/20
SAFETY 1 Raised 5/12/17
TECHNICAL 2 Raised 5/8/20
BETA 1 05 (1 00 = Market)

High	313 0	315 4	323 4	387 2	560 5	614 4	780 0	816 7	1078	1273	1365	1532
Low	141 4	216 8	236 5	278 3	347 8	489 0	487 6	663 1	775 8	970 1	1014	1013

Target Price Range 2023 2024 2025

LEGENDS
— 20 0 x "Cash Flow" p sh
Relative Price Strength
2-for-1 split 4/14
Options Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$999-$1963	$1481 (15%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	2805	(+120%)	22%
Low	2295	(+80%)	16%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	1070	968	1111
to Sell	1008	1082	1123
Hld's(000)	239150	234767	233262

% TOT. RETURN 3/20

	THIS STOCK	VL ARITH * INDEX
1 yr	-0 9	-26 1
3 yr	40 2	-16 7
5 yr	112 2	-5 7

Google Inc (now, officially Alphabet Inc.) undertook its initial public offering on August 19, 2004, selling approximately 19 6 million shares of its Class A Common stock for $85 a share. Of the total shares, the company sold 14 1 million, and selling stockholders sold 5.5 million. The lead underwriters of the offering were Morgan Stanley and Credit Suisse First Boston

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
45 63	58 29	76 10	89 03	96 97	109 10	130 58	159 55	196 70	235.14	*263.55*	*315 25*	Revenues per sh	*480.90*
14.90	17 12	19 38	22 31	26.20	29 04	35 80	45 78	58.91	68 11	*72 60*	*84.85*	"Cash Flow" per sh	*132.40*
13 16	14 88	16 23	18 03	20 82	22 84	27 85	35 90	46 67	51 58	*52.05*	*62.00*	Earnings per sh A	*102.05*
--	--	--	--	--	--	--	--	--	--	*Nil*	*Nil*	Div'ds Decl'd per sh	*Nil*
6 25	5 29	4 96	10 95	16 10	14 43	14 77	18 98	36 14	34 21	*36.60*	*38 10*	Cap'l Spending per sh	*42.65*
71 96	89 42	108 77	129 92	153 54	175 07	201 12	219 50	255.38	292 65	*341.55*	*407.35*	Book Value per sh	*687.35*
642 60	650 27	659 33	672 00	680 62	687 35	691 29	694 78	695.56	688.34	*683.00*	*682.00*	Common Shs Outst'g B	*680.00*
20 3	19 1	19 8	24 6	27 0	26 3	26 7	25 6	23 8	23 1	*Bold figures are*		Avg Ann'l P/E Ratio	*25.0*
1 29	1 20	1 26	1 38	1 42	1 32	1 40	1 29	1 29	1 25	*Value Line*		Relative P/E Ratio	*1.40*
--	--	--	--	--	--	--	--	--	--	*estimates*		Avg Ann'l Div'd Yield	*Nil*
29321	37905	50175	59825	66001	74989	90272	110855	136819	161857	*180000*	*215000*	Revenues ($mill)	*327000*
39 0%	34 7%	29.4%	28 0%	30 9%	31.3%	32 2%	31 0%	29 0%	29 0%	*32.0%*	*30.0%*	Operating Margin	*31.0%*
1067 0	1396 0	1988 0	2781 0	3523 0	4132.0	5267 0	6103 0	8164 0	10856	*11000*	*12000*	Depreciation ($mill)	*15000*
8505 0	9737 0	10788	12214	14306	15826	19478	25705	32814	36025	*40755*	*45880*	Net Profit ($mill)	*75020*
21.2%	21 0%	19 4%	15 7%	18 9%	16 8%	19 3%	12 1%	11 3%	12 8%	*13.0%*	*13.0%*	Income Tax Rate	*13.0%*
29 0%	25 7%	21 5%	20 4%	21 7%	21 1%	21 6%	23 2%	24 0%	22 3%	*22.6%*	*21.3%*	Net Profit Margin	*22.9%*
31566	43845	46117	56978	63880	70804	88652	100125	101056	107357	*105635*	*116275*	Working Cap'l ($mill)	*204275*
--	2986.0	2988 0	2236 0	3228 0	1995 0	3935 0	3969 0	4012 0	4554 0	*5000*	*5100*	Long-Term Debt ($mill)	*5500*
46241	58145	71715	87309	104500	120331	139036	152502	177628	201442	*233275*	*277815*	Shr. Equity ($mill)	*467415*
18 4%	16 0%	14.4%	13.7%	13 3%	13.0%	13 7%	16 5%	18 1%	17 5%	*16.0%*	*16.0%*	Return on Total Cap'l	*16.0%*
18 4%	16 7%	15 0%	14 0%	13.7%	13 2%	14 0%	16 9%	18 5%	17 9%	*16.5%*	*16.5%*	Return on Shr. Equity	*16.0%*
18 4%	16 7%	15 0%	14 0%	13 7%	13 2%	14 0%	16 9%	18 5%	17 9%	*16 5%*	*16.5%*	Retained to Com Eq	*16.0%*
--	--	--	--	--	--	--	--	--	--	*Nil*	*Nil*	All Div'ds to Net Prof	*Nil*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $5016 mill Due in 5 Yrs. $2482 mill
LT Debt $5016 mill LT Interest $100 mill.
(2% of Cap'l)

Leases, Uncapitalized: Annual rentals $1757 mill

No Defined Benefit Pension Plan
Pfd Stock None

Common Stock 683,972,000 shares (300,047,000 Class A shares, 46,407,000 Class B shares, and 337,518,000 Class C shares) C D

MARKET CAP: $873 billion (Large Cap)

CURRENT POSITION ($MILL.)	2018	2019	3/31/20
Cash Assets	109140	119675	117229
Receivables	20838	25326	21825
Inventory	--	--	--
Other	5698	7577	7964
Current Assets	135676	152578	147018
Accts Payable	4378	5561	4099
Debt Due	--	--	--
Other	30242	39660	36090
Current Liab	34620	45221	40189

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	19 5%	17.5%	*16.0%*
"Cash Flow"	19.0%	20 5%	*15.0%*
Earnings	18 0%	19 5%	*14.5%*
Dividends	--	--	*Nil*
Book Value	18 5%	14 5%	*18.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	24750	26010	27772	32323	110855
2018	31146	32657	33740	39276	136819
2019	36339	38944	40499	46075	161857
2020	41159	*43480*	*45035*	*50326*	*180000*
2021	*49625*	*52230*	*53785*	*59360*	*215000*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	7 73	8 90	9.57	9.70	35 90
2018	9 09	11 75	13 06	12 77	46 67
2019	11 90	14.21	10 12	15 35	51 58
2020	9 87	*15.08*	*11.00*	*16.10*	*52.05*
2021	*12.30*	*17.60*	*13.50*	*18.60*	*62.00*

Cal-endar	QUARTERLY DIVIDENDS PAID Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016					
2017	NO CASH DIVIDENDS BEING PAID				
2018					
2019					
2020					

BUSINESS: Alphabet Inc. is the successor and parent holding company of Google Inc, which operates the world's leading Internet search engine. The company derives revenues primarily through delivering targeted advertising Revenues are also derived from the licensing of search technology and solutions to enterprises Revenues in 2019 United States, 46%, International, 54%.

Has 118,899 employees. Off. & dir own less than 1% of Class A common stock, 52 8% of Class B, The Vanguard Group, 7 6%; BlackRock, 6 6% of Class A (4/20 Proxy) CEO & Dir Sundar Pichai Co-founder & Dir Larry Page Co-founder & Dir. Sergey Brin Inc Del Addr 1600 Amphitheatre Parkway, Mountain View, CA 94043 Telephone 650-253-0000 Internet www.google.com

Since our February review, shares of Alphabet have staged a modest correction. In fact, over that time frame, the equity's price has lost more than 12% of its value. By comparison, the S&P 500 Index receded a similar percentage. These moves can largely be attributed to the COVID-19 pandemic that is causing many business to be shuttered thereby making them slash their marketing budgets.

Meanwhile, the company posted decent, albeit more moderate, sales and earnings than previously expected. The leading Internet search engine provider experienced a 13.3% uptick in revenues, to $41.159 billion. This stemmed from moderate growth in Google Advertising, cloud, and Other business segments. We think that the bulk of the first-quarter sales came from marketing expenditures that were already doled out prior to the shuttering of nonessential businesses and stay-at-home orders. As a result, further reductions in marketing revenues will likely persist throughout the pandemic. On balance, after accounting for a 350-basis-point rise in costs, when viewed as a percentage of the top line, and a drop in other income, GOOG's first-quarter bottom line fell 17.1%, to $9.87 a share.

Further impacts from the challenging operating environment have prompted us to reduce our 2020 outlook. We think many of Alphabet's customers affected by the stay-at-home orders, and by a general downturn in consumer spending due to rising unemployment and financial uncertainty will look to reduce costs wherever possible, and that includes marketing budgets Consequently, we have sliced $8.0 billion from our annual revenue outlook, to $180 billion. We have also trimmed $7.05 from our earnings estimate for this year, to $52.05 a share. This figure would still represent a modest gain of about 1%. We think that given the current business environment, this would be a pretty good showing, however it is much more modest year-over-year growth than Alphabet is accustomed to. Finally, we have introduced our 2021 top- and bottom-lines estimates at $215 billion and $62 00 per share, respectively.

These timely shares offer above-average 3- to 5-year upside potential.

Bryan J. Fong *May 8, 2020*

(A) Diluted earnings per share for Class A and B common stock and Class C capital stock Excludes nonrecurring gains/(losses) '08, ($3 38), '14, ($0.55); '17, ($17.90), '18, ($2 97). Qtly egs may not sum. Next earnings report due late July (B) In millions (C) Class A common stock entitled to one vote per share. Class B common stock entitled to 10 votes per share Class C common stock is non-voting (D) All preferred stock converted to Class B common stock upon initial public offering

Company's Financial Strength	A++
Stock's Price Stability	75
Price Growth Persistence	95
Earnings Predictability	95

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HERSHEY CO. (THE) NYSE-HSY

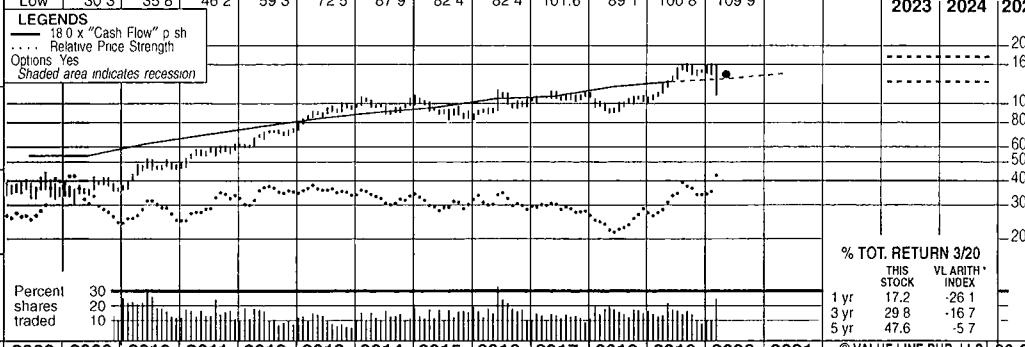
RECENT PRICE 141.86 | P/E RATIO 23.8 (Trailing: 24.5 Median: 22.0) | RELATIVE P/E RATIO 1.78 | DIV'D YLD 2.3% | VALUE LINE

TIMELINESS 2 Lowered 4/10/20
SAFETY 2 Lowered 11/2/07
TECHNICAL 3 Raised 4/3/20
BETA .65 (1.00 = Market)

High	42.3	52.1	62.3	74.7	101.4	108.7	111.4	117.8	116.5	114.6	162.2	161.8	
Low	30.3	35.8	46.2	59.3	72.5	87.9	82.4	82.4	101.6	89.1	100.8	109.9	

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 18.0 x "Cash Flow" p sh
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range
Low-High Midpoint (% to Mid)
$114-$174 $144 (0%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	175	(+25%)	8%
Low	130	(-10%)	1%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	402	402	384
to Sell	342	368	427
Hld's(000)	113565	112931	112387

Percent shares traded 30 20 10

% TOT. RETURN 3/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	17.2	-26.1
3 yr	29.8	-16.7
5 yr	47.6	-5.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
17.96	20.11	21.47	21.79	22.61	23.24	24.95	26.96	29.65	31.93	33.61	34.07	35.05	35.64	37.15	38.24	*38.40*	*39.60*	Sales per sh A	*42.90*
2.92	3.27	3.30	3.49	3.00	2.99	3.45	3.83	4.24	4.67	5.02	5.33	5.89	6.06	6.80	7.23	*7.50*	*8.00*	"Cash Flow" per sh	*8.60*
2.06	2.28	2.34	2.08	1.88	2.17	2.55	2.82	3.24	3.72	3.98	4.12	4.41	4.76	5.36	5.78	*6.05*	*6.50*	Earnings per sh AB	*7.00*
.84	.93	1.05	1.14	1.19	1.19	1.28	1.38	1.56	1.81	2.04	2.24	2.40	2.55	2.76	2.99	*3.25*	*3.40*	Div'ds Decl'd per sh ■C	*3.90*
.79	.81	.86	.90	1.25	.64	.89	1.54	1.24	1.57	1.68	1.65	1.27	1.22	1.57	1.52	*1.50*	*1.55*	Cap'l Spending per sh	*1.65*
4.42	4.25	2.97	2.61	1.40	3.16	3.97	3.76	4.63	7.17	6.59	4.60	3.70	4.34	6.67	8.33	*10.60*	*13.15*	Book Value per sh D	*20.50*
246.59	240.52	230.26	227.05	227.04	228.00	227.30	225.52	224.09	223.81	220.83	216.78	212.26	210.86	209.73	208.83	*208.00*	*207.00*	Common Shs Outst'g E	*204.00*
22.3	26.2	22.7	23.2	19.5	16.9	17.9	19.8	20.9	24.2	24.5	23.0	21.9	22.8	18.8	23.2	*Bold figures are*		Avg Ann'l P/E Ratio	*22.0*
1.18	1.40	1.23	1.23	1.17	1.13	1.14	1.24	1.33	1.36	1.29	1.16	1.15	1.15	1.02	1.26	*Value Line*		Relative P/E Ratio	*1.20*
1.8%	1.6%	2.0%	2.4%	3.2%	3.2%	2.8%	2.5%	2.3%	2.0%	2.1%	2.4%	2.5%	2.3%	2.7%	2.2%	*estimates*		Avg Ann'l Div'd Yield	*2.5%*

CAPITAL STRUCTURE as of 12/31/19
Total Debt $4266.5 mill. Due in 5 Yrs $2220 mill.
LT Debt $3530.8 mill. LT Interest $125 mill.
(Total int cov. 11.2x)
(67% of Cap'l)
Leases, Uncapitalized Annual rentals $36.8 mill.
Pension Assets-12/10 $1.05 billion
Oblig. $1.11 billion
Pfd Stock None
Common Stock 209,749,611 shs.
Incl. 61,613,777 Class B shs. (10 votes per sh.)
as of 2/14/20
MARKET CAP: $29.8 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
5671.0	6080.8	6644.3	7146.1	7421.8	7386.6	7440.2	7515.4	7791.1	7986.3	*7985*	*8200*	Sales ($mill) A	*8750*
21.2%	21.4%	21.7%	22.0%	22.4%	23.3%	24.4%	23.7%	24.4%	24.8%	*25.5%*	*26.0%*	Operating Margin	*26.0%*
197.1	215.8	210.0	201.0	211.5	244.9	301.8	261.9	295.1	291.5	*290*	*295*	Depreciation ($mill)	*315*
587.7	648.7	740.0	844.0	895.9	909.7	948.5	1016.9	1130.1	1218.4	*1270*	*1360*	Net Profit ($mill)	*1440*
35.2%	34.8%	34.7%	34.3%	34.5%	33.2%	31.3%	26.8%	19.2%	17.4%	*18.0%*	*18.0%*	Income Tax Rate	*18.0%*
10.4%	10.7%	11.1%	11.8%	12.1%	12.3%	12.7%	13.5%	14.5%	15.3%	*15.9%*	*16.5%*	Net Profit Margin	*16.5%*
706.3	872.8	642.4	1079.3	311.4	d369.3	d92.6	d74.6	d179.4	108.3	*645*	*1210*	Working Cap'l ($mill)	*1765*
1541.8	1748.5	1531.0	1795.1	1549.0	1557.1	2347.5	2061.0	3254.3	3530.8	*3625*	*3700*	Long-Term Debt ($mill)	*3850*
902.3	849.0	1036.7	1604.8	1455.1	998.0	785.9	915.3	1398.7	1739.2	*2205*	*2725*	Shr. Equity ($mill)	*4185*
25.9%	26.6%	30.6%	26.0%	31.1%	37.0%	31.4%	35.3%	25.3%	24.5%	*22.0%*	*21.0%*	Return on Total Cap'l	*18.0%*
65.1%	76.4%	71.4%	52.6%	61.6%	91.2%	NMF	NMF	80.8%	70.1%	*57.5%*	*50.0%*	Return on Shr. Equity	*34.5%*
33.7%	40.6%	38.5%	28.1%	31.3%	43.4%	57.1%	53.6%	40.6%	35.0%	*27.0%*	*24.0%*	Retained to Com Eq	*15.5%*
48%	47%	46%	47%	49%	52%	53%	52%	50%	50%	*53%*	*52%*	All Div'ds to Net Prof	*56%*

CURRENT POSITION ($MILL.)	2017	2018	12/31/19
Cash Assets	380.2	588.0	493.3
Receivables	588.3	594.1	568.4
Inventory (LIFO)	752.8	784.9	815.3
Other	280.6	272.2	240.1
Current Assets	2001.9	2239.2	2117.1
Accts Payable	523.2	502.3	550.8
Debt Due	859.5	1203.3	735.7
Other	693.8	713.0	722.3
Current Liab.	2076.5	2418.6	2008.8

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	5.0%	3.0%	*2.5%*
"Cash Flow"	8.0%	7.5%	*4.5%*
Earnings	10.0%	8.0%	*4.5%*
Dividends	9.0%	9.0%	*6.0%*
Book Value	10.5%	1.0%	*21.5%*

Cal-endar	QUARTERLY SALES ($ mill.) A Mar.Per	Jun.Per	Sep.Per	Dec.31	Full Year
2017	1879	1663	2033	1940	7515
2018	1972	1752	2079	1988	7791
2019	2017	1767	2134	2068	7986
2020	*2015*	*1765*	*2135*	*2070*	*7985*
2021	*2070*	*1820*	*2200*	*2110*	*8200*

Cal-endar	EARNINGS PER SHARE A B Mar.Per	Jun.Per	Sep.Per	Dec.31	Full Year
2017	1.31	1.09	1.33	1.03	4.76
2018	1.41	1.14	1.55	1.26	5.36
2019	1.59	1.31	1.61	1.28	5.78
2020	*1.63*	*1.30*	*1.75*	*1.37*	*6.05*
2021	*1.74*	*1.40*	*1.88*	*1.48*	*6.50*

Cal-endar	QUARTERLY DIVIDENDS PAID ■ C Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.583	.583	.618	.618	2.40
2017	.618	.618	.656	.656	2.55
2018	.656	.656	.722	.722	2.76
2019	.722	.722	.773	.773	2.99
2020	.773				

BUSINESS: The Hershey Company is the largest U.S. producer of chocolate and nonchocolate confectionery products (Major brands *Hershey's, Reese's, Kisses, Cadbury, Ice Breakers, Kit Kat, Almond Joy, Jolly Rancher, Twizzlers, Good 'n' Plenty, Heath, Whoppers,* and *Milk Duds*.) Advertising costs, 6.4% of 2019 sales. Foreign operations accounted for 11.3% of total '19 sales. Has about 16,140 full-time employees. Hershey Trust Company owns 2.6% of common stock & 99.9% of Class B stock; BlackRock, 9.3% of common; Vanguard, 7.5%; Officers & Directors, less than 1.0% (4/19 proxy). Chairman, CEO and Pres.: Michele G. Buck. Inc.: DE. Addr.: 19 E. Chocolate Ave., Hershey, PA 17033. Tel.: 717-534-4200. Internet: www.thehersheycompany.com.

The Hershey Company's stock has held up well amid the stock market selloff. Business for this maker of confectionery products will likely perform better than many others. First, the company's diversifed lineup and solid financial profile ought to help it weather the storm. What's more, the products it sells, for the most part, are sought out by consumers in good times and bad. Lastly, Hershey registered better-than-expected sales and earnings in the December quarter. Management attributed the good showing to price hikes and gains in its snacks business.

The company temporarily closed its Hershey Chocolate World locations. At the time of this writing, it shut down its Pennsylvania and New York City destinations. Hershey closed these consumer experiences in response to the spread of the coronavirus.

Strategic efforts are bearing fruit. The company reviewed its product portfolio and made changes to its offering. Hershey has focused on attractive opportunities, such as the snacks business, with a particular focus on healthy options. It is also leveraging existing brands with new candies. Additionally, it has realigned its cost structure in order to support growing products. Lastly, Hershey has made a few bolt-on acquisitions in growth categories, which have bolstered the top line.

We estimate share net of $6.05 for 2020. Recent pricing actions, coupled with improved operational efficiency, should help the top and bottom lines head higher amid the stock market volatility. The company is well positioned for the years ahead, too. We expect solid earnings gains in 2021 and beyond owing to the strategic actions, an improving supply chain, and management's effective use of capital. We would not be surprised to see additional bolt-on acquisitions, as well.

This equity is ranked Above Average (2) for Timeliness. Additionally, shares of HSY have an Above Average rank (2) for Safety. Thus, this issue represents a nice choice for conservative accounts looking to stay invested in equities in the near term. Longer term, this stock is less attractive. At the recent quotation, total return potential is below average for the 2023-2025 time frame.

Richard J. Gallagher *April 17, 2020*

(A) Years end Dec. 31, quarters end Sun. on or following end of 13th, 26th, & 39th weeks of year. (B) Diluted egs. Excl. n/r gains (losses): '04, 24¢; '05, (29¢); '07, ($1.15); '08, (52¢); '09, (27¢); '10, (34¢); '11, (8¢); '12, (35¢); '13, (11¢); '14, (21¢); '15, ($1.80); '16, ($1.07); '17, ($1.10); '18, 22¢; '19, (32¢). Figures may not sum due to rounding. Next egs. report due late April. (C) Div'ds historically paid mid-March, June, Sept., Dec. ■ Div'd reinvestment plan avail. (D) Incl. intangibles. In 2019: $3.5 bill., $16.66/share. (E) In millions.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	60
Earnings Predictability	100

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INGREDION INC. NYSE-INGR

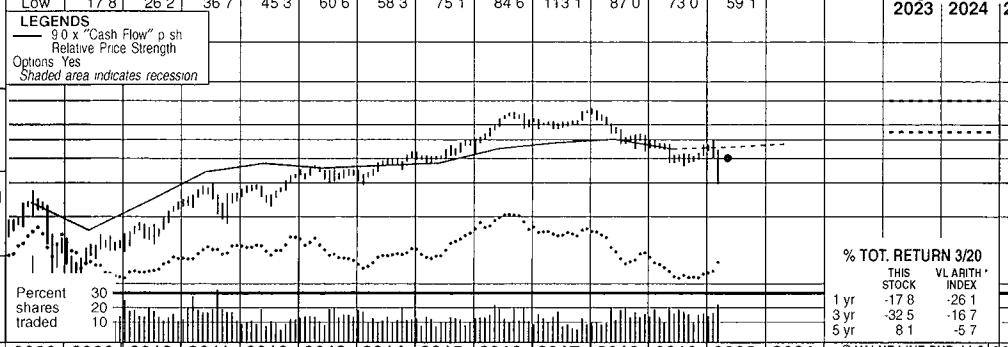
RECENT PRICE 80.56 | P/E RATIO 12.0 (Trailing: 12.2 Median: 14.0) | RELATIVE P/E RATIO 0.90 | DIV'D YLD 3.2% | VALUE LINE

TIMELINESS 3 Lowered 2/21/20
SAFETY 3 Lowered 11/4/05
TECHNICAL 5 Lowered 4/17/20
BETA .90 (1.00 = Market)

High	32.4	48.0	59.5	66.7	74.3	87.2	99.6	140.0	142.6	146.3	99.9	99.5
Low	17.8	26.2	36.7	45.3	60.6	58.3	75.1	84.6	113.1	87.0	73.0	59.1

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 9.0 x "Cash Flow" p.sh
Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$77-$120	$99 (20%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	160	(+100%)	21%
Low	110	(+35%)	11%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	199	200	213
to Sell	244	210	203
Hld's(000)	58953	58021	59830

Percent shares traded 30 20 10

% TOT. RETURN 3/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	-17.8	-26.1
3 yr	-32.5	-16.7
5 yr	8.1	-5.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
30.81	31.85	35.37	45.91	52.77	49.36	57.44	81.96	84.83	85.16	79.47	78.49	78.77	81.01	87.80	92.92	*93.15*	*93.35*	Sales per sh	*114.30*
2.65	2.65	3.21	4.37	5.28	3.79	5.31	7.60	8.39	7.94	8.17	8.42	9.97	10.72	11.18	9.97	*10.20*	*10.60*	"Cash Flow" per sh	*15.70*
1.25	1.19	1.63	2.59	3.52	2.02	3.24	4.68	5.57	5.05	5.18	5.63	7.05	7.67	6.92	6.61	*6.75*	*7.00*	Earnings per sh A	*10.00*
.25	.28	.32	.40	.51	.56	.56	.60	.86	1.40	1.68	1.71	1.85	2.10	2.43	2.51	*2.53*	*2.58*	Div'ds Decl'd per sh B	*3.20*
1.40	1.93	2.31	2.40	3.05	1.96	2.09	3.47	4.07	4.01	3.87	3.91	3.92	4.36	5.26	4.91	*5.05*	*5.25*	Cap'l Spending per sh	*6.50*
14.59	16.33	17.95	21.73	18.52	22.60	25.99	27.73	31.65	32.35	30.52	29.94	35.42	40.16	35.90	40.71	*41.80*	*42.95*	Book Value per sh D	*57.15*
74.09	74.09	74.09	73.87	74.74	74.39	76.02	75.88	77.00	74.31	71.32	71.62	72.41	72.00	66.53	66.82	*67.00*	*67.50*	Common Shs Outst'g C	*70.00*
17.7	20.1	18.8	15.4	10.6	13.1	11.1	10.7	10.0	13.4	14.3	15.2	16.9	16.1	16.4	13.0	*Bold figures are*		Avg Ann'l P/E Ratio	*13.5*
.94	1.07	1.02	.82	.64	.87	.71	.67	.64	.75	.75	.77	.89	.81	.89	.71	*Value Line*		Relative P/E Ratio	*.75*
1.1%	1.2%	1.0%	1.0%	1.4%	2.1%	1.6%	1.2%	1.5%	2.1%	2.3%	2.0%	1.6%	1.7%	2.1%	2.9%	*estimates*		Avg Ann'l Div'd Yield	*2.4%*

CAPITAL STRUCTURE as of 12/31/19
Total Debt $1848 mill. Due in 5 Yrs $1085 mill
LT Debt $1766 mill LT Interest $105 mill
(39% of Cap'l)
Leases, Uncapitalized Annual rentals $49 mill
Pension Assets-12/19 $639 mill Oblig. $641 mill
Preferred Stock None
Common Stock 66,881,850 shares as of 2/1/20
Market Cap: $5.4 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
4367.0	6219.0	6532.0	6328.0	5668.0	5621.0	5704.0	5832.0	5841.0	6209.0	*6240*	*6300*	Sales ($mill)	*8000*
11.7%	12.8%	13.7%	12.5%	13.8%	15.7%	17.9%	18.4%	17.2%	14.8%	*15.0%*	*15.5%*	Operating Margin	*22.0%*
155.0	211.0	211.0	194.0	195.0	194.0	196.0	209.0	247.0	220.0	*230*	*240*	Depreciation ($mill)	*400*
249.0	366.0	435.0	396.0	388.0	409.3	525.8	563.0	497.0	446.0	*455*	*475*	Net Profit ($mill)	*700*
36.0%	28.7%	27.8%	26.3%	30.2%	31.3%	33.2%	30.8%	26.9%	27.2%	*27.0%*	*27.0%*	Income Tax Rate	*27.5%*
5.7%	5.9%	6.7%	6.3%	6.8%	7.3%	9.2%	9.7%	8.5%	7.2%	*7.3%*	*7.5%*	Net Profit Margin	*8.8%*
862.0	1176.0	1427.0	1394.0	1423.0	1208.0	1274.0	1458.0	1192.0	1193.0	*1230*	*1300*	Working Cap'l ($mill)	*1400*
1681.0	1801.0	1724.0	1717.0	1804.0	1819.0	1850.0	1744.0	1931.0	1766.0	*1775*	*1790*	Long-Term Debt ($mill)	*1950*
1976.0	2104.0	2437.0	2404.0	2177.0	2144.0	2565.0	2891.0	2388.0	2720.0	*2800*	*2900*	Shr. Equity ($mill)	*4000*
7.6%	10.3%	11.2%	10.4%	10.5%	11.1%	12.6%	12.9%	12.5%	10.8%	*11.0%*	*11.5%*	Return on Total Cap'l	*13.0%*
12.6%	17.4%	17.8%	16.5%	17.8%	19.1%	20.5%	19.5%	20.8%	16.4%	*16.5%*	*16.5%*	Return on Shr. Equity	*17.5%*
10.3%	15.0%	15.0%	11.8%	11.9%	13.2%	15.0%	13.8%	13.2%	10.0%	*10.0%*	*10.5%*	Retained to Com Eq	*12.0%*
18%	14%	16%	28%	33%	31%	27%	29%	37%	39%	*37%*	*37%*	All Div'ds to Net Prof	*32%*

CURRENT POSITION ($MILL.)	2017	2018	12/31/19
Cash Assets	604	334	268
Receivables	961	951	977
Inventory (FIFO)	823	824	861
Other	27	29	54
Current Assets	2415	2138	2160
Accts Payable	493	452	504
Debt Due	120	169	82
Other	344	325	381
Current Liab.	957	946	967

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	6.0%	1.0%	*4.5%*
"Cash Flow"	9.0%	5.5%	*7.0%*
Earnings	10.0%	6.0%	*6.0%*
Dividends	17.0%	12.5%	*5.5%*
Book Value	6.5%	4.5%	*6.5%*

Cal-endar	QUARTERLY SALES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1453.0	1457.0	1485.0	1437.0	5832.0
2018	1469.0	1496.0	1450.0	1426.0	5841.0
2019	1536.0	1550.0	1574.0	1549.0	6209.0
2020	*1540*	*1553*	*1586*	*1561*	*6240*
2021	*1556*	*1567*	*1597*	*1580*	*6300*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1.83	1.85	2.19	1.80	7.67
2018	1.94	1.66	1.70	1.61	6.92
2019	1.53	1.66	1.82	1.60	6.61
2020	*1.55*	*1.70*	*1.85*	*1.65*	*6.75*
2021	*1.68*	*1.75*	*1.87*	*1.70*	*7.00*

Cal-endar	QUARTERLY DIVIDENDS PAID B Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.45	.45	.45	.50	1.85
2017	.50	.50	.50	.60	2.10
2018	.60	.60	.60	.625	2.43
2019	.625	.625	.625	.63	2.51
2020	.63	.63			

BUSINESS: Ingredion Incorporated (formerly Corn Products International) one of the world's largest corn refiners, produces high-quality food ingredients (high fructose, glucose, and maltose corn syrups) and industrial products (starches, enzymes, co-products) derived from the wet milling of corn and other starch-based materials. Geographic sales breakdown for 2019: North America (61.7%), South America (15.5%), Asia Pacific (13.3%), Europe, Middle East and Africa (9.5%). BlackRock owns 10.9% of common stock, The Vanguard Group, 9.4%, officers and directors, 1.8% (4/19 proxy). Chairman: Ilene S. Gordon. CEO: James P. Zallie. Inc.: DE. Address: 5 Westbrook Corporate Center, Westchester, Illinois 60154. Tel.: 708-551-2600. Internet: www.ingredion.com.

Ingredion Incorporated's earnings visibility in 2020 looks a bit hazy, at this point. This is primarily because of uncertainty surrounding the impact of the coronavirus. Management contends that businesses were not affected during last year's fourth quarter and inventories are ample, but there were negative signs in the just-completed March period, given mandatory quarantines and other restrictions. It should be mentioned that there are two manufacturing facilities in China, where the first case of the virus was reported last December. At the time of this report, one plant was functioning without difficulty while the other was experiencing disruptions due to limited staffing. Since the situation is continuously evolving, we are erring on the side of caution, and expect share net to be around $6.75, not too far from the 2019 total of $6.61. But turning to 2021, the bottom line stands to climb at a stronger percentage rate, to $7.00 a share, assuming, of course, that the pandemic fades away. Cost-savings initiatives should also benefit the company.

Finances are in solid condition. At the conclusion of 2019, cash and equivalents resided at $268 million. Moreover, there was $990 million available under a revolving credit agreement, plus an additional $585 million of unused lines of credit in various foreign countries. Both long- and short-term debt was manageable, too. All things considered, Ingredion seems to have sufficient liquidity to fund promising investment opportunities (including the opening of its first allulose production plant in Latin America several months ago) as they arise. Acquisitions are also plausible.

The neutrally ranked stock's value has fallen over 10% since our last full-page review in January. We believe that is attributable, to a large extent, to concerns about the effect the pandemic may have on corporate results. And, in spite of the price drop, the equity's recovery potential out to 2023-2025 remains unimpressive. Capital appreciation possibilities in the 18-month period are subpar, too. But one positive is the dividend yield, and prospects for further increases in the payout (which should continue to be adequately covered by profits).

Frederick L. Harris, III *April 17, 2020*

(A) Diluted shares. Excludes nonrecurring gains/(losses): '09, ($1.58); '10, ($1.04); '11, $0.64; '12, ($0.09); '14, ($0.44); '15, ($0.10); '16, ($0.55); '17, ($0.59); '18, ($0.75); '19, ($0.49). Quarters may not add due to rounding. Next earnings report due late April.
(B) Dividends historically paid in late January, April, July, and October.
(C) In millions.
(D) Includes intangibles. At 12/31/19: $1,238 mill., $18.53 per share.

Company's Financial Strength	B++
Stock's Price Stability	80
Price Growth Persistence	60
Earnings Predictability	80

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J.B. HUNT TRANSPORT NDQ-JBHT

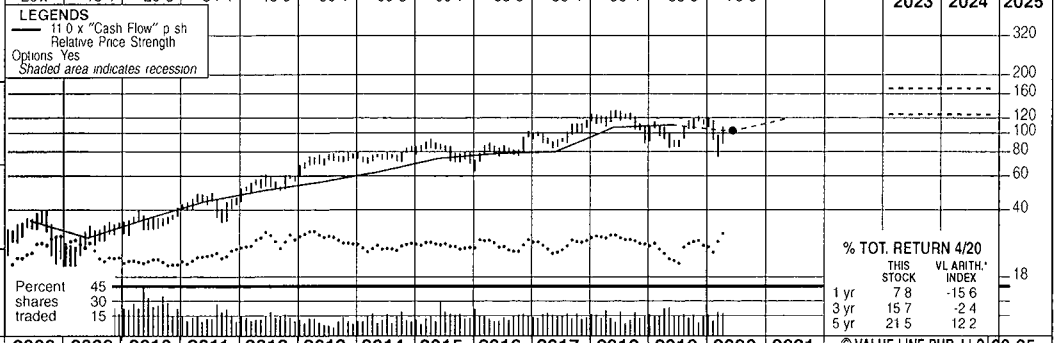
RECENT PRICE 103.20 | P/E RATIO 24.9 (Trailing: 20.2 Median: 22.0) | RELATIVE P/E RATIO 1.41 | DIV'D YLD 1.1% | VALUE LINE 323

TIMELINESS 3 Raised 9/27/19
SAFETY 2 Raised 5/29/15
TECHNICAL 3 Raised 5/15/20
BETA .95 (1.00 = Market)

High	34.8	41.2	49.1	61.2	78.6	85.5	93.5	102.4	116.8	131.7	122.3	120.8	
Low	18.1	29.5	34.4	43.9	60.1	69.3	69.7	63.6	83.4	88.4	83.6	75.3	

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 11.0 x "Cash Flow" p.sh
Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$71-$138	$105 (0%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	170	(+65%)	14%
Low	125	(+20%)	6%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	157	169	193
to Sell	270	208	189
Hld's(000)	79023	80652	79703

% TOT. RETURN 4/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	7.8	-15.6
3 yr	15.7	-2.4
5 yr	21.5	12.2

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
17.12	20.34	23.02	28.02	29.60	25.18	31.22	38.71	43.01	47.63	52.89	54.30	58.90	65.51	79.25	86.29	*82.50*	*91.60*	Revenues per sh	*113.80*
2.03	2.52	2.79	3.33	3.21	2.61	3.27	4.03	4.59	5.08	5.74	6.73	7.13	7.29	9.75	10.01	*9.30*	*10.85*	"Cash Flow" per sh	*13.60*
1.08	1.38	1.44	1.52	1.57	1.10	1.56	2.11	2.59	2.87	3.16	3.66	3.81	3.75	5.64	5.21	*4.15*	*5.35*	Earnings per sh A	*7.15*
.05	.24	.32	.36	.40	.44	.48	.52	.71	.45	.80	.84	.88	.92	.96	1.04	*1.08*	*1.12*	Div'ds Decl'd per sh B	*1.45*
2.77	1.86	3.34	2.92	2.41	2.78	2.16	4.30	3.74	4.21	6.94	6.36	5.74	4.80	9.16	8.04	*5.35*	*8.15*	Cap'l Spending per sh	*9.70*
5.29	5.31	5.26	2.76	4.20	5.06	4.72	4.85	6.74	8.64	10.33	11.41	12.70	16.76	19.33	21.34	*22.25*	*25.05*	Book Value per sh	*38.85*
162.79	153.81	144.56	124.57	126.06	127.24	121.49	116.93	117.53	117.24	116.58	113.95	111.31	109.75	108.71	106.21	*103.00*	*101.00*	Common Shs Outst'g C	*98.00*
16.0	15.0	15.6	18.0	19.9	25.8	22.5	20.4	21.2	25.2	24.2	22.2	21.6	26.0	20.7	20.0	*Bold figures are*		Avg Ann'l P/E Ratio	*20.5*
.85	.80	.84	.96	1.20	1.72	1.43	1.28	1.35	1.42	1.27	1.12	1.13	1.31	1.12	1.08	*Value Line*		Relative P/E Ratio	*1.15*
.3%	1.2%	1.4%	1.3%	1.3%	1.5%	1.4%	1.2%	1.3%	6%	1.0%	1.0%	1.1%	9%	8%	1.0%	*estimates*		Avg Ann'l Div'd Yield	*1.0%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $1302.8 mill. **Due in 5 Yrs** $600.0 mill.
LT Debt $1302.8 mill. **LT Interest** $53.0 mill.
(Total interest coverage: 11.9X)
(36% of Cap'l)

No Defined Benefit Pension Plan
Leases, Uncapitalized Annual Rentals $44.9 mill.
Pfd Stock None

Common Stock 105,460,633 shs.

MARKET CAP: $10.9 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
3793.5	4526.8	5055.0	5584.6	6165.4	6187.6	6555.5	7189.6	8614.9	9165.3	*8500*	*9250*	Revenues ($mill)	*11150*
14.4%	14.5%	15.0%	14.9%	15.0%	17.1%	16.5%	14.0%	14.5%	14.0%	*13.5%*	*14.0%*	Operating Margin	*14.5%*
197.1	213.9	229.2	253.4	294.5	339.6	361.5	383.5	435.9	499.1	*520*	*540*	Depreciation ($mill)	*625*
199.6	257.0	310.4	342.4	374.8	427.2	432.1	416.3	623.6	564.0	*440*	*555*	Net Profit ($mill)	*705*
37.6%	38.2%	38.5%	38.2%	38.0%	38.1%	37.9%	30.1%	19.5%	22.6%	*24.0%*	*24.0%*	Income Tax Rate	*26.0%*
5.3%	5.7%	6.1%	6.1%	6.1%	6.9%	6.6%	5.8%	7.2%	6.2%	*5.2%*	*6.0%*	Net Profit Margin	*6.3%*
d47.3	75.0	51.7	d32.1	109.0	327.0	372.6	416.9	150.7	445.5	*500*	*525*	Working Cap'l ($mill)	*775*
454.2	699.2	585.3	458.4	683.5	1005.0	986.3	1085.6	898.4	1295.7	*1300*	*1250*	Long-Term Debt ($mill)	*1900*
573.0	567.5	791.9	1012.5	1204.5	1300.4	1414.1	1839.3	2101.4	2267.0	*2290*	*2530*	Shr. Equity ($mill)	*3805*
20.8%	21.4%	23.5%	24.1%	20.6%	19.1%	18.5%	14.7%	21.5%	16.6%	*13.0%*	*15.5%*	Return on Total Cap'l	*12.5%*
34.8%	45.3%	39.2%	33.8%	31.1%	32.9%	30.6%	22.6%	29.7%	24.9%	*19.0%*	*22.0%*	Return on Shr. Equity	*18.5%*
24.4%	34.3%	28.7%	28.6%	23.3%	25.4%	23.6%	17.1%	24.7%	19.9%	*14.0%*	*17.5%*	Retained to Com Eq	*15.0%*
30%	24%	27%	15%	25%	23%	23%	24%	17%	20%	*26%*	*21%*	All Div'ds to Net Prof	*20%*

CURRENT POSITION ($MILL.)	2018	2019	3/31/20
Cash Assets	7.6	35.0	48.5
Receivables	1051.7	1011.8	978.3
Other	443.7	434.5	371.2
Current Assets	1503.0	1481.3	1398.0
Accts Payable	709.7	602.6	497.6
Debt Due	250.7	- -	- -
Other	391.9	433.2	411.8
Current Liab.	1352.3	1035.8	909.4

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	11.0%	10.0%	*6.5%*
"Cash Flow"	11.5%	12.0%	*7.0%*
Earnings	13.5%	11.0%	*6.5%*
Dividends	9.5%	8.5%	*7.0%*
Book Value	17.0%	17.5%	*12.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1629.2	1726.9	1843.3	1990.2	7189.6
2018	1948.2	2139.0	2209.8	2317.9	8614.9
2019	2089.6	2261.8	2363.7	2450.2	9165.3
2020	2280.8	*1875*	*2050*	*2294.2*	*8500*
2021	*2350*	*2200*	*2300*	*2400*	*9250*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.92	.88	.91	1.04	3.75
2018	1.07	1.37	1.47	1.73	5.64
2019	1.09	1.37	1.40	1.35	5.21
2020	.98	*.85*	*1.05*	*1.27*	*4.15*
2021	*1.05*	*1.35*	*1.45*	*1.50*	*5.35*

Cal-endar	QUARTERLY DIVIDENDS PAID B Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.22	.22	.22	.22	.88
2017	.23	.23	.23	.23	.92
2018	.24	.24	.24	.24	.96
2019	.26	.26	.26	.26	1.04
2020	.27	.27			

BUSINESS: J.B. Hunt Transport Services, Inc. is a holding company for J.B. Hunt Transport, Inc., one of the largest irregular-route truckload carriers in the United States, transporting general merchandise throughout the continental U.S., Canada, and Mexico. Has truckload, intermodal, and dedicated contract operations. As of 12/31/19, owned 17,972 tractors and 124,861 trailers and containers. Labor costs: 23.7% of revenues. Has about 29,055 employees. Johnelle Hunt owns 17.3% of stock; T. Rowe Price Associates, 15.9%, Vanguard Group, 9.6%; off./dir., 3.5% (3/20 proxy). Chairman: Kirk Thompson. CEO & President: John N. Roberts III. Inc.: AR. Address: 615 J.B. Hunt Corporate Drive, Lowell, Arkansas 72745-0130. Telephone: 479-820-0000. Internet: www.jbhunt.com.

J.B. Hunt shares have traded in a wide band over the last 12 months. Of late, the performance has been quite volatile, with the stock falling nearly 40% below its 52-week high on March 16th. It has since rebounded to above $100 a share, but is still trading below where it was at the time of our late-February report. Weighing on the stock has been the company's weak performance in recent quarters and concerns about the near-term negative impact the coronavirus will have on the cyclical trucking industry and J.B. Hunt's Intermodal business, its largest segment.

The trucking company got off to a weak start in 2020. Specifically, J.B. Hunt earned $0.98 a share, which fell short of both our estimate of $1.10 and the prior-year tally of $1.09. It marked the third-consecutive quarter that the company missed expectations. Although revenues advanced 9% in the March quarter, higher operating expenses pressured the bottom line. The biggest culprit was a lower gross margin in the Intermodal unit, which suffered from higher rail purchase costs. Other detractors to the bottom line were increased driver wages and elevated spending on technology enhancements. Management also noted that the coronavirus outbreak stateside hurt results at the end of March.

We are drastically reducing our full-year earnings estimate. The COVID-19 pandemic, which forced a shutdown of a large portion of the U.S. economy to stop the spread of the deadly virus in the current quarter, will likely significantly decrease the near-term demand for trucking and freight hauling services. Consumer confidence, which is a good indicator of the future need for shipping services, tumbled last month and our sense is that a notable rebound is not likely until the public is not worried about the deadly virus. Based on this assumption, we are not expecting a bottom-line rebound to materialize until next year.

This equity doesn't stand out for either the year ahead or the 3- to 5-year pull. We would avoid this cyclical stock, especially with the U.S. economy in the midst of a deep coronavirus-driven recession that saw the unemployment rate skyrocket to 14.7% in April.

William G. Ferguson *May 22, 2020*

(A) Based on diluted shares. Excludes net nonrecurring gains (losses): '04, (18¢); '05, (10¢); '07, 3¢; '08, (1¢); '09, (5¢); '17, $2.43; '18, ($1.21); '19, (44¢). Next earnings report due mid-July. (B) Cash dividend reinstated April, 2004. Payment dates mid-February, May, August, and late November. Raised quarterly dividend by $0.01 a share and paid out normal Q1 outlay in Q4 of 2012. (C) In millions, adjusted for stock split.

Company's Financial Strength	A+
Stock's Price Stability	85
Price Growth Persistence	90
Earnings Predictability	80

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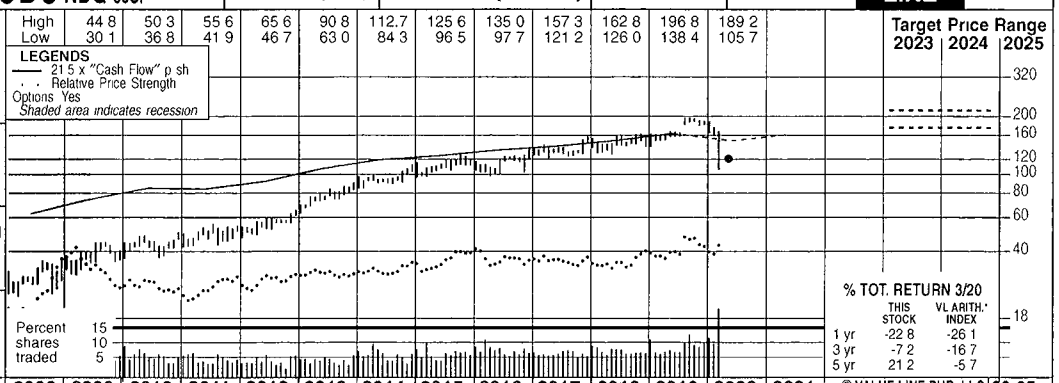
J&J SNACK FOODS NDQ-JJSF

RECENT PRICE 120.59 | P/E RATIO 27.7 (Trailing: 24.3 Median: 25.0) | RELATIVE P/E RATIO 2.07 | DIV'D YLD 1.9% | VALUE LINE

TIMELINESS 4 Lowered 4/17/20
SAFETY 1 Raised 4/20/18
TECHNICAL 3 Raised 4/3/20
BETA .70 (1.00 = Market)

High	44.8	50.3	55.6	65.6	90.8	112.7	125.6	135.0	157.3	162.8	196.8	189.2
Low	30.1	36.8	41.9	46.7	63.0	84.3	96.5	97.7	121.2	126.0	138.4	105.7

LEGENDS
— 21.5 x "Cash Flow" p sh
· · · Relative Price Strength
Options: Yes
Shaded area indicates recession



Target Price Range 2023 | 2024 | 2025

18-Month Target Price Range
Low-High: $101-$215 | Midpoint (% to Mid): $158 (30%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	215	(+80%)	16%
Low	175	(+45%)	10%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	98	123	109
to Sell	85	83	103
Hld's(000)	13932	14003	13978

Percent shares traded 15 10 5

% TOT. RETURN 3/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	-22.8	-26.1
3 yr	-7.2	-16.7
5 yr	21.2	-5.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
23.13	25.02	27.88	30.42	33.57	35.25	37.68	39.73	44.24	46.46	49.26	52.27	53.18	58.09	60.69	62.79	*57.10*	*61.85*	Sales per sh A	*69.45*
2.60	2.74	2.91	3.13	2.92	3.45	3.94	3.93	4.28	4.99	5.54	5.81	6.22	6.52	6.95	7.59	*7.10*	*7.35*	"Cash Flow" per sh	*9.45*
1.24	1.40	1.57	1.69	1.47	2.21	2.59	2.58	2.86	3.41	3.82	3.73	4.05	4.21	4.46	5.00	*4.35*	*4.85*	Earnings per sh A B	*6.50*
--	.25	.30	.34	.37	.39	.43	.47	.52	.64	1.28	1.44	1.56	1.68	1.80	2.00	*2.30*	*2.40*	Div'ds Decl'd per sh C■	*3.00*
1.20	1.18	1.07	1.22	1.22	1.47	1.81	1.56	2.28	1.92	2.08	2.68	2.61	3.87	3.20	3.02	*2.90*	*2.90*	Cap'l Spending per sh	*3.15*
11.66	12.85	14.23	15.80	16.90	18.51	20.58	23.09	25.32	27.66	30.13	32.12	34.17	36.56	40.48	44.13	*46.05*	*48.40*	Book Value per sh D	*57.65*
18.01	18.27	18.47	18.70	18.75	18.53	18.49	18.73	18.78	18.68	18.67	18.68	18.67	18.66	18.75	18.90	*19.00*	*19.00*	Common Shs Outst'g E	*19.00*
16.2	17.7	20.0	22.5	20.6	16.1	16.2	18.3	18.7	20.9	23.8	28.8	27.9	30.7	32.0	32.3	*Bold figures are*		Avg Ann'l P/E Ratio	*30.0*
.86	.94	1.08	1.19	1.24	1.07	1.03	1.15	1.19	1.17	1.25	1.45	1.46	1.54	1.73	1.75	*Value Line*		Relative P/E Ratio	*1.65*
--	1.0%	1.0%	.9%	1.2%	1.1%	1.0%	1.0%	1.0%	.9%	1.4%	1.3%	1.4%	1.3%	1.3%	1.2%	*estimates*		Avg Ann'l Div'd Yield	*1.3%*

CAPITAL STRUCTURE as of 12/28/19
Total Debt $9 mill | Due in 5 Yrs $9 mill
LT Debt $6 mill | LT Interest $.03 mill

Leases, Uncapitalized Annual rentals $14.8 mill

No Defined Pension Benefit Plan
Pfd Stock None

Common Stock 18,918,943 shs
1/23/20
MARKET CAP: $2.3 billion (Mid Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
696.7	744.1	830.8	867.7	919.5	976.3	992.8	1084.2	1138.3	1186.5	*1085*	*1175*	Sales ($mill) A	*1320*
14.6%	13.7%	13.4%	14.5%	15.1%	15.3%	15.4%	14.8%	13.8%	14.0%	*14.5%*	*15.0%*	Operating Margin	*16.5%*
24.5	25.0	26.2	28.8	31.7	38.3	40.1	42.4	46.4	48.6	*49.5*	*50.0*	Depreciation ($mill)	*55.0*
48.4	48.5	54.1	64.4	71.8	70.2	76.0	79.2	83.9	94.8	*85.0*	*90.0*	Net Profit ($mill)	*125*
38.0%	37.0%	37.3%	36.1%	35.4%	37.3%	35.0%	35.2%	29.0%	25.1%	*27.5%*	*27.5%*	Income Tax Rate	*27.5%*
6.9%	6.5%	6.5%	7.4%	7.8%	7.2%	7.7%	7.3%	7.4%	8.0%	*7.8%*	*7.7%*	Net Profit Margin	*9.5%*
149.4	184.0	226.6	181.5	179.6	229.7	252.8	262.8	264.9	385.2	*420*	*460*	Working Cap'l ($mill)	*435*
6	5	3	1	4	1.2	1.2	9	8	7	*.5*	*.5*	Long-Term Debt ($mill)	*.5*
380.6	432.4	475.5	516.6	562.5	599.9	638.0	682.3	759.1	833.8	*875*	*920*	Shr. Equity ($mill)	*1095*
12.7%	11.2%	11.4%	12.5%	12.8%	11.7%	11.9%	11.6%	11.0%	11.4%	*9.5%*	*10.0%*	Return on Total Cap'l	*11.5%*
12.7%	11.2%	11.4%	12.5%	12.8%	11.7%	11.9%	11.6%	11.1%	11.4%	*9.5%*	*10.0%*	Return on Shr. Equity	*11.5%*
10.7%	9.2%	9.4%	10.2%	9.0%	7.3%	7.4%	7.1%	6.7%	7.0%	*4.5%*	*5.0%*	Retained to Com Eq	*6.0%*
16%	18%	18%	18%	29%	37%	38%	39%	39%	39%	*53%*	*49%*	All Div'ds to Net Prof	*46%*

CURRENT POSITION ($MILL.)	2018	2019	12/28/19
Cash Assets	132.5	243.5	170.3
Receivables	132.3	140.9	131.6
Inventory (FIFO)	112.9	116.2	125.8
Other	5.1	5.8	67.4
Current Assets	382.8	506.4	495.1
Accts Payable	69.6	72.0	71.9
Debt Due	.3	.3	.3
Other	48.0	48.9	62.1
Current Liab.	117.9	121.2	134.3

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	6.0%	5.5%	*2.5%*
"Cash Flow"	8.5%	7.5%	*5.0%*
Earnings	10.0%	6.5%	*6.0%*
Dividends	17.5%	17.5%	*8.5%*
Book Value	9.0%	8.0%	*6.0%*

Fiscal Year Ends	QUARTERLY SALES ($ mill.) A Dec.Per	Mar.Per	Jun.Per	Sep.Per	Full Fiscal Year
2017	225.6	246.5	295.4	316.7	1084.2
2018	265.2	266.1	306.3	300.7	1138.3
2019	271.6	276.3	326.7	311.9	1186.5
2020	282.9	*235*	*240*	*327.1*	*1085*
2021	*280*	*270*	*300*	*325*	*1175*

Fiscal Year Ends	EARNINGS PER SHARE A B Dec.Per	Mar.Per	Jun.Per	Sep.Per	Full Fiscal Year
2017	.72	.85	1.34	1.29	4.21
2018	.88	.95	1.39	1.24	4.46
2019	.93	1.08	1.63	1.36	5.00
2020	.89	*.95*	*1.20*	*1.31*	*4.35*
2021	*.95*	*1.05*	*1.40*	*1.45*	*4.85*

Cal-endar	QUARTERLY DIVIDENDS PAID C■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.39	.39	.39	.39	1.56
2017	.42	.42	.42	.42	1.68
2018	.45	.45	.45	.45	1.80
2019	.50	.50	.50	.50	2.00
2020	.575	.575			

BUSINESS: J&J Snack Foods Corp. manufactures nutritional snack foods and distributes frozen carbonated and juice beverages mainly in the United States, Mexico and Canada. It sells to snack bars, food stands, fast food operators, stadiums, sports arenas, warehouse club stores, schools, colleges, movie theaters, and others. In addition, it sells various food products through a chain of specialty snack food retail outlets. Has 4,600 employees. Officers/directors own 21% of company, BlackRock Fund Advisors, 11%, The Vanguard Group, 9%, (12/19 proxy). Incorporated: New Jersey. Chairman, Chief Executive Officer & President: Gerald B. Schreiber. Address: 6000 Central Highway, Pennsauken, New Jersey 08109. Telephone: 856-665-9533. Internet: www.jjsnack.com.

J&J Snack Foods opened up fiscal 2020 (began September 29, 2019) on a mixed note. Fiscal first-quarter (ended December 28th) sales rose 4%, year to year, to $282.9 million, thanks to growth in the core Food Service unit (65% of sales) stemming from new product launches, price hikes, and volume increases. Too, the Frozen Beverages segment (16% of sales) benefited from the October-addition of ICEE Distributors. That said, share net was down 4%, to $0.89, due to the absence of a tax benefit related to the Tax Cuts and Job Act which benefited last year's EPS by $0.05 a share. Too, lost distribution in the Retail segment didn't help.

The coronavirus outbreak will likely have a material impact on performance. Management anticipates the shutdown of large segments of the U.S. economy (as an effort to limit the spread of the contagion) will loom large on sales and operations. Moreover, J&J Snack Foods noted that one third of its annual sales tally is typically driven by sports and entertainment venues as well as school events. However, with the extended order of shutdowns for non-essential businesses along with a mandate for social distancing, the company now expects to experience a considerable amount of lost sales. While the effects of panic buying may increase sales to grocers and other retailers, the overall impact will still be negative as the COVID-19 timeline is uncertain. As a result, we have slashed our fiscal 2020 top- and bottom-lines by $135 million and $0.85 a share, to $1.085 billion and $4.35, respectively.

We look for a partial top- and bottom-line recovery next year. We are cautiously optimistic that the current challenges will be short term in nature, and J&J Snack Foods will benefit from new items being added to the portfolio. Additionally, the Retail division should gain from repackaging initiatives that are part of its comprehensive marketing program. What's more, further M&A opportunities are possible. All told, we look for fiscal 2021 sales and share net to reach $1.175 billion and $4.85 a share, respectively.

These shares are untimely. Furthermore, 3- to 5-year recovery potential is subpar.

Oriatal J. Haiby — *April 17, 2020*

(A) Fiscal year ends last Saturday in September. (B) Diluted earnings. Qrtly may not sum due to changes in share count. Excludes nonrecurring gain: 2011, $0.35; 2018, $1.05. Next earnings report due early May. (C) Dividends historically paid early January, April, July, and October. ■ Div'd reinvest. plan available. (D) Includes intangibles. At 12/28/19: $195.3 million, or $10.33 a share. (E) In millions.

Company's Financial Strength	A+
Stock's Price Stability	90
Price Growth Persistence	100
Earnings Predictability	100

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McCORMICK NYSE-MKC

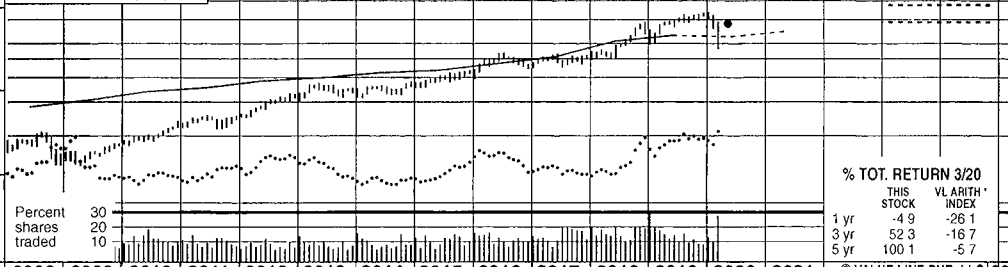
RECENT PRICE 152.01 | P/E RATIO 29.1 (Trailing: 28.6 / Median: 22.0) | RELATIVE P/E RATIO 2.17 | DIV'D YLD 1.6% | VALUE LINE

TIMELINESS 3 Lowered 5/17/19
SAFETY 1 Raised 5/1/09
TECHNICAL 3 Lowered 3/20/20
BETA .70 (1.00 = Market)

High	36.8	47.8	51.3	66.4	75.3	77.1	87.5	107.8	106.5	156.0	173.3	174.6
Low	28.1	35.4	43.4	49.9	60.8	62.8	70.7	78.4	89.6	98.3	119.0	112.2

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 20.0 x "Cash Flow" p sh
Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range
Low-High: $148-$238 | Midpoint (% to Mid): $193 (25%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	190	(+25%)	7%
Low	155	(Nil)	2%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	335	360	384
to Sell	394	367	379
Hld's(000)	107102	106633	104121

Percent shares traded 30 20 10

% TOT. RETURN 3/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	-4.9	-26.1
3 yr	52.3	-16.7
5 yr	100.1	-5.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
18.60	19.55	20.88	22.82	24.42	24.22	25.07	27.79	30.26	31.44	33.08	33.75	35.21	36.90	40.95	40.24	*41.25*	*42.50*	Sales per sh A	*48.10*
2.10	2.24	2.45	2.64	2.83	3.06	3.39	3.55	3.85	4.00	4.24	4.36	4.73	5.13	6.16	6.59	*6.50*	*6.95*	"Cash Flow" per sh	*8.40*
1.51	1.61	1.72	1.92	2.14	2.34	2.65	2.79	3.04	3.13	3.37	3.48	3.78	4.26	4.97	5.35	*5.25*	*5.70*	Earnings per sh A B	*7.00*
.56	.64	.72	.80	.88	.96	1.04	1.12	1.24	1.36	1.48	1.60	1.72	1.88	2.08	2.28	*2.48*	*2.56*	Div'ds Decl'd per sh ■ C	*2.88*
.51	.56	.65	.61	.66	.63	.67	.73	.83	.76	1.03	1.01	1.23	1.39	1.28	1.31	*1.50*	*1.50*	Cap'l Spending per sh	*1.70*
6.55	6.03	7.17	8.49	8.11	10.13	10.99	12.16	12.81	14.85	14.11	13.12	12.98	19.54	24.00	25.92	*28.70*	*31.75*	Book Value per sh D	*41.80*
135.79	132.60	130.10	127.80	130.10	131.80	133.10	133.05	132.68	131.16	128.27	127.30	125.30	131.00	132.10	132.90	*133.00*	*133.50*	Common Shs Outst'g E	*133.00*
22.0	21.3	20.0	19.4	17.2	13.7	14.8	17.1	18.7	22.0	20.6	22.5	25.1	22.9	23.3	28.3	*Bold figures are*		Avg Ann'l P/E Ratio	*24.5*
1.16	1.13	1.08	1.03	1.04	.91	.94	1.07	1.19	1.24	1.08	1.13	1.32	1.15	1.26	1.54	*Value Line*		Relative P/E Ratio	*1.35*
1.7%	1.9%	2.1%	2.2%	2.4%	3.0%	2.6%	2.3%	2.2%	2.0%	2.1%	2.0%	1.8%	1.9%	1.8%	1.5%	*estimates*		Avg Ann'l Div'd Yield	*1.7%*

CAPITAL STRUCTURE as of 2/29/20
Total Debt $4441.8 mill **Due in 5 Yrs** $2.74 bill
LT Debt $3627.9 mill **LT Interest** $146 mill
(Long-term interest earned: 6.8x) (50% of Cap'l)
Leases, Uncapitalized Annual rentals $41.8 mill
Pension Assets-11/19 $1012.8 mill
Oblig. $1230.4 mill

Pfd Stock None
Common Stock 132,903,891 shs
(Includes 123,640,577 non-voting shs.)

MARKET CAP: $20.2 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
3336.8	3697.6	4014.2	4123.4	4243.2	4296.3	4411.5	4834.1	5408.9	5347.4	*5485*	*5675*	Sales ($mill) A	*6400*
18.1%	17.3%	17.0%	16.9%	16.8%	16.8%	17.4%	18.4%	20.2%	21.3%	*20.8%*	*21.3%*	Operating Margin	*22.5%*
95.1	98.3	102.8	106.0	102.7	105.9	108.7	125.2	150.7	158.8	*160*	*165*	Depreciation ($mill)	*180*
356.3	374.2	407.8	418.2	441.6	449.5	483.4	546.7	663.0	717.5	*705*	*765*	Net Profit ($mill)	*940*
28.5%	29.0%	26.6%	26.8%	26.3%	26.2%	25.8%	23.8%	15.3%	19.5%	*21.0%*	*21.0%*	Income Tax Rate	*22.0%*
10.7%	10.1%	10.2%	10.1%	10.4%	10.5%	11.0%	11.3%	12.3%	13.4%	*12.9%*	*13.5%*	Net Profit Margin	*14.7%*
181.1	229.6	97.8	307.1	294.2	166.3	d.9	d330.3	d521.8	d604.2	*d475*	*d275*	Working Cap'l ($mill)	*775*
779.9	1029.7	779.2	1019.0	1014.1	1052.7	1054.0	4443.9	4052.9	3625.8	*3600*	*3500*	Long-Term Debt ($mill)	*4000*
1462.7	1618.5	1700.2	1947.7	1809.4	1670.2	1626.6	2559.9	3170.9	3444.2	*3815*	*4235*	Shr. Equity ($mill)	*5560*
17.0%	15.1%	17.5%	15.0%	16.5%	17.5%	19.1%	8.5%	10.3%	11.2%	*10.5%*	*10.5%*	Return on Total Cap'l	*10.5%*
24.4%	23.1%	24.0%	21.5%	24.4%	26.9%	29.7%	21.4%	20.9%	20.8%	*18.5%*	*18.0%*	Return on Shr. Equity	*17.0%*
14.9%	13.9%	14.3%	12.2%	13.8%	14.6%	16.3%	12.1%	12.3%	12.1%	*9.5%*	*10.0%*	Retained to Com Eq	*10.0%*
39%	40%	40%	43%	44%	46%	45%	43%	41%	42%	*47%*	*45%*	All Div'ds to Net Prof	*41%*

CURRENT POSITION ($MILL.)	2018	2019	2/29/20
Cash Assets	96.6	155.4	170.8
Receivables	518.1	502.9	409.9
Inventory (FIFO)	786.3	801.2	835.6
Other	78.9	90.7	108.1
Current Assets	1479.9	1550.2	1524.4
Accts Payable	710.0	846.9	789.4
Debt Due	643.5	723.8	813.9
Other	648.2	583.7	469.1
Current Liab.	2001.7	2154.4	2072.4

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '23-'25
Sales	5.0%	5.0%	*3.5%*
"Cash Flow"	7.5%	7.0%	*6.0%*
Earnings	8.5%	7.5%	*6.5%*
Dividends	9.0%	9.0%	*5.5%*
Book Value	9.0%	7.5%	*10.5%*

Fiscal Year Ends	QUARTERLY SALES ($ mill.) A Feb.28	May 31	Aug.31	Nov.30	Full Fiscal Year
2017	1043.7	1114.3	1185.2	1490.9	4834.1
2018	1237.1	1327.3	1345.3	1499.2	5408.9
2019	1231.5	1301.9	1329.2	1484.8	5347.4
2020	1212.0	*1350*	*1370*	*1553*	*5485*
2021	*1300*	*1375*	*1400*	*1600*	*5675*

Fiscal Year Ends	EARNINGS PER SHARE A B Feb.28	May 31	Aug.31	Nov.30	Full Fiscal Year
2017	.76	.82	1.12	1.54	4.26
2018	1.00	1.02	1.28	1.67	4.97
2019	1.12	1.16	1.46	1.61	5.35
2020	1.08	*1.13*	*1.40*	*1.64*	*5.25*
2021	*1.15*	*1.25*	*1.52*	*1.78*	*5.70*

Cal-endar	QUARTERLY DIVIDENDS PAID C ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.43	.43	.43	.43	1.72
2017	.47	.47	.47	.47	1.88
2018	.52	.52	.52	.52	2.08
2019	.57	.57	.57	.57	2.28
2020	.62				

BUSINESS: McCormick & Company, Inc. is a leading manufacturer, marketer, and distributor of spices, seasonings, flavorings, mixes, condiments for the consumer, industrial, and foodservice markets. Has two segments: Consumer (accounted for 61% of total sales in fiscal 2019) and Flavor Solutions (39%). Acquired Reckitt Benckiser's Food Division (French's Mustard and Frank's RedHot lines) 8/17, Enrico Giotti SpA, 12/16. Foreign operations comprise 40% of sales in fiscal 2019. Has about 12,400 employees. Off./dir. own 12.7% of common stock, Lawrence E. Kurzius, 5.2% (2/20 Proxy). Chrmn., CEO & Pres.: Lawrence E. Kurzius. Inc.: MD. Addr.: 24 Schilling Road, Suite 1, Hunt Valley, Maryland 21031. Telephone: 410-771-7301. Internet: www.mccormick.com.

McCormick reported mostly disappointing fiscal first-quarter (ended February 29th) results. Specifically, the spice maker earned $1.08 a share, which fell short of our estimate of $1.10 and the previous-year tally of $1.12, on a 2% sales decline. The primarily culprit was reduced business in China, as that nation battled the COVID-19 virus. Given the growing uncertainty, as the coronavirus pandemic has spread across the United States and Europe, the company has pulled its guidance; MKC hopes to have an updated outlook at the end of the second quarter.

We are now estimating a bottom-line retreat for fiscal 2020. There is no doubt that the company will feel the ill effects of the COVID-19 pandemic, but we expect McCormick's business model to hold up better than those of many other industries. On its latest earnings conference call, CEO Lawrence Kurzuis noted that the company is experiencing an "unprecedented surge in demand," as the grocery stores and supermarkets McCormick serves are re-stocking shelves following the frantic rush by consumers to purchase products used to cook at home. Conversely, the company's Flavor Solutions unit will likely take a big hit, as it does a good deal of business with the ravished restaurants and foodservice industries. These two factors may well serve as offsets to each other over the next few quarters, as the nation battles the coronavirus.

Despite the pullback in price since our mid-January report, we think McCormick shares should still be viewed as a solid defensive investment during these turbulent times. The stock offers many of the attributes investors value during difficult stretches for the broader market. The company's Financial Strength rating is A+ and the stock, which has a less-than-market Beta coefficient of 0.70, is ranked 1 (Highest) for Safety. These scores reflect the company's financial strength, stable cash flow generation, and access to liquidity when needed. Investors should also note than during the 2001-2002 and 2008-2009 recessions, McCormick's consumer sales grew 4% and 3%, respectively, which, we think, provides a measure of downside operating risk protection during periods of economic stress.

William G. Ferguson *April 17, 2020*

(A) Fiscal year ends Nov. 30th. (B) Diluted earnings. Excl. nonrecurring gains/(losses): '04,(1¢), '05, (5¢), '06, (12¢), '07, (19¢); '13, (22¢), '14, (3¢), '17, (54¢), '18, $2.03, '19, (11¢). Next earnings report due late June. Earnings may not add due to rounding. (C) Divs. historically paid in mid-Jan., Apr., July & Oct. ■ Div'd reinvestment plan available. (D) Includes intangibles. In fiscal 2019: $7346.8 million, $54.10/sh. (E) In mill., adjusted for split.

Company's Financial Strength	A+
Stock's Price Stability	90
Price Growth Persistence	85
Earnings Predictability	100

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ALTRIA GROUP, INC. NYSE-MO

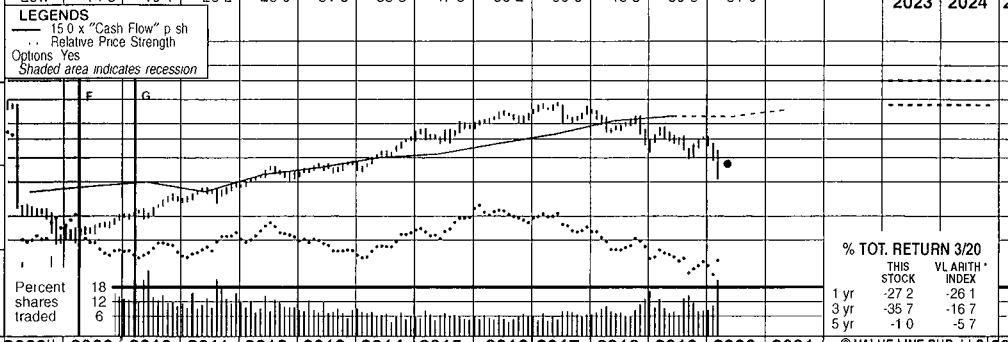
RECENT PRICE 37.28 | P/E RATIO 8.9 (Trailing: 8.9 Median: 16.0) | RELATIVE P/E RATIO 0.66 | DIV'D YLD 9.0% | VALUE LINE

TIMELINESS 3 Raised 3/27/20
SAFETY 3 Lowered 4/17/20
TECHNICAL 4 Lowered 3/27/20
BETA .70 (1.00 = Market)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High	20.5	26.2	30.4	36.3	38.6	51.7	61.7	70.1	77.8	71.9	57.9	51.8
Low	14.5	19.1	23.2	28.0	31.8	33.8	47.3	56.2	60.0	46.5	39.3	31.0

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 15.0 x "Cash Flow" p sh
. . . Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range
Low-High: $42-$68 | Midpoint (% to Mid): $55 (50%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	105	(+180%)	35%
Low	70	(+90%)	22%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	722	625	752
to Sell	845	918	840
Hld's(000)	1195017	1181212	1190093

Percent shares traded 18 12 6

% TOT. RETURN 3/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	-27.2	-26.1
3 yr	-35.7	-16.7
5 yr	-1.0	-5.7

2004	2005	2006	2007	2008H	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
43.51	46.93	48.36	35.02	9.39	11.35	11.66	11.64	12.25	12.27	12.45	12.98	13.25	13.45	13.53	13.51	*13.40*	*13.75*	Sales per sh	*15.30*
5.35	5.92	6.59	4.81	1.78	1.89	2.00	1.78	2.19	2.38	2.68	2.79	3.15	3.55	4.14	4.37	*4.35*	*4.75*	"Cash Flow" per sh	*5.70*
4.57	5.15	5.76	4.36	1.66	1.76	1.87	1.64	2.06	2.26	2.56	2.67	2.73	3.39	3.99	4.22	*4.20*	*4.60*	Earnings per sh A	*5.55*
2.82	3.06	3.32	3.16	1.68	1.32	1.46	1.58	1.70	1.84	2.08	2.17	2.35	2.54	3.00	3.28	*3.38*	*3.60*	Div'ds Decl'd per sh B ■	*4.45*
.93	1.06	1.17	2.10	.12	.13	.08	.05	.06	.07	.08	.12	.10	.10	.13	.13	*.15*	*.15*	Cap'l Spending per sh	*.15*
14.91	17.13	18.89	8.80	1.37	1.96	2.49	1.80	1.58	2.07	1.53	1.47	6.57	8.09	7.89	3.35	*3.50*	*3.70*	Book Value per sh C	*4.60*
2059.5	2085.0	2097.1	2107.7	2061.4	2076.0	2088.7	2044.4	2009.9	1993.5	1969.3	1960.1	1943.3	1901.3	1874.1	1858.0	*1850.0*	*1840.0*	Common Shs Outst'g D	*1725.0*
11.4	13.2	13.4	16.3	11.9	9.9	11.8	16.2	15.7	15.7	16.5	20.1	23.4	20.6	15.1	11.6	*Bold figures are*		Avg Ann'l P/E Ratio	*16.0*
.60	.70	.72	.87	.72	.66	.75	1.02	1.00	.88	.87	1.01	1.23	1.04	.82	.63	*Value Line*		Relative P/E Ratio	*.90*
5.4%	4.5%	4.3%	4.5%	8.5%	7.6%	6.6%	6.0%	5.3%	5.2%	4.9%	4.0%	3.7%	3.6%	5.0%	6.7%	*estimates*		Avg Ann'l Div'd Yield	*5.0%*

CAPITAL STRUCTURE as of 12/31/19
Total Debt $28042 mill. Due in 5 Yrs $10500 mill.
LT Debt $27042 mill. LT Interest $1250 mill.
(Total interest coverage: 8.6x) (81% of Cap'l)

Pension Assets-12/19 $8.2 bill. Oblig. $8.7 bill.
Pfd Stock None

Common Stock 1,857,981,554 shs.

MARKET CAP: $69.3 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
24363	23800	24618	24466	24522	25434	25744	25576	25364	25110	*24800*	*25300*	Sales ($mill)	*26400*
25.8%	26.5%	30.5%	34.1%	31.9%	33.1%	35.5%	38.3%	41.7%	42.7%	*43.0%*	*45.0%*	Operating Margin	*47.0%*
276.0	253.0	225.0	212.0	208.0	225.0	204.0	209.0	227.0	226.0	*230*	*230*	Depreciation ($mill)	*250*
3905.0	3390.0	4180.0	4535.0	5070.0	5243.0	5925.0	6531.0	7539.0	7895.9	*7805*	*8520*	Net Profit ($mill)	*9615*
31.7%	39.2%	35.4%	34.7%	34.8%	35.1%	56.2%	33.5%	23.1%	23.8%	*24.0%*	*24.0%*	Income Tax Rate	*24.0%*
16.0%	14.2%	17.0%	18.5%	20.7%	20.6%	23.0%	25.5%	29.7%	31.4%	*31.5%*	*33.7%*	Net Profit Margin	*36.4%*
d859.0	d512.0	d1936	d468.0	d795.0	d992.0	d115.0	d2448	d16894	d3350	*d3500*	*d3650*	Working Cap'l ($mill)	*d4035*
12194	13089	12419	13992	13693	12915	13881	13030	11898	27042	*27000*	*27000*	Long-Term Debt ($mill)	*25000*
5192.0	3680.0	3168.0	4119.0	3014.0	2880.0	12770	15377	14787	6222.0	*6500*	*6800*	Shr. Equity ($mill)	*7900*
25.7%	23.7%	30.4%	27.9%	32.8%	35.8%	23.6%	24.2%	29.4%	25.5%	*23.5%*	*25.0%*	Return on Total Cap'l	*29.0%*
75.2%	92.1%	131.9%	110.1%	168.2%	182.0%	46.4%	42.5%	51.0%	NMF	*NMF*	*NMF*	Return on Shr. Equity	*NMF%*
18.2%	4.6%	24.6%	22.4%	39.1%	36.9%	11.1%	11.2%	14.4%	29.4%	*24.0%*	*27.5%*	Retained to Com Eq	*24.5%*
76%	95%	81%	80%	77%	80%	76%	74%	72%	77%	*80%*	*78%*	All Div'ds to Net Prof	*80%*

CURRENT POSITION E ($MILL.)	2017	2018	12/31/19
Cash Assets	1253	1333	2117
Receivables	142	142	152
Inventory (LIFO)	2225	2331	2293
Other	724	493	262
Current Assets	4344	4299	4824
Accts Payable	374	399	425
Debt Due	864	13848	1000
Other	5554	6946	6749
Current Liab.	6792	21193	8174

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	-3.0%	2.0%	*2.0%*
"Cash Flow"	3.5%	10.5%	*8.0%*
Earnings	4.0%	11.0%	*8.5%*
Dividends	3.5%	9.5%	*9.0%*
Book Value	5.0%	30.0%	*5.5%*

Cal-endar	QUARTERLY SALES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	6083	6663	6729	6101	25576
2018	6108	6305	6837	6114	25364
2019	5628	6619	6856	6007	25110
2020	*5600*	*6400*	*6800*	*6000*	*24800*
2021	*5700*	*6600*	*6900*	*6100*	*25300*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.72	.85	.90	.91	3.39
2018	.95	1.01	1.08	.95	3.99
2019	.90	1.10	1.19	1.02	4.22
2020	*.95*	*1.00*	*1.20*	*1.05*	*4.20*
2021	*1.05*	*1.15*	*1.30*	*1.10*	*4.60*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.565	.565	.565	.61	2.30
2017	.61	.61	.61	.66	2.49
2018	.66	.70	.70	.80	2.86
2019	.80	.80	.80	.84	3.24
2020	.84	.84			

BUSINESS: Altria Group, Inc. is the parent company of Philip Morris USA, John Middleton and Philip Morris Capital Corp. In 2020, the company operated 3 segments: Cigarettes (90% of operating profits) include *Marlboro, Benson & Hedges, Merit, Virginia Slims*; Smokeless products (8%), Other (2%). Sold *Miller*, 6/02. Has a 10.2% interest in *Anheuser-Busch In-Bev*. Acq'd Nabisco, 12/00, Spun-off Kraft, 4/07, Spun-off Philip Morris Int'l, 3/08, Acq'd, UST, 1/09. Has 8,300 employees. Vanguard Group owns 7.8% of common shares, Vanguard Group owns 8.1%, officers and directors own less than 1.0% (4/20 proxy). Chairman & CEO: Howard A. Willard III. Inc.: VA. Address: 6601 W. Broad Street, Richmond, Virginia 23230. Telephone: 804-274-2200. Internet: www.altria.com.

Altria Group is well prepared to navigate the current challenging environment. Since our last full-page review in January, things have changed—quite drastically—for both the *Marlboro* maker and the world at large. The COVID-19 (coronavirus) pandemic has shut down wide swathes of the global economy, with many countries ordering businesses to close and consumers to remain in their homes. Economic conditions in the United States, where Altria generates nearly all of its sales, have deteriorated quite rapidly over the past few weeks. While recent channel checks suggest cigarette demand has held up fairly well, we think this will change as more restrictive measures are adopted to combat the virus and as more people lose their jobs because of the deteriorating economic conditions. Accordingly, we are lowering our 2020 share-net estimate by $0.30 (now at $4.20), to account for these factors. We think most of the damage will take place in the months ahead, with our models suggesting an earnings decline of around 9% in Q2 versus last year. Business should then rebound by the third quarter, as conditions slowly start to normalize.

In other news, the Federal Trade Commission has filed an administrative complaint against Altria. The agency alleges that Altria's 35% stake in JUUL Labs eliminated competition in violation of antitrust laws. More specifically, FTC officials believe that Altria's decision to pull its own e-cigarettes from the market shortly after the JUUL transaction met the definition of collaboration between two competitors. The agency is now suing Altria to try to unwind the agreement.

The company is expanding its test market for *iQOS* to a third market. *iQOS* is an electronic cigarette device that was created by Philip Morris International and has since been licensed to Altria for the exclusive right to sell in the United States. The product has been a hit overseas, particularly in Asia and Europe, and is now being rolled out to the U.S. market.

These shares are worth a closer look. The recent price dip has created an attractive entry point, in our view. Income-oriented accounts may want to start nibbling at these levels.

Daniel Henigson, CFA *April 17, 2020*

(A) Diluted earnings. Excl. nonrecur. gains (losses): '05, (12¢); '08, (17¢), '09, (21¢); '11, (21¢), '16, $4.55, '17, $1.92, '18, (31¢). Next egs. rpt. due Apr. 30th. Quarterly totals may not sum due to changes in share count. (B) Div'd's historically paid in mid-Jan., late-Apr., mid-Jul., and mid-Oct. ■ Div'd reinvestment plan available. (C) Incl. intangibles. '19: $17.86 bill., $9.62/sh. (D) In millions. (E) Excl. fin'l services and real estate subsidiary. (F) Spun-off Kraft Foods. (G) Spun-off Philip Morris Int'l. (H) Pro forma, reflects spinoff of Philip Morris Int'l.

Company's Financial Strength	B++
Stock's Price Stability	85
Price Growth Persistence	60
Earnings Predictability	90

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MOTOROLA SOLU. NYSE-MSI

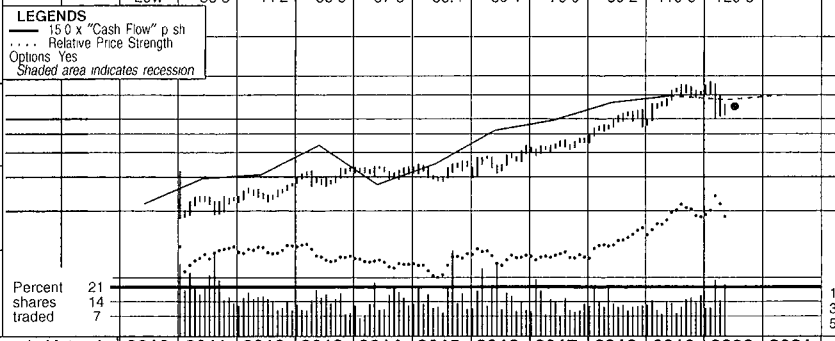
RECENT PRICE 138.94 | P/E RATIO 17.8 (Trailing: 17.0 Median: NMF) | RELATIVE P/E RATIO 0.90 | DIV'D YLD 1.9% | VALUE LINE

TIMELINESS 2 Lowered 5/22/20
SAFETY 2 Raised 9/14/18
TECHNICAL 2 Lowered 6/5/20
BETA .85 (1.00 = Market)

High	64.6	55.8	67.7	68.3	73.0	87.6	95.3	134.0	182.3	187.5		
Low	36.5	44.2	53.3	57.8	56.4	59.1	76.9	89.2	110.6	120.8		

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 15.0 x "Cash Flow" p sh
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range
Low-High: $121-$231 | Midpoint (% to Mid): $176 (25%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	240	(+75%)	16%
Low	180	(+30%)	9%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	345	401	334
to Sell	298	310	365
Hld's(000)	156355	154229	148989

Percent shares traded: 21, 14, 7

% TOT. RETURN 5/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	-8.3	-1.3
3 yr	70.9	5.2
5 yr	153.3	18.7

Motorola Solutions, Inc. (formerly Motorola Inc.) became an independent publicly traded company on January 4, 2011, after separating from its former subsidiary Motorola Mobility. Immediately following the separation, the Company completed a 1-for-7 reverse stock split and changed its name to Motorola Solutions, Inc.

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
22.65	25.73	31.50	34.17	26.76	32.67	36.66	39.58	44.91	46.26	**43.55**	**46.75**	Revenues per sh	**59.00**
2.90	3.93	4.10	5.82	3.65	4.68	6.96	7.85	9.72	10.51	**10.05**	**10.65**	"Cash Flow" per sh	**13.40**
1.85	2.61	3.20	4.73	2.58	3.33	4.92	5.46	7.15	7.96	**7.80**	**8.50**	Earnings per sh A	**11.00**
--	22	96	1.14	1.30	1.43	1.70	1.93	2.13	2.35	**2.58**	**2.85**	Div'ds Decl'd per sh D	**3.80**
57	58	68	75	82	1.00	1.65	1.41	1.20	1.45	**1.45**	**1.50**	Cap'l Spending per sh	**1.65**
16.65	16.36	11.83	14.38	12.44	d.61	d5.85	d10.81	d7.91	d4.11	**d3.85**	**d1.05**	Book Value per sh B	**5.85**
336.30	318.80	276.10	254.50	219.80	174.30	164.70	161.20	163.50	170.50	**170.00**	**170.00**	Common Shs Outst'g C	**170.00**
--	16.6	15.5	12.7	25.0	19.4	14.7	15.8	16.1	19.4	*Bold figures are*		Avg Ann'l P/E Ratio	**19.0**
--	1.04	.99	.71	1.32	.98	.77	.79	.87	1.05	*Value Line*		Relative P/E Ratio	**1.05**
--	5%	1.9%	1.9%	2.0%	2.2%	2.3%	2.2%	1.9%	1.5%	*estimates*		Avg Ann'l Div'd Yield	**1.8%**
7617.0	8203.0	8698.0	8696.0	5881.0	5695.0	6038.0	6380.0	7343.0	7887.0	**7400**	**7950**	Revenues ($mill)	**10030**
17.5%	21.2%	19.8%	20.1%	21.1%	23.0%	28.8%	29.6%	29.4%	30.0%	**29.0%**	**30.5%**	Operating Margin	**30.5%**
353.0	366.0	179.0	202.0	169.0	142.0	295.0	343.0	360.0	394.0	**345**	**310**	Depreciation ($mill)	**300**
623.0	888.0	954.0	1280.0	634.0	673.0	851.0	923.0	1230.0	1398.0	**1365**	**1500**	Net Profit ($mill)	**1980**
34.1%	33.4%	33.4%	10.7%	32.6%	33.0%	31.4%	31.0%	21.9%	22.5%	**22.0%**	**22.0%**	Income Tax Rate	**22.0%**
8.2%	10.8%	11.0%	14.7%	10.8%	11.8%	14.1%	14.5%	16.8%	17.7%	**18.4%**	**18.9%**	Net Profit Margin	**19.7%**
5649.0	4953.0	4066.0	3800.0	4629.0	2389.0	800.0	1019.0	1176.0	739.0	**830**	**1225**	Working Cap'l ($mill)	**1900**
2097.0	1130.0	1859.0	2457.0	3396.0	4386.0	4392.0	4419.0	5289.0	5113.0	**5000**	**5000**	Long-Term Debt ($mill)	**3500**
5598.0	5214.0	3265.0	3659.0	2735.0	d106.0	d964.0	d1742	d1293	d700.0	**d650**	**d175**	Shr. Equity ($mill)	**995**
9.5%	15.0%	19.7%	22.0%	11.4%	17.6%	27.8%	38.2%	33.6%	34.2%	**31.5%**	**31.0%**	Return on Total Cap'l	**44.0%**
11.1%	17.0%	29.2%	35.0%	23.2%	--	--	--	23.2%	NMF	**NMF**	**NMF**	Return on Shr. Equity	**NMF**
11.1%	15.7%	20.9%	27.0%	11.6%	--	--	--	11.6%	NMF	**NMF**	**NMF**	Retained to Com Eq	**NMF**
--	8%	28%	23%	50%	41%	33%	33%	27%	27%	**33%**	**34%**	All Div'ds to Net Prof	**43%**

CAPITAL STRUCTURE as of 3/28/20

Total Debt $5.93 bill. Due in 5 years $3.86 Bill.
LT Debt $5.11 bill. LT Interest $210 mill.

Leases, Uncapitalized: Annual rentals $119 mill.

Pension Assets - 12/19 $5.4 bill. **Oblig.** $6.6 bill.

Pfd Stock None

Common Stock 170,067,338 shs as of 4/15/20

MARKET CAP: $23.6 billion (Large Cap)

CURRENT POSITION ($MILL.)	2018	2019	3/28/20
Cash Assets	1257	1001	1672
Receivables	1293	1412	1122
Inventory (FIFO)	356	447	442
Other	1366	1318	1245
Current Assets	4272	4178	4481
Accts Payable	592	618	531
Debt Due	31	16	814
Other	2473	2805	2534
Current Liab.	3096	3439	3879

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	--	7.0%	5.5%
"Cash Flow"	--	15.5%	7.0%
Earnings	--	14.5%	9.5%
Dividends	--	13.5%	10.0%
Book Value	--	--	NMF

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1281	1497	1645	1957	6380
2018	1468	1760	1862	2254	7343
2019	1657	1860	1994	2377	7887
2020	1655	**1570**	**1800**	**2375**	**7400**
2021	**1700**	**1790**	**1960**	**2500**	**7950**

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.71	1.12	1.53	2.10	5.46
2018	1.10	1.46	1.94	2.63	7.15
2019	1.28	1.69	2.04	2.94	7.96
2020	1.49	**1.20**	**1.80**	**3.31**	**7.80**
2021	**1.40**	**1.65**	**2.10**	**3.35**	**8.50**

Cal-endar	QUARTERLY DIVIDENDS PAID D Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.41	.41	.41	.47	1.70
2017	.47	.47	.47	.52	1.93
2018	.52	.52	.52	.57	2.13
2019	.57	.57	.57	.64	2.35
2020	.64				

BUSINESS: Motorola Solutions, Inc., designs, manufacturers and services analog and digital two-way radios for private networks and end-to-end enterprise mobility solutions to a wide range of customers including government and public safety agencies (fire safety, law enforcement, emergency services, etc.) as well as retail, utilities, transportation, manufacturing, and healthcare customers. North America provides around 59% of sales. Has about 17,000 employees. Officers and directors own 2.3% of common stock, BlackRock, Inc., 11.2%, Vanguard Group, 11.1% (3/20 proxy). President and CEO: Greg Brown. Incorporated: Delaware. Address: 1303 East Algonquin Road, Schaumburg, Illinois 60196. Telephone: 847-576-5000. Internet: www.motorola.com.

Motorola Solutions reported mixed first-quarter results. Revenue of $1.7 billion was flat year over year and matched our estimate. Gross margin improvement and a lower effective tax rate drove earnings per share 16% higher. Product sales made up 60% of the total and declined 7%, as the coronavirus pandemic hindered demand from the hospitality, airline, oil and gas, and manufacturing industries. Sales to the public sector have also taken a hit, as many first-responder customers have been preoccupied with the outbreak and difficult to "get in front of." Civil unrest in the U.S. may prove to be another obstacle. A bright spot from the quarter was video security, as demand remained strong there. In fact, Motorola had a $28 million order from a North American utility, the largest contract in the history of the business. The Software and Services unit fared better than the product side, growing its top line 13%, thanks to increased demand for command center software and services.

The company withdrew its full-year guidance, citing uncertainties over the severity, impact, and duration of the pandemic. Management did still provide guidance for the second quarter, saying sales are expected to be down between 14% and 17%, with adjusted earnings likely decreasing 25%-30%. In response, the company is taking actions to reduce operating expenses. It now expects to save $210 million this year versus 2019, or $150 million more than it originally anticipated. This should be achieved through lower contractor, discretionary, and travel costs. Too, the company still expects software and service revenue to be positive this year, perhaps even eeking out a mid-single-digit growth rate.

Long-term, risk-adjusted price appreciation potential looks good here. Around 75% of Motorola's revenue comes from government customers. Even though budgets may be hindered by lower tax income from economic weakness, we doubt allocations for first-responder equipment will be sacrificed considering the crucial role it has played in fighting the coronavirus pandemic. Too, strong and historically dependable free cash flow should continue to support the dividend payout.

Kevin Downing *June 12, 2020*

(A) Diluted earnings. Egs. may not sum due to changes in share count. Next earnings report due late July. All data are pro forma.
(B) Includes intangibles. In 2019: $3.394 bill., $19.91/share
(C) In millions
(D) Quarterly divds. paid in mid-January, mid-April, mid-July and mid-Oct.

Company's Financial Strength	B++
Stock's Price Stability	95
Price Growth Persistence	75
Earnings Predictability	60

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NEWMARKET CORP. NYSE-NEU

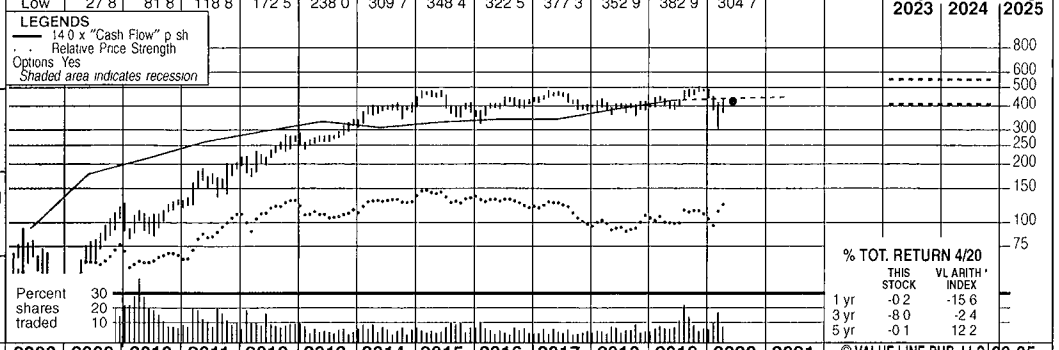
RECENT PRICE 424.12 | P/E RATIO 18.7 (Trailing: 17.1 Median: 18.0) | RELATIVE P/E RATIO 1.03 | DIV'D YLD 1.8% | VALUE LINE

TIMELINESS 2 Raised 5/8/20
SAFETY 2 Raised 9/1/17
TECHNICAL 5 Lowered 5/29/20
BETA .85 (1.00 = Market)

High	121.1	131.8	204.9	283.5	341.7	416.5	483.3	448.0	483.9	437.6	505.2	488.8
Low	27.8	81.8	118.8	172.5	238.0	309.7	348.4	322.5	377.3	352.9	382.9	304.7

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 14.0 x "Cash Flow" p sh
. . . Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$346-$637	$492 (15%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	550	(+30%)	9%
Low	410	(-5%)	1%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	107	129	134
to Sell	130	135	124
Hld's(000)	6156	6079	6268

Percent shares traded 30 20 10

% TOT. RETURN 4/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	-0.2	-15.6
3 yr	-8.0	-2.4
5 yr	-0.1	12.2

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
52.65	62.97	73.07	88.32	106.42	100.60	128.07	160.36	165.70	174.08	187.55	179.18	173.01	186.62	204.73	195.75	*183.65*	*201.80*	Revenues per sh	*218.65*
3.92	4.06	5.05	6.85	6.66	12.75	15.30	18.67	21.09	23.73	22.07	23.51	24.34	24.34	27.40	30.55	*31.35*	*31.80*	"Cash Flow" per sh	*34.10*
1.42	2.01	3.30	4.63	4.75	10.65	12.09	15.09	17.85	19.90	18.38	19.45	20.54	19.54	20.34	22.73	*22.65*	*22.05*	Earnings per sh A	*22.85*
--	--	.50	.58	.80	1.08	1.57	2.39	3.00	3.55	4.40	5.60	6.40	6.85	7.00	7.15	*7.70*	*8.25*	Div'ds Decl'd per sh B	*8.75*
1.06	1.04	1.51	2.00	2.09	2.47	5.54	3.99	2.89	4.46	4.80	10.59	12.06	12.62	6.67	5.31	*5.30*	*5.40*	Cap'l Spending per sh	*8.35*
13.66	15.58	17.43	20.37	19.15	30.12	35.03	41.00	29.98	43.70	33.81	32.44	40.79	51.07	43.80	61.05	*62.25*	*68.20*	Book Value per sh C	*83.20*
16.98	17.08	17.29	15.57	15.20	15.21	14.03	13.40	13.42	13.10	12.45	11.95	11.85	11.78	11.18	11.19	*11.00*	*11.00*	Common Shs Outst'g D	*11.00*
14.2	8.8	15.1	10.4	12.4	6.7	8.9	10.7	12.6	14.2	20.8	21.9	19.6	22.3	19.6	19.4	*Bold figures are*		Avg Ann'l P/E Ratio	*21.0*
.75	.47	.82	.55	.75	.45	.57	.67	.80	.80	1.09	1.10	1.03	1.12	1.06	1.05	*Value Line*		Relative P/E Ratio	*1.15*
--	--	1.0%	1.2%	1.4%	1.5%	1.5%	1.5%	1.3%	1.3%	1.2%	1.3%	1.6%	1.6%	1.8%	1.6%	*estimates*		Avg Ann'l Div'd Yield	*1.8%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $740.5 mill **Due in 5 Yrs** Nil
LT Debt $740.5 mill **LT Interest** $66.7 mill
(Total interest coverage 3.1x) (54% of Cap'l)
Leases, Uncapitalized Annual rentals $7.6 mill
Pension Assets-12/19: $84.3 mill
Oblig.: $95.8 mill
Pfd Stock None

Common Stock 10,938,113 shs
as of 4/23/20
MARKET CAP: $4.6 billion (Mid Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
1797.4	2149.6	2223.3	2280.4	2335.4	2140.8	2049.5	2198.4	2289.7	2190.3	*2020*	*2220*	Revenues ($mill)	*2405*
18.1%	17.9%	17.9%	18.1%	16.7%	18.6%	19.9%	17.8%	15.9%	15.4%	*16.5%*	*15.5%*	Operating Margin	*17.5%*
37.7	43.4	43.4	46.1	41.5	42.3	44.9	55.3	71.8	87.6	*95.0*	*105*	Depreciation ($mill)	*125*
177.1	206.9	239.6	264.7	233.3	238.6	243.4	231.3	234.7	254.3	*250*	*245*	Net Profit ($mill)	*250*
31.9%	31.9%	29.8%	22.4%	31.2%	29.6%	29.1%	26.7%	19.1%	23.3%	*23.0%*	*23.0%*	Income Tax Rate	*23.0%*
9.9%	9.6%	10.8%	11.6%	10.0%	11.1%	11.9%	10.5%	10.3%	11.6%	*12.4%*	*11.0%*	Net Profit Margin	*10.4%*
396.4	463.7	518.8	649.7	537.5	511.1	542.3	516.9	542.1	570.5	*610*	*620*	Working Cap'l ($mill)	*700*
217.5	232.6	424.4	349.5	363.5	494.6	507.3	602.9	771.0	642.9	*740*	*750*	Long-Term Debt ($mill)	*850*
491.6	549.5	402.2	572.4	421.0	387.6	483.3	601.6	489.9	683.1	*685*	*750*	Shr. Equity ($mill)	*915*
26.2%	27.6%	29.5%	29.6%	30.7%	27.8%	25.4%	20.1%	19.7%	20.3%	*20.0%*	*14.5%*	Return on Total Cap'l	*12.0%*
36.0%	37.7%	59.6%	46.2%	55.4%	61.6%	50.4%	38.5%	47.9%	37.2%	*36.5%*	*32.5%*	Return on Shr. Equity	*27.5%*
31.4%	31.7%	50.2%	37.4%	41.3%	43.3%	34.7%	24.7%	31.5%	25.3%	*24.0%*	*20.5%*	Retained to Com Eq	*17.0%*
13%	16%	16%	19%	25%	30%	31%	36%	34%	32%	*34%*	*37%*	All Div'ds to Net Prof	*38%*

CURRENT POSITION ($MILL.)	2018	2019	3/31/20
Cash Assets	73.0	144.4	178.7
Receivables	314.9	335.8	347.2
Inventory (FIFO)	396.3	365.9	371.0
Other	29.2	33.3	34.0
Current Assets	813.4	879.4	930.9
Accts Payable	151.6	178.8	178.5
Debt Due	--	--	--
Other	119.7	130.1	134.4
Current Liab	271.3	308.9	312.9

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	7.0%	2.0%	*2.0%*
"Cash Flow"	12.0%	4.0%	*4.5%*
Earnings	12.0%	2.0%	*2.0%*
Dividends	24.0%	14.0%	*4.0%*
Book Value	8.5%	7.5%	*9.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	542.8	547.2	548.4	560.0	2198.4
2018	589.2	599.0	563.2	538.3	2289.7
2019	536.6	563.4	555.8	534.4	2190.2
2020	559.4	*470*	*490*	*500.6*	*2020*
2021	*520*	*550*	*570*	*580*	*2220*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	5.40	5.29	5.04	3.81	19.54
2018	5.11	4.53	5.12	5.58	20.34
2019	5.56	6.63	6.06	4.48	22.73
2020	7.67	*4.80*	*5.00*	*5.18*	*22.65*
2021	*5.30*	*5.40*	*5.55*	*5.80*	*22.05*

Cal-endar	QUARTERLY DIVIDENDS PAID B Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	1.60	1.60	1.60	1.60	6.40
2017	1.60	1.75	1.75	1.75	6.85
2018	1.75	1.75	1.75	1.75	7.00
2019	1.75	1.75	1.75	1.90	7.15
2020	1.90	1.90			

BUSINESS: NewMarket Corporation develops, manufactures, and blends chemical additives through its Afton Chemical and Ethyl Corp units. Has two segments: Petroleum Additives (99% of '19 revenues) provides lubricant, engine oil, driveline, industrial, and fuel additives under the HiTEC, GREENBURN, TecGARD, BioTEC, and MMT brands and TEL name. Other (1%) sells high-octane fuel. Has about 2,150 employees. Bruce C. Gottwald owns 11.4% of stock, Thomas Gottwald, 5.0%, Floyd Gottwald, 5.4%; Bank of America, 6.6%, Vanguard, 7.5%, BlackRock, 6.1% (4/20 Proxy). Chairman, President & CEO: Thomas E. Gottwald. Incorp.: VA. Address: 330 South Fourth St., Richmond, VA 23219-4350. Tel.: 804-788-5000. Internet: www.newmarket.com.

NewMarket reported good first-quarter results. Sales were up 4.2%, to $559 million, thanks to a higher volume of shipments of lubricant additives to Europe, North America, and Latin America. This more than offset lower selling prices. Share net rose a whopping 38%, to $7.67, due to lower raw material costs, namely for oil, olefins, polyisobutylene, and friction modifiers.

However, sales and earnings will likely be limited in 2020. This is because government restrictions on the movement of people, goods, and services will mean less sales of petroleum additives (99% of total sales). These restrictions will probably be gradually lifted as the number of coronavirus cases lessens. As a result, we look for second-quarter sales and earnings to be down considerably, with results incrementally improving throughout the second half. On a bright note, the volume of lubricant additives sold to the Chinese market appears to have picked up in the early going of the second quarter.

We don't think the dividend is in jeopardy of being cut. The main reason most institutional investors buy this stock is for its high dividend payout. The dividend yield may not be high, but the quarterly payment of $1.90 per share is considerable. NewMarket's cash flow-generating ability is astoundingly lofty. This is thanks to a very high operating leverage, which produces a substantial earnings stream. This is the reason why we don't think the dividend is in any peril.

The stock has minimal long-term capital appreciation potential. It has been trading within its 3- to 5-year Target Price Range for some time now. The company's top line has remained stagnant for a number of years. Market share, and therefore shipments, has improved over this time period, but selling prices have declined. Over the next few years, we see a decline in market-share growth, and therefore slippage, as internal combustion engines decline. Less movement of goods, services, and people due to fallout from the coronavirus, along with the rise of cleaner-burning energy sources, will likely cause the decrease. Investors looking for a timely stock with some income are probably the only ones who should take a closer look.

Jeremy J. Butler *May 29, 2020*

A) Diluted earnings. Excl. non-recurring gains/(losses): '04, (50¢); '05, (44¢); '07, $1.55; '13, $1.65. Next earnings report due mid-July.
(B) Dividends historically paid in first week of January, April, July, and October. Special cash dividend of $.90 a share paid in 4Q, 2012.
(C) Incl. intangibles. At 3/31/20, $131.1 mill.
$11.91/share
(D) In millions

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	65
Earnings Predictability	90

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NORTHROP GRUMMAN NYSE-NOC

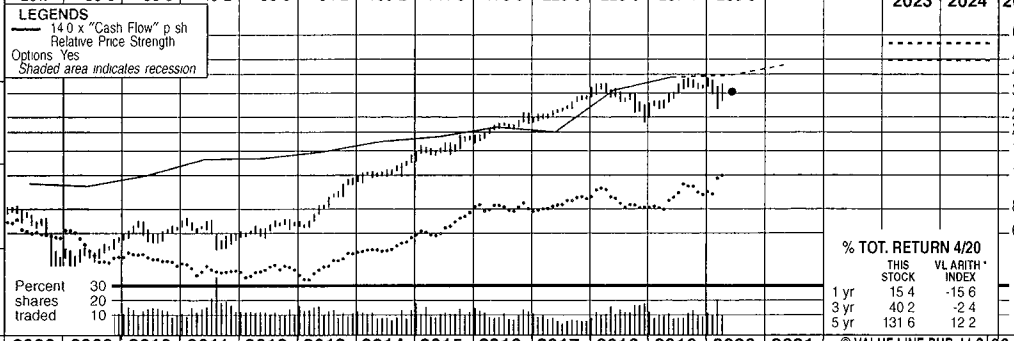
RECENT PRICE 325.91 | P/E RATIO 14.8 (Trailing: 15.3 Median: 14.0) | RELATIVE P/E RATIO 0.80 | DIV'D YLD 1.8% | VALUE LINE

TIMELINESS 1 Raised 5/15/20
SAFETY 1 Raised 9/21/07
TECHNICAL 1 Raised 5/22/20
BETA .85 (1.00 = Market)

High	57.3	69.8	72.5	71.3	116.2	153.2	194.0	253.8	311.2	360.9	383.9	385.0
Low	33.8	53.5	49.2	56.6	64.2	109.2	141.6	175.0	223.9	223.6	237.1	263.3

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 14.0 x "Cash Flow" p sh
Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$267-$549	$408 (25%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	580	(+80%)	17%
Low	475	(+45%)	11%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	420	472	590
to Sell	500	452	417
Hld's(000)	140579	141177	141278

Percent shares traded 30 20 10

% TOT. RETURN 4/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	15.4	-15.6
3 yr	40.2	-2.4
5 yr	131.6	12.2

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
81.92	88.44	87.15	94.77	103.63	110.00	119.46	104.03	106.35	113.78	120.86	129.76	139.99	148.22	176.40	201.87	*209.50*	*230.80*	Revenues per sh	*273.60*
4.95	5.83	6.50	7.30	7.77	7.52	8.52	10.36	10.49	11.29	12.76	13.55	15.17	14.30	23.62	27.58	*28.25*	*32.35*	"Cash Flow" per sh	*38.60*
2.99	3.52	4.44	5.04	5.32	4.87	5.80	7.41	7.81	8.35	9.75	10.39	12.19	11.47	18.49	21.21	*21.95*	*25.85*	Earnings per sh A	*30.95*
.89	1.01	1.16	1.48	1.57	1.69	1.84	1.97	2.15	2.38	2.71	3.10	3.50	3.90	4.70	5.16	*5.30*	*5.95*	Div'ds Decl'd per sh B■	*7.20*
1.84	2.37	2.13	2.03	2.08	2.13	2.65	1.92	1.40	1.68	2.83	2.60	5.26	5.33	7.32	7.54	*7.95*	*8.10*	Cap'l Spending per sh	*8.20*
45.83	48.45	48.03	52.35	36.45	41.34	46.59	40.71	40.12	49.00	36.47	30.46	30.04	40.49	47.99	52.61	*69.20*	*90.35*	Book Value per sh C	*158.85*
364.43	347.36	345.92	337.83	327.01	306.87	290.96	253.89	237.13	216.74	198.41	181.30	175.07	174.09	170.61	167.64	*168.00*	*165.00*	Common Shs Outst'g D	*163.00*
17.4	15.6	14.9	15.2	12.4	9.9	10.5	8.3	8.2	10.4	12.9	16.1	17.4	23.0	16.8	15.1	*Bold figures are*		Avg Ann'l P/E Ratio	*17.0*
.92	.83	.80	.81	.75	.66	.67	.52	.52	.58	.68	.81	.91	1.16	.91	.82	*Value Line*		Relative P/E Ratio	*.95*
1.7%	1.8%	1.8%	1.9%	2.4%	3.5%	3.0%	3.2%	3.4%	2.7%	2.1%	1.9%	1.6%	1.5%	1.5%	1.6%	*estimates*		Avg Ann'l Div'd Yield	*1.4%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $14299 mill. Due in 5 Yrs $3303 mill.
LT Debt $14299 mill. Total Interest $528 mill.
(Total interest coverage: 10.1x)
(59% of Cap'l)
Leases, Uncapitalized $300 mill.
Pension Assets-12/19 $30.6 bill. Oblig. $36.9 bill.

Pfd Stock None

Common Stock 166,702,730 shs.
as of 4/24/20

MARKET CAP: $54.3 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
34757	26412	25218	24661	23979	23526	24508	25803	30095	33841	*35200*	*38080*	Revenues ($mill)	*44600*
11.0%	14.5%	14.4%	14.7%	15.3%	15.1%	14.9%	14.6%	15.2%	18.7%	*17.0%*	*17.5%*	Operating Margin	*18.0%*
738.0	544.0	510.0	495.0	462.0	467.0	456.0	475.0	800.0	1018.0	*1055*	*1065*	Depreciation ($mill) E	*1250*
1742.0	2086.0	1978.0	1952.0	2069.0	1990.0	2200.0	2015.0	3229.0	3606.0	*3690*	*4270*	Net Profit ($mill)	*5040*
24.2%	32.3%	33.3%	31.8%	29.6%	28.7%	24.7%	33.9%	13.7%	7.7%	*17.0%*	*18.0%*	Income Tax Rate	*19.0%*
5.0%	7.9%	7.8%	7.9%	8.6%	8.5%	9.0%	7.8%	10.7%	10.7%	*10.5%*	*11.2%*	Net Profit Margin	*11.3%*
1518.0	1611.0	2336.0	3673.0	2292.0	877.0	1226.0	9384.0	1406.0	1251.0	*1760*	*1900*	Working Cap'l ($mill)	*2230*
4045.0	3935.0	3930.0	5928.0	5925.0	6416.0	7058.0	14399	13883	12770	*12325*	*12375*	Long-Term Debt ($mill)	*11125*
13557	10336	9514.0	10620	7235.0	5522.0	5259.0	7048.0	8187.0	8819.0	*11620*	*14910*	Shr. Equity ($mill)	*25890*
10.7%	15.4%	15.5%	12.6%	16.8%	17.9%	19.1%	10.2%	15.9%	17.9%	*32.0%*	*28.5%*	Return on Total Cap'l	*19.5%*
12.8%	20.2%	20.8%	18.4%	28.6%	36.0%	41.8%	28.6%	39.4%	40.9%	*32.0%*	*28.5%*	Return on Shr. Equity	*19.5%*
8.8%	14.9%	15.2%	13.2%	20.8%	25.1%	29.7%	18.8%	29.4%	30.9%	*24.0%*	*22.0%*	Retained to Com Eq	*15.0%*
31%	26%	27%	28%	27%	30%	29%	34%	25%	24%	*24%*	*23%*	All Div'ds to Net Prof	*23%*

CURRENT POSITION ($MILL.)	2018	2019	3/31/20
Cash Assets	1579	2245	3278
Receivables	1448	1326	2136
Inventory (Avg Cst)	654	783	785
Other	5999	6331	6929
Current Assets	9680	10685	13128
Accts Payable	2182	2226	2071
Debt Due	- -	- -	- -
Other	6092	7208	8106
Current Liab.	8274	9434	10177

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	5.5%	9.0%	*7.5%*
"Cash Flow"	11.0%	13.5%	*10.0%*
Earnings	13.0%	14.5%	*10.5%*
Dividends	11.0%	13.5%	*8.0%*
Book Value	1.0%	2.5%	*22.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	6267	6375	6527	6634	25803
2018	6735	7119	8085	8156	30095
2019	8189	8456	8475	8721	33841
2020	8620	*8910*	*8880*	*8790*	*35200*
2021	*9130*	*9480*	*9605*	*9865*	*38080*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	3.63	3.15	3.68	1.01	11.47
2018	4.79	4.52	7.11	2.07	18.49
2019	5.06	5.06	5.49	5.61	21.22
2020	5.15	*5.25*	*5.60*	*5.95*	*21.95*
2021	*6.10*	*6.35*	*6.55*	*6.85*	*25.85*

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.80	.90	.90	.90	3.50
2017	.90	1.00	1.00	1.00	3.90
2018	1.10	1.20	1.20	1.20	4.70
2019	1.20	1.32	1.32	1.32	5.16
2020	1.32				

BUSINESS: Northrop Grumman Corporation operates in several main sectors. It is a leading maker of manned and unmanned airborne systems, a designer of electronic warfare items, makes space systems and provides advanced information systems. Acquired satellite and missile systems maker Orbital ATK in 2018. Has approximately 90,000 employees. Consolidated backlog at 12/31/19: $64.8 billion. U.S. Government accounted for 83% of total revenues in '19. Officers & directors control about 3% of stock, State Street Corp., 10.1%, Vanguard Group, 7.9%, BlackRock, 6.4% (4/20 Proxy). CEO & Pres.: Kathy Warden. Incorporated: DE. Address: 2980 Fairview Park Drive, Falls Church, VA 22042. Tele.: 703-280-2900. Internet: www.northropgrumman.com.

Northrop Grumman's first-quarter earnings performance was marginally impaired by the spread of COVID-19. That is not to say that the company had any material operational problems. In fact, it experienced increasing revenue across the entire spectrum of its business, highlighted by the Mission Systems unit, which generated a 6% gain, year over year, to $2.35 billion. The largest reason for the shortfall was actually the losses that the company incurred as a product of its marketable security holdings. These values were hurt because of a rise in market volatility that can be closely associated with the pandemic. Otherwise, operating income was somewhat of a mixed bag with Mission and Space systems both realizing improvement, while Aeronautics and Defense Systems were down.

The company's revenue streams are pretty well insulated from economic distress. Northrop Grumman has limited exposure to the commercial aircraft sector, and it is still anticipating growth from its restricted activities with the United States Department of Defense in 2020. The company may experience some margin pressure owing to lower EAC adjustments for its autonomous systems. However, it has only had to lower its revenue expectations by less than a percentage point, to a range of $35.0 billion-$35.4 billion.

Growth in Mission Systems should help offset margin pressure on the Aerospace unit. Northrop Grumman is advancing roughly $30 million per week to its suppliers to maintain operational continuity. The company's Mission Systems division has been experiencing more aggressive gains from its work in Airborne Sensors and Network programs, however, which we think will largely offset these costs and the near-term impact of the coronavirus on the Aerospace operations.

Northrop Grumman stock maintains our Highest rank (1) for Timeliness. Shares of the company have recovered notably over the last of couple months, and they should continue to advance so long as the supply chain is kept intact. However, long term total-return investors may be better suited looking elsewhere, as appreciation potential is limited and NOC fails to offer an enticing dividend.

Robert J. Scrudato *June 5, 2020*

(A) Diluted earnings. Excl. nonrecur. (losses) gains.: '04, (2¢); '05, 33¢; '06, (7¢); '07, 11¢; '08, ($9.09); '09, 34¢; '10, $1.02; '19, $7.99. Next earnings report due late July.
(B) Div'd historically paid mid-March, June, Sept., and Dec. ■ Div'd reinvest. plan available.
(C) Incl. intang. assets. In 2019: $19.7 bill., $116.16/sh.
(D) In millions.
(E) Depr. on accel. basis.

Company's Financial Strength	A++
Stock's Price Stability	90
Price Growth Persistence	90
Earnings Predictability	80

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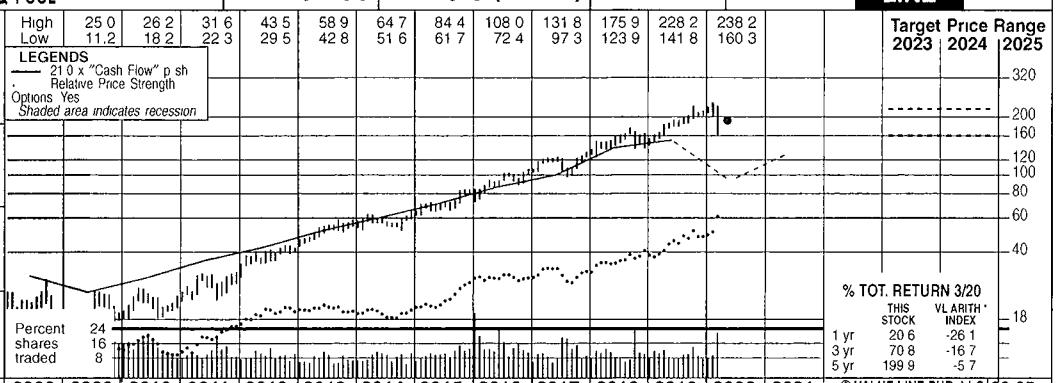
POOL CORP. NDQ-POOL

RECENT PRICE 191.60 | P/E RATIO 48.8 (Trailing: 29.9 Median: 25.0) | RELATIVE P/E RATIO 3.19 | DIV'D YLD 1.1% | VALUE LINE

TIMELINESS 1 Raised 3/27/20
SAFETY 2 Raised 8/4/17
TECHNICAL 1 Raised 4/24/20
BETA .90 (1.00 = Market)

High	25.0	26.2	31.6	43.5	58.9	64.7	84.4	108.0	131.8	175.9	228.2	238.2
Low	11.2	18.2	22.3	29.5	42.8	51.6	61.7	72.4	97.3	123.9	141.8	160.3

LEGENDS
— 21.0 x "Cash Flow" p sh
. Relative Price Strength
Options: Yes
Shaded area indicates recession



Target Price Range 2023 | 2024 | 2025

18-Month Target Price Range
Low-High: $175-$272 | Midpoint (% to Mid): $224 (15%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	220	(+15%)	5%
Low	160	(-15%)	-3%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	201	177	200
to Sell	156	188	169
Hld's(000)	38395	38160	37652

Percent shares traded 24 16 8

% TOT. RETURN 3/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	20.6	-26.1
3 yr	70.8	-16.7
5 yr	199.9	-5.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
25.12	29.64	37.50	40.58	36.99	31.43	32.75	37.86	42.20	46.20	51.50	55.33	62.57	69.34	75.89	79.84	*71.50*	*79.50*	Revenues per sh	*100.00*
1.48	1.78	2.12	1.75	1.44	1.19	1.40	1.73	2.02	2.46	2.87	3.39	4.12	4.75	6.60	7.22	*4.45*	*6.20*	"Cash Flow" per sh	*8.70*
1.19	1.50	1.74	1.37	1.18	.95	1.15	1.47	1.71	2.05	2.44	2.90	3.47	3.99	5.62	6.40	*3.80*	*5.50*	Earnings per sh A	*7.90*
20	34	41	47	51	52	52	55	62	73	85	1.00	1.19	1.42	1.72	2.10	*2.20*	*2.40*	Div'ds Decl'd per sh C	*2.80*
.12	16	29	.22	15	15	16	41	35	42	40	68	84	98	80	83	*.80*	*.80*	Cap'l Spending per sh	*.90*
4.22	5.21	5.45	4.39	5.01	5.15	5.79	5.91	6.08	6.36	5.60	5.99	4.99	5.55	5.66	10.24	*10.50*	*11.00*	Book Value per sh B	*14.75*
52.19	52.39	50.93	47.52	48.22	48.99	49.28	47.37	46.30	45.01	43.62	42.71	41.09	40.21	39.51	40.07	*40.00*	*40.00*	Common Shs Outst'g D	*38.00*
22.9	23.0	23.9	23.7	16.9	19.3	18.8	18.4	22.3	25.2	23.7	24.6	26.4	28.9	26.5	28.8	*Bold figures are*		Avg Ann'l P/E Ratio	*24.0*
1.21	1.22	1.29	1.26	1.02	1.29	1.20	1.15	1.42	1.42	1.25	1.24	1.39	1.45	1.43	1.56	*Value Line*		Relative P/E Ratio	*1.35*
7%	1.0%	1.0%	1.4%	2.6%	2.8%	2.4%	2.0%	1.6%	1.4%	1.5%	1.4%	1.3%	1.2%	1.2%	1.1%	*estimates*		Avg Ann'l Div'd Yield	*1.5%*

CAPITAL STRUCTURE as of 12/31/19
Total Debt $511.4 mill. Due in 5 Yrs $373.7 mill.
LT Debt $499.7 mill. LT Interest $20.0 mill.
(LT interest earned: 17.1x; total interest coverage: 14.2x)
(55% of Cap'l)
Leases, Uncapitalized: Annual rentals $51.6 mill.
No Defined Benefit Pension Plan
Pfd Stock None

Common Stock 40,191,526 shs.
as of 2/21/20
MARKET CAP: $7.7 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
1613.8	1793.3	1954.0	2079.7	2246.6	2363.1	2570.8	2788.2	2998.1	3199.5	*2860*	*3180*	Revenues ($mill)	*3800*
7.0%	7.5%	8.4%	8.6%	9.1%	9.8%	10.7%	11.1%	11.3%	11.5%	*9.0%*	*10.0%*	Operating Margin	*11.0%*
11.3	9.7	11.6	13.4	14.5	16.4	20.3	24.2	26.1	27.9	*27.0*	*27.0*	Depreciation ($mill)	*30.0*
57.6	72.0	82.0	97.3	110.7	128.3	149.0	167.0	234.5	261.6	*150*	*220*	Net Profit ($mill)	*300*
39.2%	38.7%	41.0%	38.8%	38.9%	38.5%	38.5%	38.1%	20.1%	17.7%	*22.0%*	*22.0%*	Income Tax Rate	*22.0%*
3.6%	4.0%	4.2%	4.7%	4.9%	5.4%	5.8%	6.0%	7.8%	8.2%	*5.3%*	*6.9%*	Net Profit Margin	*7.9%*
265.5	307.1	295.1	313.9	345.3	356.8	399.4	460.7	609.6	582.7	*520*	*530*	Working Cap'l ($mill)	*600*
198.7	247.3	230.9	246.4	319.3	328.0	436.9	508.8	657.6	499.7	*530*	*500*	Long-Term Debt ($mill)	*500*
285.2	279.7	281.6	286.2	244.4	255.7	205.2	223.1	223.6	410.2	*420*	*440*	Shr. Equity ($mill)	*560*
12.5%	14.3%	16.5%	18.9%	20.3%	22.7%	24.3%	23.8%	27.7%	29.8%	*16.0%*	*27.0%*	Return on Total Cap'l	*28.5%*
20.2%	25.7%	29.1%	34.0%	45.3%	50.2%	72.6%	74.9%	NMF	63.8%	*35.5%*	*73.0%*	Return on Shr. Equity	*53.5%*
11.2%	16.3%	18.8%	22.2%	29.9%	33.3%	48.3%	48.8%	73.8%	43.3%	*15.0%*	*28.0%*	Retained to Com Eq	*34.5%*
45%	37%	36%	35%	34%	34%	33%	35%	30%	32%	*58%*	*44%*	All Div'ds to Net Prof	*35%*

CURRENT POSITION ($MILL.)	2017	2018	12/31/19
Cash Assets	29.9	16.4	28.6
Receivables	26.7	69.4	76.5
Inventory (FIFO)	536.5	672.6	702.3
Other	189.2	156.8	166.1
Current Assets	782.3	915.2	973.5
Accts Payable	245.2	237.8	262.0
Debt Due	10.8	9.2	11.7
Other	65.6	58.6	117.1
Current Liab.	321.6	305.6	390.8

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	7.5%	10.0%	*5.0%*
"Cash Flow"	15.5%	20.5%	*6.0%*
Earnings	16.5%	21.0%	*7.0%*
Dividends	13.5%	19.0%	*8.0%*
Book Value	4.0%	3.5%	*13.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	546.4	988.2	743.4	510.2	2788.2
2018	585.9	1057.8	811.3	543.1	2998.1
2019	597.5	1121.3	898.5	582.2	3199.5
2020	*550*	*880*	*850*	*580*	*2860*
2021	*580*	*1100*	*900*	*600*	*3180*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.52	2.21	1.16	.10	3.99
2018	.75	2.80	1.66	.41	5.62
2019	.80	3.22	1.95	.43	6.40
2020	*.65*	*1.80*	*1.05*	*.30*	*3.80*
2021	*.75*	*2.60*	*1.70*	*.45*	*5.50*

Cal-endar	QUARTERLY DIVIDENDS PAID C Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.26	.31	.31	.31	1.19
2017	.31	.37	.37	.37	1.42
2018	.37	.45	.45	.45	1.72
2019	.45	.55	.55	.55	2.10
2020	.55				

BUSINESS. Pool Corporation distributes swimming pool supplies, equipment and leisure products on the wholesale level. Offers maintenance, repair and replacement parts, packaged pool kits, construction materials, and complementary products. Operates customer service centers in North America and Europe. Acquired Automatic Rain Co., 10/05, General Pool & Spa Supply, 10/09. Has about 4,500 employees. BlackRock, Inc. own 9% of the stock, Vanguard Group, 9%, Neuberger Berman, 5%, Officers & Directors, 4% (3/20 proxy). Chairman: John E. Stokely. President & CEO: Manuel J. Perez de la Mesa. Incorporated: Delaware. Address: 109 Northpark Blvd., Covington, Louisiana 70433. Telephone: 985-892-5521. Internet: www.poolcorp.com.

Pool Corp. is likely to see a substantial setback in its financial results this year. The COVID-19 pandemic that has frozen U.S. economic activity in recent weeks is likely to severely impact the company's operations. The outbreak has hit retail sales hard, and Pool Corp.'s retail products are likely no exception. Furthermore, the pandemic has forced a halt to many construction projects, and the company's results have historically been linked to homebuilding activity. As a result, we expect Pool Corp. to see top- and bottom-line declines beginning in the first quarter (results were due to be released shortly after this Issue went to press). The drop should intensify sharply during the second quarter, followed by a partial recovery in the latter half of the year, pending progress against the outbreak.

Our newly initiated 2021 estimates reflect our expectation that the company will regain most of the lost ground next year. Pool Corp.'s operations are well positioned to benefit as the strictest physical distancing measures are pared. Thus, we expect the company's retail and construction-related revenues to return to more-normal levels by 2021. However, the economic damage from this crisis may lead to a prolonged lag in new home construction and discretionary consumer spending. These factors will likely prevent Pool Corp.'s revenues and earnings-per-share results from matching their 2019 records, and there is a chance these risk factors could lead to an outcome considerably worse than our estimates reflect.

On the bright side, the company's long-term outlook remains positive. Pool Corp. rebounded strongly from its last major setback during the recession of 2007-2009. Indeed, the company has seen double-digit percentage annual earnings growth over the past decade. This performance has been driven by rising demand for swimming pool and outdoor living products, and we believe this underlying strength will help Pool Corp. resume its growth path as the current crisis abates.

The timely stock's lofty valuation is our main cause for concern. Even after its recent price decline, the issue is priced for an optimistic long-term scenario that leaves little room for downside surprises.

Adam J. Platt *May 1, 2020*

(A) Diluted earnings. Excludes nonrecurring loss: '09, 56¢; '12, 14¢; '17, 22¢. Next earnings report due late July.
(B) Includes intangibles. At 12/31/19: $199.6 mill., $4.99/sh.
(C) Dividends historically paid in early March, June, September, and December.
(D) In millions, adjusted for stock splits.

Company's Financial Strength	B++
Stock's Price Stability	85
Price Growth Persistence	95
Earnings Predictability	100

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ROLLINS, INC. NYSE-ROL

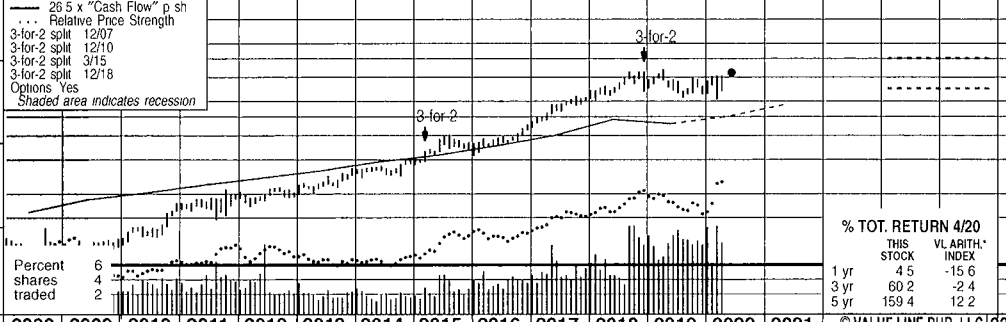
RECENT PRICE 42.45 | P/E RATIO NMF (Trailing: NMF Median: 34.0) | RELATIVE P/E RATIO NMF | DIV'D YLD 0.8% | VALUE LINE 400

TIMELINESS 3 Raised 3/27/20
SAFETY 2 Raised 3/6/09
TECHNICAL 3 Lowered 5/15/20
BETA .85 (1.00 = Market)

High	5.9	9.0	10.6	10.8	13.6	15.1	20.3	22.8	32.2	42.9	43.9	42.8				
Low	4.1	5.4	7.3	8.6	9.9	12.0	14.1	15.8	21.9	29.8	31.4	30.7				

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 26.5 x "Cash Flow" p sh
. . . Relative Price Strength
3-for-2 split 12/07
3-for-2 split 12/10
3-for-2 split 3/15
3-for-2 split 12/18
Options: Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$29-$62	$46 (5%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	50	(+20%)	6%
Low	35	(-20%)	-3%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	170	177	209
to Sell	220	189	178
Hld's(000)	140292	141028	136640

% TOT. RETURN 4/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	4.5	-15.6
3 yr	60.2	-2.4
5 yr	159.4	12.2

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
2.15	2.33	2.50	2.63	3.02	3.22	3.43	3.66	3.87	4.08	4.31	4.53	4.82	5.12	5.57	6.16	*6.25*	*6.55*	Revenues per sh	*7.40*
.19	.22	.25	.27	.30	.35	.38	.42	.46	.50	.55	.60	.67	.76	.91	.87	*.95*	*1.10*	"Cash Flow" per sh	*1.60*
.12	.15	.17	.19	.20	.24	.27	.31	.34	.37	.42	.47	.51	.58	.71	.62	*.65*	*.80*	Earnings per sh A	*1.25*
.03	.04	.05	.06	.07	.08	.11	.12	.14	.16	.19	.21	.27	.31	.37	.42	*.36*	*.42*	Div'ds Decl'd per sh B■	*.65*
.04	.07	.05	.05	.04	.05	.04	.06	.06	.06	.09	.12	.10	.08	.08	.08	*.05*	*.10*	Cap'l Spending per sh	*.20*
.48	.51	.62	.69	.68	.79	.90	.98	1.08	1.34	1.41	1.60	1.74	2.00	2.18	2.49	*2.60*	*2.70*	Book Value per sh C	*3.40*
349.62	344.31	343.70	339.65	337.64	333.80	331.16	329.06	328.53	328.20	327.42	328.13	326.69	326.99	327.31	327.43	*327.00*	*327.00*	Common Shs Outst'g D	*324.00*
26.4	25.2	24.8	26.0	24.4	22.1	24.7	29.0	29.1	30.7	32.0	36.9	37.0	47.4	NMF	NMF	*Bold figures are*		Avg Ann'l P/E Ratio	*34.0*
1.39	1.34	1.34	1.38	1.47	1.47	1.57	1.82	1.85	1.72	1.68	1.86	1.94	2.38	NMF	NMF	*Value Line*		Relative P/E Ratio	*1.90*
1.0%	1.0%	1.2%	1.2%	1.5%	1.6%	1.6%	1.4%	1.4%	1.4%	1.4%	1.2%	1.4%	1.1%	1.0%	1.1%	*estimates*		Avg Ann'l Div'd Yield	*1.5%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $319.8 mill. **Due in 5 Yrs** $291.5 mill.
LT Debt $307.3 mill. **LT Interest** $8.0 mill.
(28% of Cap'l)

Leases, Uncapitalized Annual rentals $72.9 mill.

Pension Assets-12/19 $23.6 mill. **Oblig.** $2.8 mill.

Pfd Stock None

Common Stock 327,767,449 shs.
MARKET CAP: $13.9 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
1136.9	1205.1	1270.9	1337.4	1411.6	1485.3	1573.4	1674.0	1821.6	2015.5	*2040*	*2150*	Revenues ($mill)	*2400*
15.9%	16.6%	17.0%	17.2%	18.6%	19.2%	19.7%	20.9%	20.7%	19.8%	*20.0%*	*21.0%*	Operating Margin	*25.0%*
36.4	37.5	38.7	39.6	43.5	44.5	50.9	56.6	66.8	81.1	*90.0*	*100*	Depreciation ($mill)	*110*
90.0	100.7	111.3	123.3	137.7	152.1	167.4	190.7	231.7	203.3	*215*	*260*	Net Profit ($mill)	*405*
37.3%	37.5%	37.0%	35.6%	37.3%	37.5%	35.8%	35.2%	25.4%	22.1%	*25.0%*	*25.0%*	Income Tax Rate	*25.0%*
7.9%	8.4%	8.8%	9.2%	9.8%	10.2%	10.6%	11.4%	12.7%	10.1%	*10.5%*	*12.1%*	Net Profit Margin	*16.9%*
d95.4	d50.1	d22.4	38.6	31.3	60.9	13.2	d31.8	d13.0	d100.2	*d85.0*	*d55.0*	Working Cap'l ($mill)	*100.0*
--	--	--	--	--	--	--	--	--	279.0	*305*	*300*	Long-Term Debt ($mill)	*Nil*
298.0	324.0	354.9	438.3	462.7	524.0	568.5	653.9	711.9	815.8	*850*	*875*	Shr. Equity ($mill)	*1100*
30.2%	31.1%	31.4%	28.1%	29.8%	29.0%	29.4%	29.2%	32.5%	18.9%	*19.0%*	*22.5%*	Return on Total Cap'l	*37.0%*
30.2%	31.1%	31.4%	28.1%	29.8%	29.0%	29.4%	29.2%	32.5%	24.9%	*25.0%*	*30.0%*	Return on Shr. Equity	*37.0%*
18.3%	18.4%	18.2%	16.1%	16.6%	15.7%	14.1%	13.8%	15.4%	6.1%	*11.0%*	*14.0%*	Retained to Com Eq	*17.5%*
39%	41%	42%	43%	44%	46%	52%	53%	53%	76%	*55%*	*53%*	All Div'ds to Net Prof	*52%*

CURRENT POSITION ($MILL.)	2018	2019	3/31/20
Cash Assets	115.5	94.3	92.6
Receivables	122.5	122.8	123.2
Inventory (FIFO)	15.8	19.5	21.5
Other	32.2	73.2	67.5
Current Assets	286.0	309.8	304.8
Accts Payable	27.2	35.2	36.8
Debt Due	--	12.5	12.5
Other	271.8	362.3	368.6
Current Liab	299.0	410.0	417.9

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	6.5%	6.5%	*4.5%*
"Cash Flow"	10.5%	11.0%	*11.0%*
Earnings	11.5%	11.0%	*12.0%*
Dividends	17.5%	17.5%	*10.0%*
Book Value	12.0%	11.5%	*7.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	375.3	433.6	450.4	414.7	1674.0
2018	408.7	480.5	487.8	444.6	1821.6
2019	429.1	524.0	556.5	505.9	2015.5
2020	487.9	*480*	*550*	*522.1*	*2040*
2021	*485*	*550*	*580*	*535*	*2150*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.12	.16	.16	.14	.58
2018	.15	.20	.20	.16	.71
2019	.14	.20	.13	.16	.62
2020	.13	*.15*	*.20*	*.17*	*.65*
2021	*.15*	*.20*	*.25*	*.20*	*.80*

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.067	.067	.067	.067	.267
2017	.077	.077	.077	.077	.307
2018	.093	.093	.093	.093	.372
2019	.105	.105	.105	.105	.420
2020	.120	.080			

BUSINESS: Rollins, Inc. owns and operates Orkin LLC, Exterminating, one of the world's largest pest- and termite-control service providers. Has over 500 locations (including franchises) in the U.S., Canada, Europe, Latin America, the Caribbean, the Middle East, and Asia. Commercial and residential pest control account for 81% of revenues, and the balance is mainly from the termite business. Acquired HomeTeam Pest Defense, 4/08, Crane Pest Control, 12/08, two acquisitions in Australia in 2014. Has approx. 14,000 employ. Rollins family & other dirs. own 53.2% and less than 1.0%, resp., of stock (3/20 proxy). Chairman: R. Randall Rollins. CEO: Gary W. Rollins. Inc.: DE. Addr.: 2170 Piedmont Rd., N.E., Atlanta, GA 30324. Telephone: 404-888-2000. Internet: www.rollins.com.

Rollins reported decent March-period results. The top line increased 13.7% year over year, to $487.9 million. Meanwhile, the bottom line fell to $0.13 a share, a cent below the year-ago tally. The company's operations were deemed essential and continued to remain open amid the government-mandated lockdown. This helped the pest-control service provider generate respectable results for the first part of the March quarter. However, the commercial pest control line suffered the most as Rollins serves multiple businesses in the hospitality, healthcare, food processing, and logistics sectors, all of which were impacted notably.

The company has taken some initiative to navigate coronavirus-related challenges. Management announced a decrease in its second-quarter cash dividend, to $0.08 per share (versus $0.12 paid earlier this year). This proactive move is to prepare for unforseen events in the short term related to COVID-19, and in line with Rollins' conservative financial management approach. Other steps included furloughs, selected pay decreases, and a reduction of nonessential expenses. Elsewhere, the company added a new disinfecting service through the Orkin line, Vital-Clean, which will likely boost the top line in the coming months.

All told, our near-term projections are on the cautious side. Certainly, we like that Rollins has implemented cost-cutting measures and added a top-line growth opportunity. Nevertheless, weakness in its commercial operations is expected to continue until the pandemic is controlled or businesses start to operate normally. There is a lot of uncertainty at the moment to determine how the demand for Rollins services will look during the summer season, which usually experiences high requests for mosquito and termite control services. In all, for 2020 and 2021, we estimate share net to come in at $0.65 and $0.80, respectively.

Shares of Rollins have subpar long-term upside potential. Still, the company continues to reward its shareholders, albeit with a reduced quarterly dividend, during these difficult times. Note that ROL has recovered in price since the market selloff in March.

Emma Jalees *May 22, 2020*

(A) Dil. shs. Excl. nonrecurring gains: '04, 5¢; '05, 1¢; '09, 2¢. 2017 excl. one-time tax impact 5¢. Egs may not sum due to rdg. and/or change in shs. out. Next earnings report due mid-July.
(B) Div'd paid in mid-March, June, September, and December. Excl. special div'd. $0.08 paid 12/12, $0.06 paid 12/13, $0.07 paid 12/14, $0.10 paid 10/17, $0.14 paid 11/18, & $0.05 paid 12/19. ■ Div'd reinvest. plan available.
(C) Incl. intang. In '19: $68.60 mill., $0.21/sh.
(D) In mill., adj. for stock splits.

Company's Financial Strength	A
Stock's Price Stability	90
Price Growth Persistence	95
Earnings Predictability	90

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SELECTIVE INSUR. NDQ-SIGI

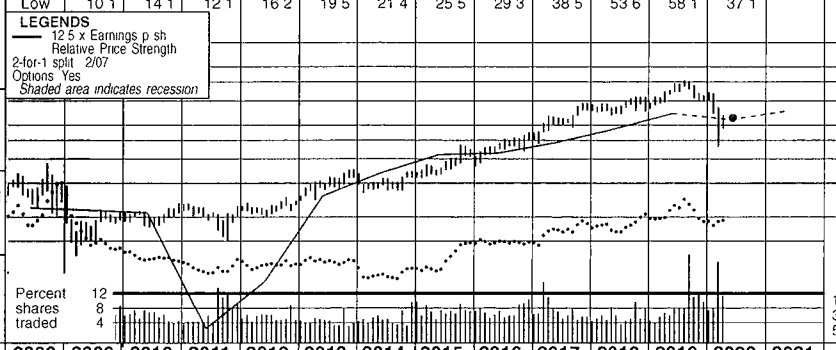
RECENT PRICE 52.39 | P/E RATIO 12.8 (Trailing: 12.1 / Median: 15.0) | RELATIVE P/E RATIO 0.69 | DIV'D YLD 1.8% | VALUE LINE

TIMELINESS 3 Lowered 5/29/20
SAFETY 3 New 7/27/90
TECHNICAL 3 Raised 5/8/20
BETA .85 (1.00 = Market)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High	23.3	18.9	19.0	20.3	28.3	27.7	37.9	44.0	62.4	67.2	81.4	70.9
Low	10.1	14.1	12.1	16.2	19.5	21.4	25.5	29.3	38.5	53.6	58.1	37.1

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 12.5 x Earnings p sh
Relative Price Strength
2-for-1 split 2/07
Options: Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$44-$95	$70 (35%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	85	(+60%)	15%
Low	55	(+5%)	4%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	115	145	124
to Sell	106	114	142
Hld's(000)	47216	46248	46834

Percent shares traded 12 8 4

% TOT. RETURN 4/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	-29.1	-15.6
3 yr	-1.8	-2.4
5 yr	99.2	12.2

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
23.57	24.94	26.18	27.94	28.28	26.88	26.39	26.45	28.72	31.04	33.93	34.69	37.57	39.17	41.33	43.68	*45.00*	*50.00*	P/C Prem Earned per sh	*52.30*
2.15	2.39	2.74	3.21	2.48	2.23	2.71	2.71	2.39	2.41	2.54	2.12	2.29	2.77	3.31	3.74	*3.75*	*3.85*	Investment Inc per sh	*4.00*
.70	1.21	.97	.25	d.26	d.04	d.44	d1.94	d1.14	.61	1.29	2.64	2.74	2.72	2.07	2.84	*1.60*	*4.00*	Underwriting Inc per sh	*4.70*
1.80	2.24	2.30	2.22	1.43	1.39	1.35	.34	.59	1.65	2.17	2.70	2.75	3.12	3.66	4.40	*4.10*	*4.55*	Earnings per sh A	*5.50*
.35	.40	.44	.49	.52	.52	.52	.52	.52	.52	.53	.57	.61	.66	.74	.83	*.92*	*1.07*	Div'ds Decl'd per sh B■	*1.40*
15.77	17.26	18.81	19.81	16.84	18.83	19.96	20.39	19.77	20.63	23.36	24.37	26.77	29.28	30.40	36.91	*40.00*	*43.75*	Book Value per sh	*49.25*
55.94	56.86	57.27	54.31	52.88	53.24	53.68	54.41	55.16	55.92	54.59	57.36	57.21	58.50	58.95	59.46	*60.00*	*60.00*	Common Shs Outst'g C	*65.00*
119%	142%	144%	122%	133%	80%	81%	80%	91%	117%	103%	124%	141%	172%	198%	190%	*Bold figures are*		Price to Book Value	*145%*
10.5	10.9	11.8	10.9	15.7	10.8	12.0	48.1	30.5	14.6	11.1	11.2	13.5	16.2	16.4	15.9	*Value Line*		Avg Ann'l P/E Ratio	*13.0*
.55	.58	.64	.58	.94	.72	.76	3.02	1.94	.82	.58	.56	.71	.81	.89	.86	*estimates*		Relative P/E Ratio	*.70*
1.9%	1.6%	1.6%	2.0%	2.3%	3.5%	3.2%	3.2%	2.9%	2.2%	2.2%	1.9%	1.6%	1.3%	1.2%	1.2%			Avg Ann'l Div'd Yield	*2.0%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $852.6 mill. Due in 5 Yrs $417.0 mill.
LT Debt $550.6 mill. LT Interest $32.5 mill.
(21% of Cap'l)
Leases, Uncapitalized $8.3 million
Pension Assets-12/19 $385 mill. Oblig. $391 mill.

Pfd Stock None
Common Stock 59,707,580 shs.
as of 4/24/20
MARKET CAP: $3.1 billion (Mid Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
1416.6	1439.3	1584.1	1736.1	1852.6	1989.9	2149.6	2291.0	2436.2	2597.2	*2700*	*3000*	P/C Premiums Earned	*3400*
69.3%	74.7%	70.8%	64.6%	62.5%	57.7%	57.4%	58.7%	61.5%	59.7%	*61.5%*	*58.0%*	Loss to Prem Earned	*58.0%*
32.3%	32.6%	33.2%	33.4%	33.7%	34.7%	35.5%	34.4%	33.2%	33.8%	*35.0%*	*34.0%*	Expense to Prem Writ	*33.0%*
-1.7%	-7.3%	-4.0%	2.0%	3.8%	7.6%	7.0%	6.9%	5.3%	6.5%	*3.5%*	*8.0%*	Underwriting Margin	*9.0%*
17.0%	--	--	29.6%	27.0%	28.4%	28.1%	27.7%	18.0%	18.9%	*20.0%*	*20.0%*	Income Tax Rate	*20.0%*
73.9	19.1	32.1	86.7	124.5	157.1	161.7	184.9	218.6	264.4	*260*	*290*	Net Profit ($mill)	*360*
3.9%	3.8%	3.2%	3.1%	3.0%	2.5%	2.5%	2.9%	3.5%	3.5%	*3.6%*	*3.7%*	Inv Inc/Total Inv	*3.8%*
5232	5736	6794	6270	6582	6904	7356	7686	7953	8797	*10000*	*11000*	Total Assets ($mill)	*13500*
1071.1	1109.2	1090.6	1153.9	1275.6	1398.0	1531.4	1713.0	1791.8	2194.9	*2400*	*2625*	Shr. Equity ($mill)	*3200*
6.9%	1.7%	2.9%	7.5%	9.8%	11.2%	10.6%	10.8%	12.2%	12.0%	*11.0%*	*11.0%*	Return on Shr. Equity	*11.5%*
4.5%	NMF	.5%	5.1%	7.5%	9.0%	8.4%	8.6%	9.8%	9.9%	*8.5%*	*8.5%*	Retained to Com Eq	*8.5%*
35%	NMF	84%	32%	23%	20%	21%	20%	19%	18%	*21%*	*22%*	All Div'ds to Net Prof	*25%*

FINANCIAL POSITION ($MILL.)	2018	2019	3/31/20
Bonds	5310.2	6116.4	5965.7
Stocks	147.6	72.9	100.0
Mortgages	--	--	--
Other	2494.9	2607.9	2909.4
Total Assets	7952.7	8797.2	8975.1
Unearned Prems	1431.9	1523.2	1514.6
Reserves	3893.9	4067.2	4103.6
Other	835.1	1011.8	1260.4
Total Liab	6160.9	6602.2	6878.6

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Premium Inc	4.0%	6.0%	*4.0%*
Invest Income	2.0%	6.0%	*3.5%*
Earnings	8.5%	20.5%	*6.5%*
Dividends	4.0%	7.5%	*11.0%*
Book Value	5.5%	8.5%	*7.5%*

Cal-endar	NET PREM. EARNED ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	560.9	568.0	572.1	590.0	2291.0
2018	591.8	604.8	614.3	625.3	2436.2
2019	632.6	642.6	653.6	668.4	2597.2
2020	651.7	*675*	*680*	*693.3*	*2700*
2021	*735*	*750*	*755*	*760*	*3000*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.86	.68	.72	.86	3.12
2018	.46	1.01	.99	1.20	3.66
2019	.90	1.16	.97	1.37	4.40
2020	.84	*.97*	*.87*	*1.42*	*4.10*
2021	*1.15*	*1.15*	*1.05*	*1.20*	*4.55*

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.15	.15	.15	.16	.61
2017	.16	.16	.16	.18	.66
2018	.18	.18	.18	.20	.74
2019	.20	.20	.20	.23	.83
2020	.23	.23			

BUSINESS: Selective Insurance Group, Inc. is a holding company for five property/casualty insurance companies. Main subsidiary: Selective Insurance Company of America. Markets products primarily in the East and Midwest. New Jersey accounted for 19% of premiums written in '19. Mix of 2019 premiums written: personal lines, 20%; commercial lines, 80%. Commercial premiums by industry (as percentage of total): automobile, 26%; general liability, 32%; workers' compensation, 17%; other, 25%. Has about 2,400 employees. Officers/directors own 2.0% of common stock; Black-Rock, 11.7% (4/20 Proxy). Chairman, Pres. & CEO: John J. Marchioni. Inc.: NJ. Address: 40 Wantage Ave., Branchville, NJ 07890. Telephone: 973-948-3000. Internet: www.selective.com.

Selective Insurance Group's bottom line will likely take a step backward this year. Like many of its peers, the recent COVID-19 pandemic has greatly impacted the company's operating fundamentals. In that vein, reserves have been increased to offset the spike in claims from small business liability and workers' compensation coverages. Meanwhile, the expense ratio has recorded a considerable uptick, with uncollectible premiums and higher policy cancellations hurting underwriting results. Moreover, a combination of volatile equity markets and weak interest rates has kept a tight lid on investment returns. Therefore, we have chosen to reduce our 2020 EPS outlook by $0.35, to $4.10.

We think the insurer will dust itself off and get back on the horse in 2021. Though management feels an economic downturn will probably place pressure on top-line expansion, overall policy retention levels should remain solid. Furthermore, earlier loss activity ought to provide Selective with enhanced negotiating leverage during the upcoming policy renewal season (where meaningful rate hikes should take place). Leadership has also mentioned that standard commercial line coverages will likely be little affected, since these policies require physical loss or property damage to trigger an approved claim. We also believe that firmer equity markets and lower catastrophe loss levels will support better profitability next year. All told, our 2021 share-net call checks in at $4.55.

The insurer seems to be on good footing from a liquidity standpoint. The company raised its short-term borrowings by $302 million in March out of an abundance of caution, which includes a $50 million drawdown of its credit line and $252 million in loans from the Federal Home Loan Bank facilities. These funds ought to be repaid in the coming quarters as markets normalize and regulatory/economic uncertainty declines.

These neutrally ranked shares do not merit much investment attention at this juncture. The issue offers lackluster appreciation potential three to five years hence. Too, SIGI's dividend yield fails to impress. In our view, most accounts would do well to look elsewhere, for now.

Kenneth J. DeFranco, Jr. *June 5, 2020*

(A) Diluted egs. Excludes cap'l gains/losses beginning in 2004: '05, 9¢; Excl. loss from discontinued ops: '08, 1¢; '09, 15¢; '10, 7¢; '11, 1¢. Next earnings report due late July. (B) Dividends historically paid in early March, June, September, December. ■ Div'd reinvestment plan available. (C) In mill., adj. for stock split.

Company's Financial Strength	B+
Stock's Price Stability	95
Price Growth Persistence	90
Earnings Predictability	60

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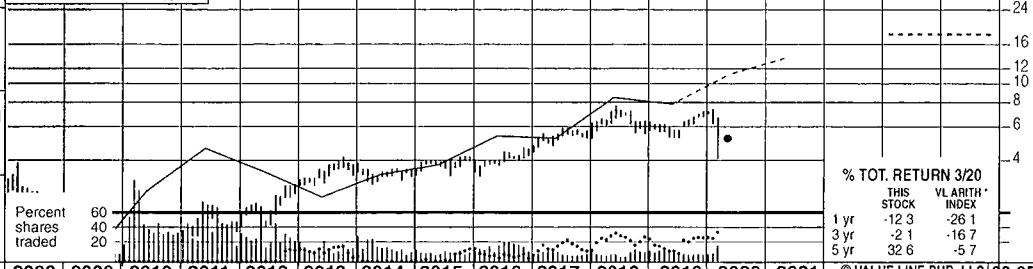
SIRIUS XM HOLDINGS NDQ-SIRI

RECENT PRICE 5.22 | P/E RATIO 17.4 (Trailing: 27.5 Median: 34.0) | RELATIVE P/E RATIO 1.14 | DIV'D YLD 1.0% | VALUE LINE

TIMELINESS 3 Raised 9/20/19
SAFETY 4 Lowered 2/5/16
TECHNICAL 2 Raised 3/20/20
BETA 1 00 (1 00 = Market)

High.	0.8	1.7	2 4	3 0	4 2	3 9	4 2	4 6	5 9	7 7	7 2	7 4
Low	0 1	0 6	1 3	1 8	2 9	3 0	3 3	3 3	4 4	5 2	5 2	4 1

LEGENDS
— 25 0 x "Cash Flow" p sh
· Relative Price Strength
Options Yes
Shaded area indicates recession



Target Price Range 2023 | 2024 | 2025

18-Month Target Price Range
Low-High Midpoint (% to Mid)
$4-$10 $7 (40%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	30	(+475%)	55%
Low	18	(+245%)	37%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	209	228	299
to Sell	284	252	206
Hld's(000)	860148	803789	791860

Percent shares traded 60 40 20

% TOT. RETURN 3/20

	THIS STOCK	VL ARITH * INDEX
1 yr	-12 3	-26 1
3 yr	-2 1	-16 7
5 yr	32 6	-5 7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
.05	18	44	63	46	64	72	80	65	.62	74	89	1 06	1 20	1 33	1.77	*1.85*	*2.00*	Revenues per sh	*2.40*
d 48	d 56	d 70	d 31	d 09	.04	.11	.19	14	.10	.13	.15	.21	.21	.34	.31	*.45*	*.55*	"Cash Flow" per sh	*.90*
d.57	d 65	d 79	d 39	d 25	d 10	03	.07	.07	06	08	09	15	14	26	20	*.35*	*.45*	Earnings per sh A	*.75*
--	--	--	--	--	--	--	--	--	--	--	--	.01	.04	.05	.05	*.05*	*.05*	Div'ds Decl'd per sh D	*.10*
.02	04	.07	04	04	06	08	04	02	03	02	03	04	06	08	08	*.10*	*.10*	Cap'l Spending per sh	*05*
78	24	d 27	d 54	d.01	00	05	19	77	45	23	d 03	d 17	d 34	d 42	d 17	*d.05*	*.05*	Book Value per sh B	*.50*
1276.9	1346.2	1434 6	1471 1	3651.7	3882 7	3933 2	3753 2	5262 4	6096 2	5638 7	5147 6	4740 9	4527 7	4345 6	4412 0	*4350.0*	*4200.0*	Common Shs Outst'g C	*4000.0*
--	--	--	--	--	--	35.9	26.4	33 4	58 0	42 9	43 0	27.0	37.5	24 7	30 7	*Bold figures are*		Avg Ann'l P/E Ratio	*31.5*
--	--	--	--	--	--	2 28	1 66	2.13	3 26	2 26	2 17	1 42	1 89	1 33	1 66	*Value Line*		Relative P/E Ratio	*1.75*
--	--	--	--	--	--	--	--	--	--	--	--	2%	8%	.7%	.8%	*estimates*		Avg Ann'l Div'd Yield	*.4%*

CAPITAL STRUCTURE as of 12/31/19
Total Debt $7,844 mill Due in 5 Yrs $3,200 mill
LT Debt $7,842 mill LT Interest $385 0 mill
(Tot Interest Covered 4 1x)
(110% of Total Cap'l)
Leases, Uncapitalized Annual rentals $72.0 mill.

No Defined Benefit Pension Plan

Pfd Stock None
Common Stock 4,413,944,475 shares as of 1/31/20

MARKET CAP: $23.0 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
2817 0	3014 5	3402 0	3799 1	4181 1	4570 1	5017.2	5425 1	5770 7	7794 0	*8100*	*8350*	Revenues ($mill)	*9500*
26 2%	31 3%	33 5%	42 6%	45 0%	31 7%	33 9%	35 7%	35 1%	27 1%	*30.0%*	*32.0%*	Operating Margin	*50.0%*
273 7	267 9	266 3	253 3	266 4	272 2	269 0	298 6	300 7	468 0	*475*	*485*	Depreciation ($mill)	*500*
163 2	427 0	470 9	377 2	493 2	509 7	745 9	647 9	1175 9	914 0	*1500*	*1925*	Net Profit ($mill)	*3000*
2 8%	3 2%	8%	40 8%	40 6%	42 9%	31 7%	48 8%	17 2%	23 6%	*30.0%*	*22.0%*	Income Tax Rate	*21.0%*
5 8%	14 2%	13.8%	9 9%	11 8%	11 2%	14 9%	11.9%	20 4%	11.7%	*18.5%*	*23.1%*	Net Profit Margin	*31.6%*
d1358	d970.6	d486.4	d1320	d764 0	d1935	d2026	d2351	d2325	d2290	*d2820*	*d2550*	Working Cap'l ($mill)	*d850*
3021.8	3012 4	2431.0	3093.8	4493 9	5443.6	5842 8	6741.2	6884 5	7842 0	*7500*	*7200*	Long-Term Debt ($mill)	*7000*
207 6	704 1	4039 6	2745 7	1309.8	d166 5	d792 0	d1524	d1817	d736 0	*d250*	*140*	Shr. Equity ($mill)	*2000*
9.6%	15 6%	8 0%	8 2%	10 8%	12 5%	18 0%	15 7%	26 7%	15 6%	*20.5%*	*26.0%*	Return on Total Cap'l	*33.5%*
78.6%	60 6%	11 7%	13 7%	37.7%	--	--	--	37 7%	--	*NMF*	*NMF*	Return on Shr. Equity	*NMF*
78 6%	60.6%	11 7%	13.7%	37.7%	--	--	--	37.7%	--	*NMF*	*NMF*	Retained to Com Eq	*NMF*
--	--	--	--	--	--	6%	29%	17%	25%	*15%*	*11%*	All Div'ds to Net Prof	*13%*

CURRENT POSITION ($MILL.)	2017	2018	12/31/19
Cash Assets	69 0	54 4	106.0
Receivables	241.7	98.0	670.0
Inventory (FIFO)	20 2	22 2	11 0
Other	140 0	303.6	216.0
Current Assets	470 9	478 2	1003 0
Accts Payable	794 3	735 1	1151.0
Debt Due	5 1	3.4	2.0
Other	2022 1	2064.2	2140.0
Current Liab	2821 5	2802 7	3293 0

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '23-'25
Revenues	9 0%	11 5%	*9 0%*
"Cash Flow"	--	12 0%	*21.0%*
Earnings	--	22 5%	*24 5%*
Dividends	--	--	*14.0%*
Book Value	--	--	*NMF*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1294.0	1347.6	1379 6	1403 9	5425 1
2018	1375.1	1432 3	1467.4	1495.9	5770.7
2019	1744 0	1977 0	2011 0	2062 0	7794 0
2020	*1850*	*2000*	*2100*	*2150*	*8100*
2021	*1900*	*2125*	*2150*	*2175*	*8350*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	04	04	06	d 01	14
2018	06	06	07	06	26
2019	03	06	05	05	20
2020	*.05*	*.10*	*.10*	*.10*	*.35*
2021	*.10*	*.10*	*.10*	*.15*	*.45*

Cal-endar	QUARTERLY DIVIDENDS PAID D Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	--	--	--	01	.01
2017	01	.01	.01	.011	.041
2018	.011	011	011	012	.045
2019	012	.012	.012	013	.049
2020	013				

BUSINESS: Sirius XM Holdings, Inc broadcasts a wide variety of programming (music, sports, talk, news, comedy, etc.) in the U S through two audio entertainment systems SiriusXM and Pandora As of 12/31/19, SiriusXM (and 360L) had about 34 9 million subscribers and Pandora had 6 2 mill subscribers It offers programming through satellite radio, streaming media through mobile, web, and connected devices Revenues are supported by subscriptions and ad revenues It has 4,354 employees Officers/directors own less than 1% of stock, Liberty Media Corp, 71 74% (4/20 proxy). Inc DE Chairman Gregory B Maffei CEO James E. Meyer. Address: 1221 Avenue of the Americas, 35th Floor New York, NY 10020 Tel 212-584-5100 Internet www siriusxm.com

Sirius XM Holdings put in a mixed performance in 2019. Even though revenues increased 35% last year, spurred in large part by the Pandora addition (completed February 1, 2019), higher taxes, operating and acquisition-related costs, and restructuring expenses hindered the bottom line, causing profits to dip 23%. Still, self-pay subscriptions reached a record high, and ad revenues from its Pandora stations also helped boost the top line.

The satellite radio operator should post healthier comparisons in the coming quarters. *Sirius was scheduled to report first-quarter earnings shortly after we went to press with this report.* The company will likely face a tougher business backdrop due to the ongoing coronavirus pandemic. However, several of its radio stations have been offering shows to address current events. And Sirius may experience an uptick in demand for its streaming digital media. All told, we imagine net profits will be up between 60% and 65% this year, on a 3%-5% sales gain. We are introducing our 2021 estimates. The top and bottom lines ought to climb another 3% and 25%-30%, respectively, next year.

Management may put some of its growth strategy on the back burner, for now. Over the past couple of years, Sirius invested heavily in technological enhancements, as well as improving its programming and operations to widen its audiences While the company may slow some of its more-aggressive expansion plans, including potential tuck-in acquisitions, it will likely build on synergies from the Pandora purchase, bolster productivity across its business, and focus on reducing operating costs

These shares may appeal to patient investors with an appetite for some risk. The stock rebounded nicely in value from the lows it experienced in late March, and the issue is neutrally ranked for year-ahead relative price performance. That said, SIRI has given up much ground since the start of the year, and this may provide a worthwhile entry point for speculative accounts. Although the current dividend yield is nothing to write home about, the equity offers robust upside possibilities over the coming 3 to 5 years.

Orly Seidman *May 1, 2020*

(A) Fully diluted earnings Excludes nonrecurring gains/(losses): '15, $0 01, '12, $0 44, '10, ($0 02), '09, ($0 05); '08, ($2.20), '05, ($0.03). Next earnings report due early May
(B) Includes intangibles In 2018, $4 791 billion, or $1 10 per share.
(C) In millions.
(D) Excl special dividend of $0 05, paid 12/28/12. Instituted quarterly dividend on 11/1/16.

Company's Financial Strength	C++
Stock's Price Stability	80
Price Growth Persistence	95
Earnings Predictability	60

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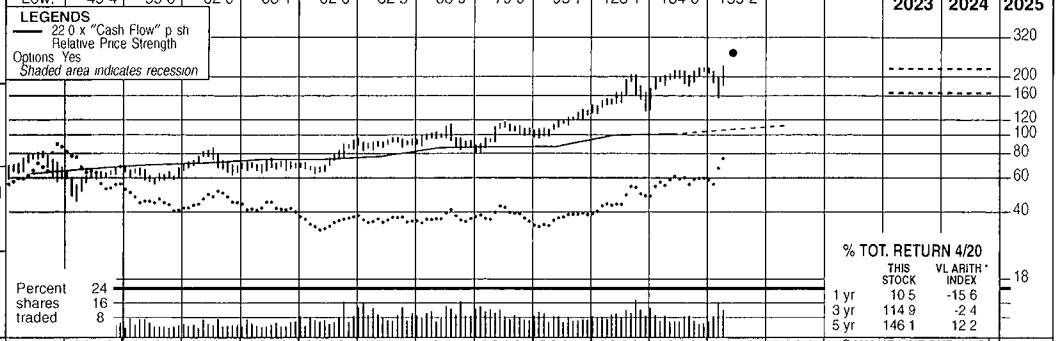
BIO-TECHNE CORP. NDQ-TECH

RECENT PRICE 266.40 | P/E RATIO NMF (Trailing: 95.5 Median: 30.0) | RELATIVE P/E RATIO NMF | DIV'D YLD 0.5% | VALUE LINE

TIMELINESS 2 Raised 2/14/20
SAFETY 2 Lowered 9/7/18
TECHNICAL 2 Raised 6/5/20
BETA .85 (1.00 = Market)

High	69.9	69.8	86.4	76.0	94.8	97.1	114.6	117.4	136.4	206.0	223.3	282.5				
Low	45.4	55.6	62.0	63.1	62.6	82.5	83.9	79.9	95.7	128.1	134.6	155.2				

Target Price Range 2023 | 2024 | 2025



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$199-$406	$303 (15%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	220	(-15%)	-4%
Low	165	(-40%)	-11%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	171	137	183
to Sell	164	183	144
Hld's(000)	35234	35941	35803

% TOT. RETURN 4/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	10.5	-15.6
3 yr	114.9	-2.4
5 yr	146.1	12.2

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
3.92	4.62	5.15	5.66	6.66	7.09	7.27	7.80	8.54	8.43	9.67	12.17	13.40	15.07	17.10	18.82	*18.60*	*20.60*	Sales per sh A	*26.20*
1.47	1.87	2.04	2.33	2.87	3.03	3.18	3.26	3.39	3.39	3.52	3.90	3.95	3.95	4.53	4.59	*4.85*	*5.10*	"Cash Flow" per sh	*7.50*
1.31	1.62	1.85	2.15	2.64	2.78	2.94	3.02	3.04	3.05	3.00	2.89	2.80	2.34	2.78	2.47	*2.75*	*3.00*	Earnings per sh A B	*5.50*
--	--	--	--	--	.75	1.03	1.07	1.11	1.18	1.23	1.27	1.28	1.28	1.28	1.28	*1.28*	*1.32*	Div'ds Decl'd per sh C	*1.52*
.09	.30	.12	.20	.42	.18	.13	.10	.16	.61	.37	.54	.45	.41	.56	.67	*.65*	*.70*	Cap'l Spending per sh	*.75*
7.23	6.93	8.64	11.09	12.61	12.26	13.55	15.78	18.31	20.02	21.49	22.80	23.60	25.42	28.69	30.73	*33.35*	*36.25*	Book Value per sh D	*40.45*
41.16	38.64	39.38	39.46	38.64	37.24	37.03	37.15	36.83	36.83	37.00	37.15	37.25	37.36	37.61	37.93	*39.00*	*40.00*	Common Shs Outst'g E	*42.00*
28.3	24.5	29.9	25.6	25.2	23.1	21.7	22.3	23.0	22.6	28.4	32.9	34.2	45.6	48.5	NMF	*Bold figures are*		Avg Ann'l P/E Ratio	*35.0*
1.50	1.30	1.61	1.36	1.52	1.54	1.38	1.40	1.46	1.27	1.49	1.66	1.80	2.29	2.62	NMF	*Value Line*		Relative P/E Ratio	*1.95*
--	--	--	--	--	1.2%	1.6%	1.6%	1.6%	1.7%	1.4%	1.3%	1.3%	1.2%	9%	7%	*estimates*		Avg Ann'l Div'd Yield	*.9%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $419.8 mill. Due in 5 yrs $12.5 mill
LT Debt $407.3 mill LT Interest $15.0 mill
(24% of Cap'l)

Leases, Uncapitalized: Annual rentals $12.9 mill.

No Defined Benefit Pension Plan
Preferred Stock None
Common Stock 38,223,009 shares
as of 5/4/20

MARKET CAP: $10.2 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
269.0	290.0	314.6	310.6	357.8	452.2	499.0	563.0	643.0	714.0	*725*	*825*	Sales ($mill) A	*1100*
61.5%	59.2%	56.8%	55.0%	50.0%	40.7%	38.7%	35.1%	31.2%	31.5%	*32.5%*	*35.5%*	Operating Margin	*40.0%*
8.1	8.7	12.5	12.3	19.2	37.2	42.8	60.0	64.5	78.2	*80.0*	*85.0*	Depreciation ($mill)	*85.0*
109.8	112.3	112.3	112.6	110.9	107.7	104.5	87.7	106.1	96.1	*110*	*120*	Net Profit ($mill)	*230*
29.8%	31.9%	30.7%	29.9%	31.3%	30.1%	29.2%	32.0%	15.8%	14.2%	*20.0%*	*25.0%*	Income Tax Rate	*25.0%*
40.8%	38.7%	35.7%	36.2%	31.0%	23.8%	20.9%	15.6%	16.5%	13.5%	*15.1%*	*13.7%*	Net Profit Margin	*20.9%*
184.0	212.2	310.7	377.4	443.0	208.5	199.7	212.5	319.7	310.7	*315*	*325*	Working Cap'l ($mill)	*550*
--	--	--	--	7.0	73.0	91.5	343.8	339.0	492.7	*375*	*300*	Long-Term Debt ($mill)	*200*
501.8	586.1	674.4	737.5	795.3	846.9	879.3	949.6	1079.1	1165.6	*1300*	*1450*	Shr. Equity ($mill)	*1700*
21.9%	19.2%	16.7%	15.3%	13.8%	11.8%	10.9%	7.1%	7.9%	6.9%	*7.0%*	*7.0%*	Return on Total Cap'l	*12.5%*
21.9%	19.2%	16.7%	15.3%	14.0%	12.7%	11.9%	9.2%	9.8%	8.2%	*8.5%*	*8.5%*	Return on Shr. Equity	*13.5%*
14.2%	12.4%	10.6%	9.4%	8.2%	7.2%	6.5%	4.3%	5.4%	4.1%	*4.5%*	*4.5%*	Retained to Com Eq	*9.5%*
35%	35%	37%	39%	41%	44%	46%	54%	45%	50%	*45%*	*44%*	All Div'ds to Net Prof	*28%*

CURRENT POSITION ($MILL.)	2018	2019	3/31/20
Cash Assets	181.6	166.0	261.0
Receivables	120.2	137.5	117.4
Inventory (FIFO)	85.6	91.0	99.6
Other	10.9	18.1	13.9
Current Assets	398.3	412.6	491.9
Accts Payable	18.5	16.2	19.7
Debt Due	--	12.5	12.5
Other	60.1	73.2	72.7
Current Liab	78.6	101.9	104.9

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	10.0%	14.0%	*7.5%*
"Cash Flow"	4.5%	5.0%	*9.0%*
Earnings	--	-3.5%	*14.0%*
Dividends	--	2.0%	*3.0%*
Book Value	9.0%	7.0%	*6.0%*

Fiscal Year Ends	QUARTERLY SALES ($ mill.) A Sep.30	Dec.31	Mar.31	Jun.30	Full Fiscal Year
2017	130.6	131.8	144.0	156.6	563.0
2018	144.6	154.2	163.9	180.3	643.0
2019	162.9	174.5	184.9	191.7	714.0
2020	183.2	184.9	194.6	*162.3*	*725*
2021	*200*	*200*	*200*	*225*	*825*

Fiscal Year Ends	EARNINGS PER SHARE A B Sep.30	Dec.31	Mar.31	Jun.30	Full Fiscal Year
2017	.55	.45	.57	.77	2.34
2018	.42	.35	.94	1.07	2.78
2019	.45	.43	1.15	.42	2.47
2020	.37	1.08	.92	*.38*	*2.75*
2021	*.40*	*.75*	*1.10*	*.75*	*3.00*

Cal-endar	QUARTERLY DIVIDENDS PAID C Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.32	.32	.32	.32	1.28
2017	.32	.32	.32	.32	1.28
2018	.32	.32	.32	.32	1.28
2019	.32	.32	.32	.32	1.28
2020	.32	.32			

BUSINESS: Bio-Techne Corp. is a holding company. R&D Systems manufactures and sells more than 11,000 cytokines, enzymes, antibodies, and related biotech products (76% of '19 sales), used for research and clinical diagnostics. Clinical Controls (24%) are used to calibrate blood analysis instruments. Int'l sales accounted for 45.2% of '19 business. R&D, 8.7% of sales. 2019 deprec. rate 25.5%. Acquired Genzyme's R&D products. Has 15.0% stake in ChemoCentryx (cytokine-related drugs). Has 2,250 employees. Off. & dir. own 4.1% of stock; All others aggregate, 24.6% (9/19 proxy). Chairman: R. Baumgartner. CEO: Charles Kummeth. Inc.: Minnesota. Address: 614 McKinley Pl., N.E., Minneapolis, MN 55413. Telephone: 612-379-8854. Internet: www.bio-techne.com.

Investor support for Bio-Techne stock has strengthened, of late. At the recent quotation, the equity has increased roughly 35% since our March report, and is perched well above its 52-week high. The positive buyer sentiment comes despite mixed fiscal 2020 third-quarter results (year ends June 30th). In the March period sales rose 5% year over year but earnings declined 20%. COVID-19-related challenges suppressed top- and bottom-line growth. Notably, state-mandated guidelines that forced facility closures hurt Bio-Techne's operations. Ongoing restrictions aimed at lessening the impact of the pandemic will likely continue to cause curtailed spending by the majority of the company's customers, particularly researchers that utilize its numerous antibodies, proteins, tissues, and other compounds to advance medical research.

The COVID-19 pandemic has boosted some aspects of the company's business, however, and we are optimistic that sales and earnings will advance in fiscal 2020 and 2021. For example, Bio-Techne's *Ella* testing kit has been used by some hospitals to provide real-time monitoring to a person's immune responses to COVID-19. Additionally, throughout the spread of the virus, the company has been providing medical research customers with numerous protein, antibody, and tissue samples that could potentially assist in the discovery of a vaccine. Moreover, the company has reconfigured distribution measures and has enhanced its capabilities to provide customers with samples through online and contactless measures. These catalysts ought to facilitate sales and earnings advances over this year and next.

The pipeline holds other promising clinical candidates, and demand should strengthen once the global economy gradually reopens. For example, Bio-Tecne's *ExoDo Prostate* cancer kit recently gained Medicare coverage, thus expanding its addressable markets.

Buy-and-hold investors should look elsewhere, for now. Further stock-price momentum is expected over the upcoming 12 months (Timeliness: 2). However, 3- to 5-year capital appreciation potential is well below average.

Nira Maharaj *June 5, 2020*

(A) Fiscal year ends the Friday closest to on June 30th.
(B) Diluted earnings. Excl. nonrecur. gain (losses): '04, (4¢); '17, ($0.31); '18, $0.53. May not sum due to rounding. Next earnings report due early August.
(C) Dividends paid in early March, June, September and December.
(D) Includes intangibles. In 2019: $1312.0 million, $34.58/sh.
(E) In millions.

Company's Financial Strength	A
Stock's Price Stability	90
Price Growth Persistence	65
Earnings Predictability	75

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TETRA TECH, INC. NDQ-TTEK

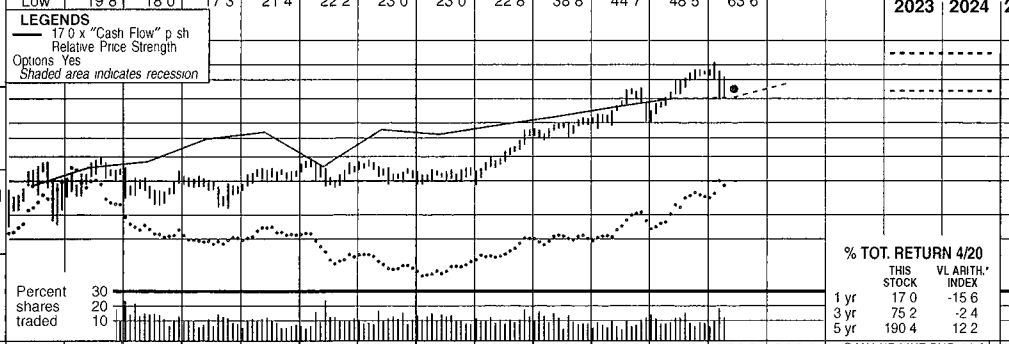
RECENT PRICE 71.60 | P/E RATIO 22.3 (Trailing: 21.4 Median: 18.0) | RELATIVE P/E RATIO 1.27 | DIV'D YLD 0.9% | VALUE LINE 413

TIMELINESS 2 Raised 7/19/19
SAFETY 3 New 12/18/98
TECHNICAL 1 Raised 5/22/20
BETA .90 (1.00 = Market)

High	32.0	28.2	25.5	28.0	31.5	30.9	28.2	44.3	50.9	72.6	90.3	99.3
Low	19.8	18.0	17.3	21.4	22.2	23.0	23.0	22.8	38.8	44.7	48.5	63.6

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 17.0 x "Cash Flow" p sh
Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$63-$132	$98 (35%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	110	(+55%)	12%
Low	70	(Nil)	1%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	155	169	144
to Sell	155	168	176
Hld's(000)	47930	46695	46953

Percent shares traded 30 20 10

% TOT. RETURN 4/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	17.0	-15.6
3 yr	75.2	-2.4
5 yr	190.4	12.2

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
17.95	15.76	16.62	17.35	20.80	22.63	23.65	28.68	31.68	31.57	29.72	28.94	33.82	36.40	39.76	43.79	*44.45*	*49.45*	Revenues per sh A C	*60.00*
.75	.41	.88	1.03	1.33	1.66	1.78	2.33	2.53	1.68	2.60	2.46	2.74	3.03	3.40	3.76	*3.80*	*4.55*	"Cash Flow" per sh	*5.90*
.41	.12	.66	.79	1.02	1.22	1.23	1.43	1.63	.70	1.66	1.66	1.88	2.13	2.64	3.17	*3.15*	*3.80*	Earnings per sh A B	*5.00*
--	--	--	--	--	--	--	--	--	--	.14	.30	.34	.38	.44	.54	*.66*	*.74*	Div'ds Decl'd per sh E	*.96*
.32	.17	.20	.23	.30	.32	.35	.30	.39	.43	.31	.41	.21	.17	.18	.30	*.30*	*.35*	Cap'l Spending per sh	*.40*
7.06	5.34	6.15	7.12	8.54	10.55	12.11	13.68	15.96	15.56	16.17	14.42	15.24	16.62	17.47	18.13	*20.20*	*22.75*	Book Value per sh	*29.05*
56.31	57.05	57.68	58.39	59.88	61.26	61.76	62.50	63.84	64.13	62.59	59.38	57.04	55.87	55.35	54.57	*54.00*	*53.00*	Common Shs Outst'g D	*50.00*
48.1	NMF	25.9	24.5	22.1	19.7	18.6	15.9	15.0	37.7	16.5	15.4	15.6	19.9	20.6	21.0	*Bold figures are*		Avg Ann'l P/E Ratio	*18.0*
2.54	NMF	1.40	1.30	1.33	1.31	1.18	1.00	.95	2.12	.87	.78	.82	1.00	1.11	1.15	*Value Line*		Relative P/E Ratio	*1.00*
--	--	--	--	--	--	--	--	--	--	5%	1.2%	1.2%	9%	8%	8%	*estimates*		Avg Ann'l Div'd Yield	*1.0%*

CAPITAL STRUCTURE as of 3/29/20
Total Debt $345.5 mill **Due in 5 Yrs** $345.5 mill.
LT Debt $333.0 mill **LT Interest** $12.0 mill
(Total int earned 19.2x) (27% of Cap'l)

Leases, Uncapitalized Annual rentals $71.3 mill

Pension Assets-9/19: $30.4 mill **Oblig** $29.5 mill

Common Stock 54,026,070 shs as of 4/22/20

MARKET CAP: $3.9 billion (Mid Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
1460.2	1792.3	2022.2	2024.8	1859.9	1718.7	1929.2	2034.0	2200.7	2389.6	*2400*	*2620*	Revenues ($mill) A C	*3000*
10.8%	11.3%	10.1%	6.4%	8.0%	11.7%	11.5%	11.5%	12.0%	10.9%	*12.6%*	*13.0%*	Operating Margin	*14.0%*
33.5	55.7	56.9	62.6	54.5	44.2	45.6	45.8	38.6	28.8	*36.0*	*40.0*	Depreciation ($mill)	*45.0*
76.2	90.0	104.4	45.0	108.3	101.8	110.9	123.6	149.3	176.5	*170*	*200*	Net Profit ($mill)	*250*
37.8%	33.8%	34.9%	34.0%	24.7%	31.9%	32.6%	30.3%	27.2%	19.1%	*26.0%*	*25.0%*	Income Tax Rate	*25.0%*
5.2%	5.0%	5.2%	2.2%	5.8%	5.9%	5.7%	6.1%	6.8%	7.4%	*7.1%*	*7.7%*	Net Profit Margin	*8.3%*
371.7	307.4	355.5	388.5	394.7	373.4	454.3	504.3	432.3	309.8	*430*	*490*	Working Cap'l ($mill)	*555*
122.5	144.9	81.0	203.4	192.8	181.0	331.5	341.3	264.7	263.9	*330*	*325*	Long-Term Debt ($mill)	*305*
748.1	854.7	1019.0	997.8	1012.1	856.3	869.3	928.5	967.0	989.3	*1090*	*1205*	Shr. Equity ($mill)	*1450*
8.9%	9.3%	9.8%	4.1%	9.4%	10.2%	9.7%	10.2%	12.8%	14.7%	*13.0%*	*14.0%*	Return on Total Cap'l	*15.0%*
10.2%	10.5%	10.2%	4.5%	10.7%	11.9%	12.8%	13.3%	15.4%	17.8%	*15.5%*	*16.5%*	Return on Shr. Equity	*17.0%*
10.2%	10.5%	10.2%	4.5%	9.8%	9.8%	10.5%	11.0%	12.9%	14.8%	*12.5%*	*13.5%*	Retained to Com Eq	*14.0%*
--	--	--	--	8%	18%	18%	18%	16%	17%	*21%*	*20%*	All Div'ds to Net Prof	*19%*

CURRENT POSITION ($MILL.)	2018	2019	3/29/20
Cash Assets	146.2	120.7	135.0
Receivables	837.1	768.8	660.6
Other	67.1	190.3	206.4
Current Assets	1050.4	1079.8	1002.0
Accts Payable	160.2	206.6	120.6
Debt Due	12.6	12.6	12.5
Other	445.3	550.8	602.7
Current Liab.	618.1	770.0	735.8

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	7.0%	5.0%	*7.0%*
"Cash Flow"	10.0%	8.5%	*9.5%*
Earnings	10.0%	15.0%	*11.0%*
Dividends	--	--	*13.5%*
Book Value	7.0%	2.0%	*9.0%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) A C Dec.Per.	Mar.Per.	Jun.Per.	Sep.Per.	Full Fiscal Year
2017	489.8	512.2	498.7	533.3	2034.0
2018	544.8	532.8	570.4	552.7	2200.7
2019	553.3	585.4	623.2	627.7	2389.6
2020	614.0	584.5	*600*	*601.5*	*2400*
2021	*640*	*650*	*660*	*670*	*2620*

Fiscal Year Ends	EARNINGS PER SHARE A B Dec.Per.	Mar.Per.	Jun.Per.	Sep.Per.	Full Fiscal Year
2017	.49	.48	.53	.63	2.13
2018	.65	.54	.71	.75	2.64
2019	.70	.70	.89	.88	3.17
2020	.84	.73	*.78*	*.80*	*3.15*
2021	*.90*	*.95*	*.95*	*1.00*	*3.80*

Cal-endar	QUARTERLY DIVIDENDS PAID E Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.09	.09	.09	.09	.36
2017	.09	.10	.10	.10	.39
2018	.10	.12	.12	.12	.46
2019	.12	.15	.15	.15	.57
2020	.15	.17			

BUSINESS: Tetra Tech, Inc. is an international provider of engineering and management consulting services to public agencies and private corporations. The company operates in the water, environment, infrastructure, resource management, energy, and global development arenas. Revenue breakdown for 2019: federal government, 30%, U.S. commercial, 23%, International, 28%; State & Local Government, 19%. Employees: About 20,000. Officers & directors own 2.0% of common stock; BlackRock, Inc., 15.5%, Vanguard Group, 10.3%, (1/20 proxy). Chairman, CEO, and President: Dan Batrack. Incorporated: Delaware. Address: 3475 East Foothill Boulevard, Pasadena, California 91107. Telephone: 626-351-4664. Internet: www.tetratech.com.

Tetra Tech recorded lackluster fiscal second-quarter results (ended March 29th). Net revenues were $584.5 million, as sales were helped by additional contributions from the purchase of WYG but offset by some slowdowns related to the coronavirus outbreak. Adjusted profits fell to $0.73 per share sequentially. The company remains on track for better performance over the near term, though the coronavirus is a complicating factor. Though Tetra Tech finished its fiscal second quarter with a sizable backlog, some of these projects may be delayed, and the change in work flows could cause costs to rise. Still, the company has diversified revenues due to working for several governments in the U.S. at the federal, state, and local levels, while 95% of its staff can work from home. Overall, we have not built much disruption into our estimates, given the amount of government contracts. Overall, we look for revenues of $2.4 billion and earnings of $3.15 per share in fiscal 2020.

The long-term outlook appears to be brighter here. The company has about $2.99 billion in projects currently available for completion in the water and environmental services segment. Too, this list includes ventures both domestic and abroad. Moreover, operations expanded in Europe, while we think that higher profits will come in the years ahead. All told, we project adjusted earnings of $3.80 per share in fiscal 2021 and $5.00 per share in the 2023-2025 period.

Management raised the quarterly dividend by 13%, to $0.17 per share. This marks another year of payout growth, and this compares favorably to others in the *Survey*, given others are suspending payouts. Overall, we think the dividend will grow at a decent rate going forward, as it remains well covered by earnings. Additionally, $60 million of stock was bought back in the fiscal second quarter, which ought to help share-net expansion in the coming years.

Shares of Tetra Tech are ranked Above Average (2) for Timeliness. However, the stock is trading at the low end of our 3- to 5-year Target Price Range, and the dividend yield is below average. Most long-term accounts would be best served waiting for a dip in price.

John E. Seibert III *May 22, 2020*

(A) Fisc. year ends around Sept. 30th.
(B) Dil. egs. Excl. extra and nonrec. gains/(losses): '04, ($1.97), '05, ($1.87), '06 (3¢), '09, 21¢, '10, 1¢, '15, ($1.01), '16, (26¢), '17, 9¢, '18, (22¢), '19, (33¢), '20, 6¢. Results may not sum due to rounding. Next egs. report due early August. (C) Reported rev's. net of sub. costs. Rev's. from 2005 on excl. wireless comm's. unit. Revenue before 2006 do not reflect the elimination of inter-segment revenue. (D) In mill. (E) Div. initiated June 2014. Paid by early Mar., Jun., Sept., mid Dec.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	55
Earnings Predictability	50

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TEXAS INSTR. NDQ-TXN

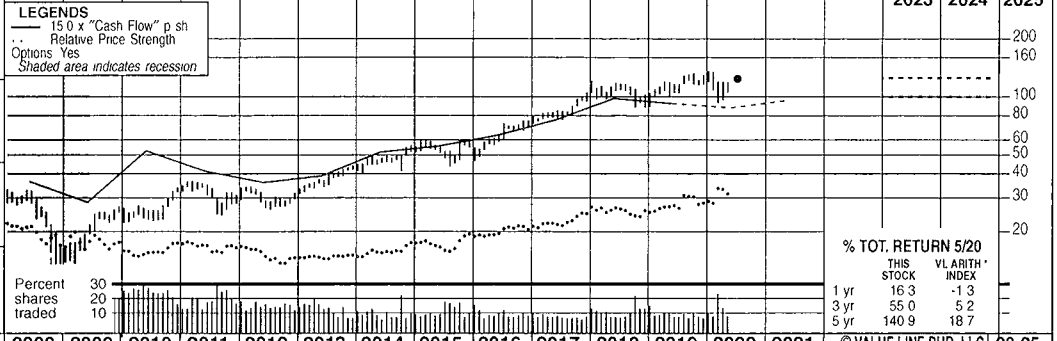
RECENT PRICE 124.23 | P/E RATIO 25.9 (Trailing: 23.8 Median: 19.0) | RELATIVE P/E RATIO 1.30 | DIV'D YLD 2.9% | VALUE LINE

TIMELINESS 3 Lowered 11/9/18
SAFETY 1 Raised 7/8/11
TECHNICAL 3 Lowered 4/3/20
BETA .85 (1.00 = Market)

High	27.0	33.9	36.7	34.2	44.1	56.0	60.0	75.3	105.3	120.8	132.2	135.7
Low	13.7	22.3	24.3	26.1	31.4	40.3	43.5	46.7	72.5	87.7	88.7	93.1

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 15.0 x "Cash Flow" p sh
.. Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$92-$167	$130 (5%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	125	(Nil)	3%
Low	100	(-20%)	-2%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	712	806	676
to Sell	632	633	810
Hld's(000)	805865	795368	772303

% TOT. RETURN 5/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	16.3	-1.3
3 yr	55.0	5.2
5 yr	140.9	18.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
7.32	8.37	9.83	10.30	9.78	8.41	11.96	12.05	11.33	11.12	12.25	12.86	13.42	15.22	16.70	15.43	*14.85*	*15.90*	Sales per sh	*18.45*
1.94	2.25	2.54	2.73	2.43	1.89	3.51	2.76	2.40	2.60	3.45	3.71	4.22	5.06	6.53	6.14	*5.85*	*6.40*	"Cash Flow" per sh	*7.55*
1.05	1.34	1.69	1.83	1.57	1.15	2.62	1.88	1.51	1.75	2.57	2.82	3.48	4.35	5.59	5.24	*4.80*	*5.25*	Earnings per sh B	*5.90*
.09	.11	.13	.30	.40	.45	.49	.56	.72	1.07	1.24	1.40	1.64	2.12	2.63	3.21	*3.60*	*3.64*	Div'ds Decl'd per sh C	*3.84*
.76	.83	.88	.51	.60	.61	1.03	.72	.44	.38	.36	.54	.53	.71	1.20	.91	*.55*	*.55*	Cap'l Spending per sh	*.55*
7.60	7.46	7.83	7.43	7.30	7.84	8.94	9.61	9.68	9.84	9.76	9.84	10.52	10.51	9.52	9.56	*10.75*	*12.45*	Book Value per sh	*18.25*
1718.1	1600.3	1450.0	1343.2	1277.9	1240.1	1167.4	1139.5	1132.0	1098.0	1065.0	1011.3	995.98	983.16	945.15	932.03	*930.00*	*929.00*	Common Shs Outst'g A	*925.00*
24.0	21.4	18.4	18.3	16.0	18.0	10.0	16.9	19.9	21.6	18.5	19.1	18.1	19.4	19.0	22.1	*Bold figures are*		Avg Ann'l P/E Ratio	*19.0*
1.27	1.14	.99	.97	.96	1.20	.64	1.06	1.27	1.21	.97	.96	.95	.98	1.03	1.20	*Value Line*		Relative P/E Ratio	*1.05*
3%	4%	4%	9%	1.6%	2.2%	1.9%	1.8%	2.4%	2.8%	2.6%	2.6%	2.6%	2.5%	2.5%	2.8%	*estimates*		Avg Ann'l Div'd Yield	*2.5%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $6.6 bill. **Due in 5 Years** 3.1 bill.
LT Debt $5.5 bill. **LT Interest** $170 mill.
(42% of capital)

Leases, Uncapitalized: Annual Rentals $75 mill.
Pension Assets-12/19 $4004 mill. **Oblig.** $3900 mill.
Pfd Stock None

Common Stock 917,772,641 shs.
as of 4/14/20
MARKET CAP: $114 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
13966	13735	12825	12205	13045	13000	13370	14961	15784	14383	*13800*	*14750*	Sales ($mill)	*17075*
37.5%	31.5%	28.4%	30.1%	38.9%	40.8%	42.7%	44.3%	46.3%	44.7%	*45.0%*	*46.50*	Operating Margin	*46.5%*
865.0	904.0	957.0	879.0	850.0	766.0	605.0	539.0	590.0	708.0	*750*	*850*	Depreciation ($mill)	*1250*
3228.0	2236.0	1759.0	1971.0	2821.0	2986.0	3595.0	4437.3	5580.0	5017.0	*4680*	*5115*	Net Profit ($mill)	*5730*
29.1%	24.3%	9.1%	23.1%	27.2%	29.2%	27.1%	27.0%	16.5%	12.4%	*12.0%*	*12.0%*	Income Tax Rate	*12.0%*
23.1%	16.3%	13.7%	16.1%	21.6%	23.0%	26.9%	29.7%	35.4%	34.9%	*33.9%*	*34.7%*	Net Profit Margin	*33.5%*
5079.0	4329.0	4800.0	5272.0	5106.0	4519.0	5193.0	6476.0	5623.0	6638.0	*8060*	*10105*	Working Cap'l ($mill)	*17325*
--	4211.0	4186.0	4158.0	3641.0	3120.0	2978.0	3577.0	4319.0	5303.0	*5400*	*5500*	Long-Term Debt ($mill)	*5500*
10437	10952	10961	10807	10390	9946.0	10473	10337	8994.0	8907.0	*9980*	*11575*	Shr. Equity ($mill)	*16900*
30.9%	14.9%	11.9%	13.5%	20.4%	23.2%	27.0%	32.2%	42.4%	35.9%	*30.5%*	*30.0%*	Return on Total Cap'l	*25.5%*
30.9%	20.4%	16.0%	18.2%	27.2%	30.0%	34.3%	42.9%	62.0%	56.3%	*49.0%*	*44.0%*	Return on Shr. Equity	*34.0%*
25.3%	14.5%	8.6%	7.4%	14.4%	15.5%	18.6%	22.6%	33.6%	22.6%	*13.5%*	*15.0%*	Retained to Com Eq	*13.0%*
18%	29%	47%	60%	47%	48%	46%	47%	46%	60%	*72%*	*66%*	All Div'ds to Net Prof	*62%*

CURRENT POSITION ($MILL.)	2018	2019	3/31/20
Cash Assets	4233	5387	4742
Receivables	1207	1074	1316
Inventory (Avg Cst)	2217	2001	2003
Other	440	299	249
Current Assets	8097	8761	8310
Accts Payable	478	388	363
Debt Due	749	500	1100
Other	1247	1235	918
Current Liab	2474	2123	2381

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs	Est'd '17-'19 to '23-'25
Sales	5.0%	6.5%	*2.5%*
"Cash Flow"	9.5%	16.0%	*3.0%*
Earnings	13.0%	21.0%	*2.5%*
Dividends	21.5%	21.5%	*6.5%*
Book Value	2.5%	--	*11.0%*

Cal-endar	QUARTERLY SALES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	3402	3693	4116	3750	14961
2018	3789	4017	4261	3717	15784
2019	3594	3668	3771	3350	14383
2020	3329	*3100*	*3800*	*3571*	*13800*
2021	*3565*	*3335*	*4035*	*3815*	*14750*

Cal-endar	EARNINGS PER SHARE B Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.97	1.03	1.26	1.09	4.35
2018	1.35	1.40	1.58	1.27	5.59
2019	1.26	1.36	1.49	1.12	5.24
2020	1.24	*1.00*	*1.40*	*1.16*	*4.80*
2021	*1.35*	*1.10*	*1.50*	*1.30*	*5.25*

Cal-endar	QUARTERLY DIVIDENDS PAID C Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.38	.38	.38	.50	1.64
2017	.50	.50	.50	.62	2.12
2018	.62	.62	.62	.77	2.63
2019	.77	.77	.77	.90	3.21
2020	.90	.90			

BUSINESS: Texas Instruments Incorporated is a global manufacturer of semiconductors and electronic products. The company is the leading supplier of digital signal processors and analog devices. Markets electrical controls, educational and productivity solutions, and metallurgical materials. Royalty income from licensing proprietary technology is significant. Acquired Burr-Brown, 8/00, Unitrode, 10/99. Sold DRAM business, 10/1/98, defense business, 7/11/97. R&D, 10.7% of 2019 revenues. Has 29,768 empls. The Vanguard Group owns 9.5% of common stock, Off. and dir. own less than 1% of stock (3/20 proxy). CEO & Pres. Richard K. Templeton. Inc.: DE. Address: 12500 TI Boulevard, P.O. Box 660199, Dallas, TX 75266-0199. Telephone: 972-995-3773. Internet: www.ti.com.

Since our March review, shares of Texas Instruments have rebounded nicely. Indeed, over that time frame, the equity's price advanced more than 17%. This likely reflected the general uptrend in the broader market averages, with the S&P 500 Index rebounding sharply over the past three months.

Conversely, the chip maker's March-quarter results were lackluster. The widespread economic slowdown stemming from the COVID-19 pandemic weighed on volumes across all business units. In fact, the Analog, Embedded Processing, and Other segments experienced drops in sales of 2.3%, 17.9%, and 22.9%, respectively. All told, these figures equated to a 7.4% slide in the overall top line, to $3.329 billion. Meanwhile, on the profitability front, cost of goods sold and operating expenses increased 20 basis points, and 90 basis points, as a percentage of sales, respectively. After accounting for a 30% decline in other income and an 18% rise in interest costs, TXN's first-quarter earnings receded 1.6%, to $1.24 a share. This was modestly below our call of $1.30.

Consequently, we have reduced our outlook for this year and next. Texas Instruments now appears poised to register a roughly 4% drop in sales, to $13.8 billion. The anticipated decline in its business will likely stem from a downturn in its Signal Chain, High Volume, Connected Microcontrollers, Processors, and other offerings, partially offset by strength in its Power product line. The reduced volumes will undoubtedly weigh on fixed-cost absorption. As a result, we have sliced $0.60 off our 2020 earnings estimate, to $4.80 a share. Our revised call would represent a year-over-year decline of almost 8.5%.

At this juncture, these shares do not stand out. The equity's quotation is trading above our 3- to 5-year Target Price Range suggesting that it is overvalued at the moment. Consequently, investors looking to get a toehold into Texas Instruments shares would be wise to wait for some sort of price correction to afford a more-attractive entry point. In the near term, our Timeliness Ranking System has this stock pegged to mirror the broader market averages for the year-ahead time frame (Timeliness: 3).

Bryan J. Fong *June 26, 2020*

(A) In mill.
(B) Diluted earnings. Excl. nonrecur. gains (losses) & amort. of purchased intang.: '05, 6¢; '17, (75¢). Excl. disc. operations: '06, $1.09.
Next egs. rpt. due late July. Qtly. egs. may not sum to total due to change in shares outstanding.
(C) Dividends historically paid mid-February, May, August, and November.

Company's Financial Strength	A++
Stock's Price Stability	90
Price Growth Persistence	95
Earnings Predictability	80

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AMERCO NDQ-UHAL

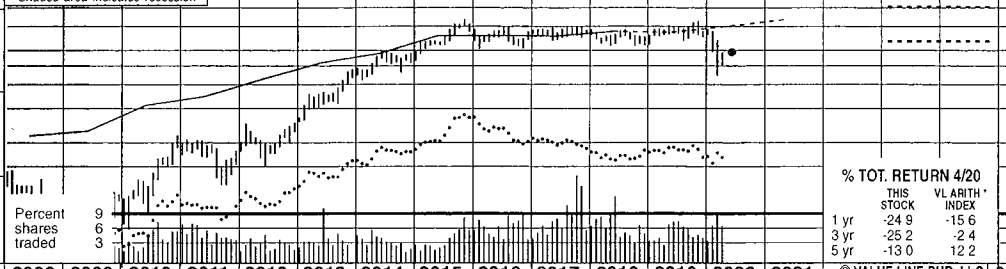
RECENT PRICE 294.67 | P/E RATIO 16.4 (Trailing: 18.0 Median: 14.0) | RELATIVE P/E RATIO .93 | DIV'D YLD Nil | VALUE LINE 318

TIMELINESS 3 Raised 5/8/20
SAFETY 3 New 11/25/16
TECHNICAL 3 Raised 4/24/20
BETA .90 (1.00 = Market)

High	55.4	109.1	104.0	126.9	240.4	297.1	436.9	399.2	401.0	386.6	426.5	387.8
Low	21.9	35.6	60.2	75.4	128.4	210.0	266.3	305.7	338.3	316.0	322.2	222.3

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 8.0 x "Cash Flow" p sh
. Relative Price Strength
Options: No
Shaded area indicates recession



18-Month Target Price Range
Low-High Midpoint (% to Mid)
$213-$436 $325 (10%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	505	(+70%)	14%
Low	335	(+15%)	3%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	102	104	121
to Sell	107	110	87
Hld's(000)	7391	7338	7438

Percent shares traded 9 6 3

% TOT. RETURN 4/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	-24.9	-15.6
3 yr	-25.2	-2.4
5 yr	-13.0	12.2

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
94.35	98.97	101.51	104.38	101.61	102.10	114.30	127.64	130.49	144.60	156.80	167.06	174.51	183.66	192.20	**200.25**	**206.65**	**212.80**	Revenues per sh	**246.15**
6.81	12.44	12.83	14.40	13.55	14.30	19.56	21.68	26.79	32.41	36.19	44.80	44.88	44.57	47.17	**46.70**	**50.25**	**54.60**	"Cash Flow" per sh	**60.00**
2.08	6.30	3.72	2.78	.02	2.74	8.80	10.09	13.56	17.51	18.21	24.95	20.34	15.70	18.93	**16.00**	**18.50**	**21.75**	Earnings per sh AB	**28.00**
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**Nil**	**Nil**	Div'ds Decl'd per sh D	**Nil**
13.39	16.18	31.56	29.20	20.26	13.23	24.51	30.08	33.51	50.99	57.49	76.97	72.40	69.55	95.37	**102.00**	**105.00**	**105.00**	Cap'l Spending per sh	**80.00**
26.91	32.68	34.95	38.63	36.60	41.46	50.64	52.83	62.69	77.90	96.10	114.82	133.61	173.84	188.31	**204.10**	**222.70**	**243.60**	Book Value per sh	**320.50**
21.28	21.28	20.55	19.63	19.61	19.61	19.61	19.61	19.61	19.61	19.61	19.61	19.61	19.61	19.61	**19.60**	**19.60**	**19.50**	Common Shs Outst'g C	**19.50**
16.7	10.3	22.7	23.6	NMF	16.3	8.9	8.7	8.3	11.2	15.4	14.5	17.7	23.4	18.7	**22.9**	*Bold figures are*		Avg Ann'l P/E Ratio	**15.0**
.88	.55	1.23	1.25	NMF	1.09	.57	.55	.53	.63	.81	.73	.93	1.18	1.01	**1.25**	*Value Line*		Relative P/E Ratio	**.85**
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*estimates*		Avg Ann'l Div'd Yield	**Nil**

CAPITAL STRUCTURE as of 12/31/19
LT Debt $4656.2 mill Due in 5 Yrs $2835.6 mill
LT Interest $158.0 mill
(53% of Cap'l)

Leases, Uncapitalized Annual rentals $34.0 mill

No Defined Benefit Pension Plan

Pfd Stock None

Common Stock 19,607,788 shs.
as of 1/1/2020

MARKET CAP: $5.8 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
2241.3	2502.7	2558.6	2835.3	3074.5	3275.7	3421.8	3601.1	3768.7	**3925**	**4050**	**4150**	Revenues ($mill) A	**4800**
26.3%	25.5%	29.7%	32.6%	33.0%	38.3%	35.8%	32.4%	31.9%	**31.5%**	**31.5%**	**31.5%**	Operating Margin	**32.0%**
212.3	222.7	260.5	293.2	352.8	389.4	481.5	567.8	554.0	**600**	**620**	**640**	Depreciation ($mill)	**700**
183.6	205.4	264.7	342.4	356.7	489.0	398.4	306.2	370.9	**315**	**365**	**425**	Net Profit ($mill)	**545**
36.5%	36.9%	35.2%	36.3%	36.5%	36.4%	36.6%	35.0%	22.3%	**23.5%**	**23.0%**	**23.0%**	Income Tax Rate	**25.0%**
8.2%	8.2%	10.3%	12.1%	11.6%	14.9%	11.6%	8.5%	9.8%	**8.0%**	**9.0%**	**10.2%**	Net Profit Margin	**11.4%**
548.5	723.7	436.0	464.9	213.3	522.1	632.6	697.8	619.2	**650**	**675**	**700**	Working Cap'l ($mill)	**800**
1250.0	1303.3	1434.9	1778.8	1930.1	2688.8	3262.9	3513.1	4163.3	**4650**	**4600**	**4600**	Long-Term Debt ($mill)	**4000**
993.0	1035.8	1229.3	1527.4	1884.4	2251.4	2619.7	3408.7	3692.4	**4000**	**4365**	**4750**	Shr. Equity ($mill)	**6250**
9.6%	10.7%	11.3%	11.5%	10.5%	10.9%	7.7%	5.3%	5.6%	**4.5%**	**5.0%**	**5.5%**	Return on Total Cap'l	**6.0%**
18.5%	19.8%	21.5%	22.4%	18.9%	21.7%	15.2%	9.0%	10.0%	**8.0%**	**8.5%**	**9.0%**	Return on Shr. Equity	**8.5%**
18.5%	19.8%	21.5%	22.4%	18.9%	21.7%	15.2%	9.0%	10.0%	**8.0%**	**8.5%**	**9.0%**	Retained to Com Eq	**8.5%**
--	--	44%	--	5%	20%	10%	10%	11%	**12%**	**Nil**	**Nil**	All Div'ds to Net Prof	**Nil**

CURRENT POSITION ($MILL.)	2017	2018	12/31/19
Cash Assets	759.4	673.7	632.0
Receivables	193.5	224.8	200.2
Inventory (LIFO)	89.9	103.5	103.0
Other	166.1	174.1	188.8
Current Assets	1208.9	1176.1	1124.0
Accts Payable	511.1	556.9	551.8
Other	--	--	--
Current Liab	511.1	556.9	551.8

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '23-'25
Revenues	6.0%	6.5%	*5.0%*
"Cash Flow"	13.0%	11.0%	*4.5%*
Earnings	24.0%	6.0%	*7.5%*
Dividends	--	--	*Nil*
Book Value	16.0%	20.5%	*11.0%*

Fiscal Year Begins	QUARTERLY REVENUES ($ mill.) A Jun.30	Sep.30	Dec.31	Mar.31	Full Fiscal Year
2017	957.9	1042.7	842.9	757.6	3601.1
2018	1019.6	1104.5	919.1	725.5	3768.7
2019	1079.2	1150.2	927.9	**767.7**	**3925**
2020	**1075**	**1150**	**975**	**850**	**4050**
2021	**1100**	**1175**	**1000**	**875**	**4150**

Fiscal Year Begins	EARNINGS PER SHARE AB Jun.30	Sep.30	Dec.31	Mar.31	Full Fiscal Year
2017	6.44	6.36	2.34	.56	15.70
2018	6.53	8.35	4.01	.04	18.93
2019	6.76	7.97	1.58	**d.31**	**16.00**
2020	**6.75**	**8.50**	**3.00**	**.25**	**18.50**
2021	**7.75**	**9.50**	**4.00**	**.50**	**21.75**

Cal-endar	QUARTERLY DIVIDENDS PAID D Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	NO CASH DIVIDENDS BEING PAID				
2017					
2018					
2019					
2020					

BUSINESS: AMERCO is the holding company for U-Haul International, Inc., Amerco Real Estate Co., Repwest Insurance Co., and Oxford Life Insurance Co. Moving and Storage, consisting of the rental of trucks, trailers, and related accessories, is the company's main business, accounting for about 90% of revenues. The Property and Casualty Insurance unit (Repwest and ARCOA Risk Retention Group) provides loss adjusting and claims handling for U-Haul. The Life Insurance division (Oxford) offers life and health insurance products to the senior market. Has around 29,000 employees. Off. & dir. own 42.6% of common (7/19 Proxy). Chairman & Pres.: Edward J. Shoen. Inc.: NV. Addr.: 5555 Kietzke Lane, Suite 100, Reno, NV 89511. Tel.: 775-688-6300. Internet: www.amerco.com.

While AMERCO stock has rebounded from its multiyear low, this is a solid entry point for more venturesome accounts. (Note: The company was set to report its fourth-quarter earnings for fiscal 2019 after this review went to press.) A closer look at the company's price chart reveals that UHAL's price had been in a type of holding pattern over the past five years, after it peaked back in late 2015. This came after an impressive surge that began at the tailend of the last recession. Indeed, from the beginning of 2010 to the fall of 2015, UHAL shares became a "10 bagger", increasing over 10 times in market value (from the low $40s in January, 2010 to an all-time high of $436.89 by November, 2015), which is an elusive distinction for a moving and storage company these days. In that vein, after testing the aforementioned record price back in November of 2019 (a multiyear high of $426.50), UHAL retreated some 48% to its trough in early March of this year. Although this is a different time and a different crisis, we believe the company's recovery prospects are favorable and the equity could be set for a strong rebound.

Notwithstanding stock price indicators, the trucker's operational prospects appear quite encouraging compared to the rest of the industry. AMERCO's primary breadwinner, U-Haul is mainly focused on a regional rental business, almost entirely driven by residential moving and storage customers. Though there is likely to be some disruption, the impact may be less pronounced than in freight transport. Moreover, while containment measures probably weighed on performance in late March through May, with many states already easing quarantine restrictions, and as college students prepare to move back home for the summer, we expect this traffic to bolster results. Moreover, limited exposure to import/export trends, and freight in general, ought to provide some insulation. What's more, the economic fallout from this crisis may well lead to an increase in demand for storage units, as business failures and unemployment levels skyrocket.

All told, AMERCO is financially sound. The company has ample cash flow and a manageable debt load.

Simon R. Shoucair *May 22, 2020*

(A) Fiscal year ends March 31st of the following calendar year.
(B) Earnings based on diluted shares. Next earnings report is due late May.
(C) In millions.
(D) Excludes special dividends paid: $0.50, 12/19, $0.50, 9/19, $0.50, 3/19, $0.50, 12/18, $0.50, 8/18, $0.50, 1/18, $1, 8/17, $1, 3/17, $1, 11/16, $1, 4/16; $3, 10/15, $1, 7/15; $1, 3/15; $1, 2/14, $5, 11/12, $1, 1/12.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	65
Earnings Predictability	65

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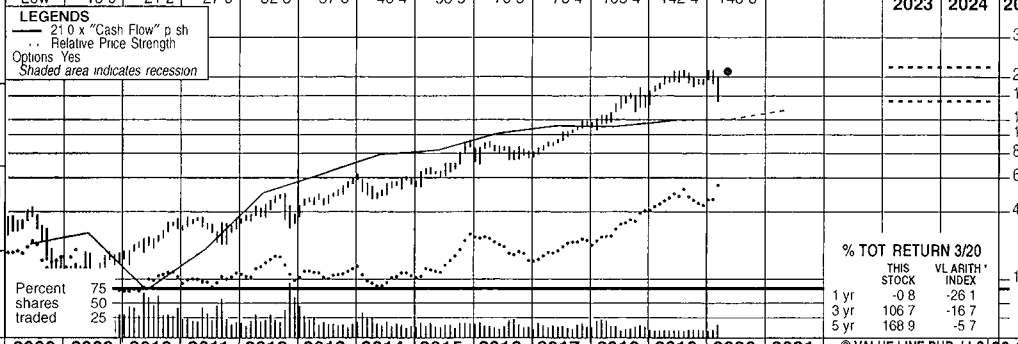
VERISIGN NDQ-VRSN

RECENT PRICE 214.23 | P/E RATIO 41.0 (Trailing: 41.0 Median: 26.0) | RELATIVE P/E RATIO 2.55 | DIV'D YLD Nil | VALUE LINE

TIMELINESS 2 Raised 5/8/20
SAFETY 3 Raised 11/23/07
TECHNICAL 3 Lowered 3/13/20
BETA .95 (1.00 = Market)

High	25.0	37.2	37.7	50.2	59.9	63.0	93.9	92.0	118.3	176.8	217.0	219.0
Low	16.9	21.2	27.0	32.8	37.6	46.4	53.5	70.3	76.4	105.4	142.4	148.8

LEGENDS
— 21.0 x "Cash Flow" p sh
.. Relative Price Strength
Options: Yes
Shaded area indicates recession



Target Price Range 2023 | 2024 | 2025

18-Month Target Price Range
Low-High: Midpoint (% to Mid)
$171-$273: $222 (5%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	225	(+5%)	2%
Low	150	(-30%)	-8%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	237	261	247
to Sell	266	223	267
Hld's(000)	108675	106857	106340

Percent shares traded 75 50 25

% TOT. RETURN 3/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	-0.8	-26.1
3 yr	106.7	-16.7
5 yr	168.9	-5.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
4.60	6.53	6.46	6.71	5.02	5.62	3.94	4.84	5.70	7.22	8.53	9.62	11.08	11.94	10.12	10.55	*10.95*	*12.05*	Sales per sh	*15.90*
1.07	1.49	2.00	1.19	1.30	1.48	.75	1.22	2.39	2.98	3.76	3.97	4.84	5.29	5.26	5.64	*5.75*	*6.45*	"Cash Flow" per sh	*8.75*
.72	1.05	1.53	.63	.73	1.03	.39	.83	1.91	2.17	2.71	2.82	3.42	3.75	4.75	5.15	*5.30*	*5.90*	Earnings per sh A	*7.75*
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*Nil*	*Nil*	Div'ds Decl'd per sh D	*Nil*
.37	.57	.74	.68	.62	.64	.47	1.21	.35	.49	.33	.37	.26	.51	.31	.35	*.40*	*.50*	Cap'l Spending per sh	*.80*
6.68	8.24	9.75	6.86	.27	3.00	3.92	d.55	d.06	d3.17	d7.46	d9.73	d11.65	d12.91	d11.54	d12.77	*d8.70*	*d4.40*	Book Value per sh C	*9.10*
253.34	246.42	243.84	222.85	191.55	183.30	172.74	159.42	153.39	133.72	118.45	110.07	103.09	97.59	120.04	116.72	*115.00*	*114.00*	Common Shs Outst'g B	*110.00*
28.6	24.8	14.5	47.9	42.5	20.4	NMF	40.3	21.6	22.4	20.1	24.5	23.9	25.6	28.7	37.0	*Bold figures are*		Avg Ann'l P/E Ratio	*24.0*
1.51	1.32	.78	2.54	2.56	1.36	NMF	2.53	1.38	1.26	1.06	1.23	1.25	1.29	1.55	2.02	*Value Line*		Relative P/E Ratio	*1.35*
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*estimates*		Avg Ann'l Div'd Yield	*Nil*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $1788.2 mill. Due in 5 Yrs $1133.3 mill.
LT Debt $1788.2 mill. LT Interest $90.0 mill.

Leases, Uncapitalized $4.6 mill.
No Defined Benefit Pension Plan

Pfd Stock None

Common Stock 115,539,476 shs.
as of 4/17/20
MARKET CAP: $24.8 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
680.6	772.0	873.6	965.1	1010.1	1059.4	1142.2	1165.1	1215.0	1231.7	*1260*	*1375*	Sales ($mill)	*1750*
45.8%	51.9%	58.5%	61.0%	62.2%	63.0%	65.2%	65.0%	67.1%	69.2%	*68.5%*	*69.5%*	Operating Margin	*70.0%*
62.6	55.7	54.8	60.7	63.7	61.5	58.2	49.9	48.4	46.3	*45.0*	*55.0*	Depreciation ($mill)	*90.0*
67.1	138.6	312.5	338.5	381.8	375.2	440.6	466.2	582.5	612.3	*615*	*680*	Net Profit ($mill)	*870*
26.6%	28.4%	24.3%	25.9%	21.0%	23.1%	24.2%	22.2%	20.2%	19.3%	*20.0%*	*21.0%*	Income Tax Rate	*21.0%*
9.9%	17.9%	35.8%	35.1%	37.8%	35.4%	38.6%	40.0%	47.9%	49.7%	*48.8%*	*49.5%*	Net Profit Margin	*49.7%*
1525.3	788.9	948.5	d226.0	d430.0	464.9	320.3	885.7	369.4	313.4	*275*	*350*	Working Cap'l ($mill)	*600*
581.6	690.1	697.6	750.0	750.0	1235.4	1237.2	1782.5	1785.0	1787.6	*1800*	*1850*	Long-Term Debt ($mill)	*2100*
676.4	d88.1	d9.3	d423.6	d883.5	d1070	d1201	d1260	d1385	d1490	*d1000*	*d500*	Shr. Equity ($mill)	*1000*
11.6%	35.3%	49.0%	NMF	NMF	NMF	NMF	NMF	NMF	NMF	*NMF*	*NMF*	Return on Total Cap'l	*30.0%*
9.9%	--	--	--	--	--	--	--	--	--	*NMF*	*NMF*	Return on Shr. Equity	*NMF*
9.9%	--	--	--	--	--	--	--	--	--	*NMF*	*NMF*	Retained to Com Eq	*NMF*
--	--	--	--	--	--	--	--	--	--	*Nil*	*Nil*	All Div'ds to Net Prof	*Nil*

CURRENT POSITION ($MILL.)	2018	2019	3/31/20
Cash Assets	1269.7	1218.1	1138.6
Receivables	--	--	--
Inventory	--	--	--
Other	47.3	60.5	46.9
Current Assets	1317.0	1278.6	1185.5
Accts Payable	215.2	210.0	180.0
Debt Due	--	--	--
Other	732.4	755.2	775.7
Current Liab.	947.6	965.2	955.7

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	6.5%	9.0%	*6.5%*
"Cash Flow"	15.0%	12.0%	*8.5%*
Earnings	19.0%	15.0%	*9.5%*
Dividends	--	--	*Nil*
Book Value	--	--	*NMF*

Cal-endar	QUARTERLY SALES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	288.6	288.6	292.4	295.5	1165.1
2018	299.3	302.5	305.8	307.4	1215.0
2019	306.4	306.3	308.4	310.6	1231.7
2020	312.5	*310*	*310*	*327.5*	*1260*
2021	*335*	*340*	*340*	*360*	*1375*

Cal-endar	EARNINGS PER SHARE A E Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.94	.99	.93	.90	3.75
2018	1.09	1.04	1.13	1.50	4.75
2019	1.35	1.24	1.30	1.26	5.15
2020	1.42	*1.25*	*1.30*	*1.33*	*5.30*
2021	*1.50*	*1.40*	*1.45*	*1.55*	*5.90*

Cal-endar	QUARTERLY DIVIDENDS PAID Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016					
2017	NO CASH DIVIDENDS BEING PAID				
2018					
2019					
2020					

BUSINESS: VeriSign, Inc. is a global provider of domain name registry services and Internet infrastructure. The company enables the security, stability, and resiliency of key Internet infrastructure and services. Has one reportable segment, Registry Services. International sales were 37% of the total for 2019. Acquired m-Qube (5/06). Berkshire Hathaway, Inc. owns 11.2% of common stock, The Vanguard Group, 10.2%, BlackRock, Inc., 7.9%, Renaissance Technologies, LLC, 7.1%, officers & directors, 1.4% (4/20 Proxy). Had 872 employees at 12/31/19. Executive Chairman & Chief Executive Officer: D. James Bidzos. Inc.: Delaware. Address: 12061 Bluemont Way, Reston, Virginia 20190. Telephone: 703-948-3200. Internet: investor.verisign.com/investor-relations.

Shares of VeriSign have staged an impressive rally in recent times. As this Issue went to press, the stock had regained nearly all of the ground lost during the first-quarter selloff that resulted from the spread of the coronavirus. The company reported fairly solid results for the March quarter. Revenue of $313 million marked an increase of 2%, on a year-over-year basis. Earnings per share clocked in at $1.42, a gain of around 5%. Our bottom-line presentation for the March period excludes $168 million ($1.44 per share) of previously unrecognized income tax benefits. The company finished the March period with 160.7 million .com and net registrations in the domain name base, a 3.8% year-to-year gain. During the period, VeriSign processed 10.0 million new domain name registrations for .com and .net, compared with 9.8 million in the year-ago quarter.

The company has agreed with the Internet Corporation for Assigned Names and Numbers (ICANN) to another amendment to the .com Registry Agreement. This will allow VeriSign to increase the price of .com domain name registrations by up to 7% over the previous year, in each of the final four years of the term of the agreement. However, due to the current coronavirus pandemic, the company plans to freeze registry prices for all of its Top-Level Domains through the end of 2020.

This stock is ranked to outperform the broader market averages for the coming six to 12 months. Subscribers with a short time horizon may want to take a closer look. VeriSign earns good marks for Price Stability, Growth Persistence, and Earnings Predictability. That said, the equity's expensive valuation increases investment risk, especially in light of the likelihood that considerable macroeconomic weakness will constrain the company's performance in the coming quarters. We do anticipate healthy growth in sales and earnings at VeriSign from 2021 onward. However, this appears to be largely discounted by the recent quotation, as the shares presently trade within our Target Price Range. Patient investors may be best served to wait for a more-attractive entry point.

Michael Napoli, CFA *May 8, 2020*

(A) Diluted earnings. Excludes nonrecurring gains/losses: '05, 49¢; '07, ($1.22); '08, ($2.60); '09, 25¢; '10, $4.25; '11, 3¢; '12, 4¢; '13, $1.32; '14, (19¢); '17, (7¢). Next earnings report due late July. (B) In millions. (C) Includes intangibles. In 2019: $52.5 million, $0.45 per share. (D) Special cash dividends of $3.00 per share and $2.75 per share were paid on 12/20/10 and 5/18/11, respectively. (E) Totals may not sum due to rounding.

Company's Financial Strength	B++
Stock's Price Stability	85
Price Growth Persistence	90
Earnings Predictability	95

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WATERS CORP. NYSE-WAT

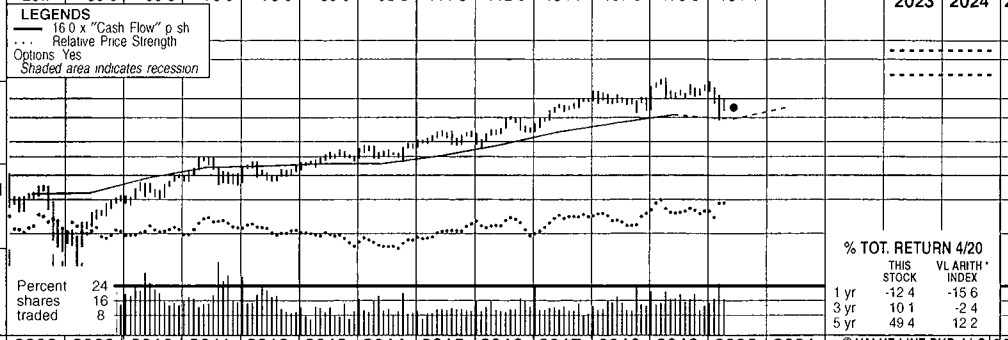
RECENT PRICE 180.43 | P/E RATIO 23.0 (Trailing: 22.2 Median: 21.0) | RELATIVE P/E RATIO 1.39 | DIV'D YLD Nil | VALUE LINE

TIMELINESS 2 Raised 4/24/20
SAFETY 2 Raised 5/27/11
TECHNICAL 3 Raised 5/8/20
BETA .90 (1.00 = Market)

High	63.1	81.0	100.0	94.5	108.9	117.7	137.4	162.5	202.0	220.2	255.2	245.7
Low	30.0	56.0	70.9	73.0	85.0	93.6	111.8	112.0	134.7	167.9	175.0	154.4

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 16.0 x "Cash Flow" p sh
. . . Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range
Low-High Midpoint (% to Mid)
$163-$292 $228 (25%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	355	(+95%)	19%
Low	265	(+45%)	10%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	228	210	227
to Sell	302	280	273
Hld's(000)	63846	62864	61683

Percent shares traded 24 16 8

% TOT. RETURN 4/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	-12.4	-15.6
3 yr	10.1	-2.4
5 yr	49.4	12.2

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
9.22	11.00	12.63	14.59	16.09	15.92	17.89	20.38	20.62	22.45	23.93	25.07	27.09	29.10	33.10	38.45	*34.45*	*36.90*	Sales per sh	*45.75*
2.21	2.61	2.77	3.18	4.00	4.04	4.84	5.50	5.58	5.76	5.75	6.31	7.16	8.38	9.34	10.32	*9.80*	*11.35*	"Cash Flow" per sh	*17.45*
1.81	1.99	2.25	2.62	3.25	3.34	4.06	4.69	5.19	5.20	5.07	5.65	6.41	7.49	8.05	8.69	*7.85*	*9.15*	Earnings per sh A	*14.80*
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*Nil*	*Nil*	Div'ds Decl'd per sh	*Nil*
.55	.48	.51	.60	.71	1.00	.68	.94	1.17	1.40	1.10	1.23	1.19	1.08	1.31	2.62	*1.60*	*1.65*	Cap'l Spending per sh	*2.00*
5.66	2.69	3.57	5.80	6.75	9.02	11.64	13.50	16.42	20.79	22.79	25.27	28.77	28.16	21.44	d3.46	*d5.30*	*4.35*	Book Value per sh B	*42.55*
119.84	105.34	101.37	100.98	97.89	94.12	91.85	90.83	89.39	84.82	83.15	81.47	80.02	79.34	73.12	62.59	*64.40*	*64.35*	Common Shs Outst'g C	*64.50*
23.5	21.1	19.6	24.3	17.7	14.4	16.7	17.9	16.0	18.8	21.1	22.3	21.7	23.2	24.4	25.4	*Bold figures are*		Avg Ann'l P/E Ratio	*21.0*
1.24	1.12	1.06	1.29	1.07	.96	1.06	1.12	1.02	1.06	1.11	1.12	1.14	1.17	1.32	1.37	*Value Line*		Relative P/E Ratio	*1.15*
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*estimates*		Avg Ann'l Div'd Yield	*Nil*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $1896.0 mill **Due in 5 Yrs** $1025.4 mill
LT Debt $1846.0 mill **LT Interest** $60.6 mill
(Total interest coverage: 17.6x) (122% of Capital)
Leases, Uncapitalized Annual rentals $29.5 mill
Pension Assets-12/19 $96.8 mill.
Oblig. $125.6 mill

Preferred Stock None

Common Stock 61,908,682 shs
as of 4/24/20

MARKET CAP: $11.2 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
1643.4	1851.2	1843.6	1904.2	1989.3	2042.3	2167.4	2309.1	2419.9	2406.6	*2220*	*2375*	Sales ($mill)	*2950*
31.8%	32.7%	30.9%	29.7%	28.9%	30.7%	31.2%	34.0%	33.0%	31.7%	*35.5%*	*39.5%*	Operating Margin	*39.5%*
62.6	66.4	37.4	38.2	46.4	45.3	51.7	61.5	58.0	53.8	*100*	*110*	Depreciation ($mill)	*130*
381.8	433.0	461.4	450.0	431.6	469.1	521.5	603.7	625.2	592.2	*530*	*620*	Net Profit ($mill)	*995*
12.8%	15.0%	5.4%	8.2%	12.0%	13.4%	13.1%	11.8%	14.5%	12.7%	*14.5%*	*14.5%*	Income Tax Rate	*14.5%*
23.2%	23.4%	25.0%	23.6%	21.7%	23.0%	24.1%	26.1%	25.8%	24.6%	*23.9%*	*26.1%*	Net Profit Margin	*33.7%*
1200.7	1340.2	1753.5	2068.8	2272.1	2649.4	3115.2	3663.9	2214.3	721.2	*705*	*735*	Working Cap'l ($mill)	*735*
700.0	700.0	1045.0	1190.0	1240.0	1493.0	1702.0	1897.5	1148.2	1580.8	*1895*	*1895*	Long-Term Debt ($mill)	*1720*
1068.8	1226.6	1467.4	1763.2	1894.7	2058.9	2301.9	2233.8	1567.3	d216.3	*d340*	*280*	Shr. Equity ($mill)	*2745*
21.9%	22.9%	18.6%	15.7%	14.2%	13.7%	13.6%	14.9%	23.9%	45.2%	*34.0%*	*28.5%*	Return on Total Cap'l	*22.5%*
35.7%	35.3%	31.4%	25.5%	22.8%	22.8%	22.7%	27.0%	39.9%	NMF	*NMF*	*NMF*	Return on Shr. Equity	*36.0%*
35.7%	35.3%	31.4%	25.5%	22.8%	22.8%	22.7%	27.0%	39.9%	NMF	*NMF*	*NMF*	Retained to Com Eq	*36.0%*
--	--	--	--	--	--	--	--	--	--	*Nil*	*Nil*	All Div'ds to Net Prof	*Nil*

CURRENT POSITION ($MILL.)	2018	2019	3/31/20
Cash Assets	1735.2	337.1	393.9
Receivables	568.3	587.7	522.2
Inventory	291.6	320.6	344.0
Other	68.1	67.1	67.7
Current Assets	2663.2	1312.5	1327.8
Accts Payable	68.1	49.0	61.1
Debt Due	2	100.4	50.0
Other	380.6	442.0	440.0
Current Liab	448.9	591.3	551.1

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	8.0%	8.5%	*4.5%*
"Cash Flow"	9.5%	10.5%	*5.5%*
Earnings	10.0%	9.5%	*6.0%*
Dividends	--	--	*Nil*
Book Value	8.0%	-5.0%	*7.5%*

Cal-endar	QUARTERLY SALES ($ mill.) Mar.Per	Jun.Per	Sep.Per	Dec.Per	Full Year
2017	498.0	558.2	565.6	687.3	2309.1
2018	530.7	596.2	578.0	715.0	2419.9
2019	513.9	599.2	577.3	716.2	2406.6
2020	464.9	*482*	*550*	*723.1*	*2220*
2021	*592*	*593*	*595*	*595*	*2375*

Cal-endar	EARNINGS PER SHARE A Mar.Per	Jun.Per	Sep.Per	Dec.Per	Full Year
2017	1.46	1.76	1.77	2.50	7.49
2018	1.59	1.95	1.92	2.59	8.05
2019	1.51	2.08	2.07	3.12	8.69
2020	1.15	*1.42*	*2.04*	*3.24*	*7.85*
2021	*1.83*	*2.20*	*2.20*	*2.92*	*9.15*

Cal-endar	QUARTERLY DIVIDENDS PAID Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016					
2017	NO CASH DIVIDENDS BEING PAID				
2018					
2019					
2020					

BUSINESS: Waters Corp. manufactures, distributes, and services high-performance and ultra-performance liquid chromatography (HPLC and UPLC) and mass spectrometry systems, chemistry consumables, and related products through its Waters division (88% of '19 sales) and thermal analysis, rheometry, and calorimetry instruments through its TA division (12%). HPLC and UPLC are used to identify and analyze the components of a variety of chemicals and materials. Acquired Thar Instruments 2/09. Vanguard, 11.8% of common stock; Massachussetts Financial Services Co., 9.1%; BlackRock, 8.3%; Off. & dir., 1.5% (4/20 proxy). Chm/Pres/CEO: Christopher J. O'Connell. Inc.: DE. Address: 34 Maple Street, Milford, MA 01757. Tel.: 508-482-2314. Internet: www.waters.com.

Waters Corporation posted lower-than-expected results for the first quarter. Net sales declined 9.5% year to year, primarily due to the impact of COVID-19 on its business in China. Government efforts there to contain the virus led to the lock-down of many customer facilities, leading to a significant reduction in demand. On a constant currency basis, sales to the company's Asian customers decreased 19% and were down 45% in China alone. It appears the most impacted were academic and governmental institutions, as worldwide sales to this market declined 22% to $49.0 million. We suspect the exclusion of Waters' engineering and technical sales teams from customer facilities contributed to the shortfall. While Instrument sales decreased 19%, to $176.9 million, total recurring revenue (comprising service and chemistry consumables) was down just 1%, indicating the usage of tools in the installed base had remained steady.

The timing of a recovery is uncertain. The conditions in China persisted through end of the quarter, though we suspect conditions have improved since. Moreover, as the quarter drew to a close, the virus spread to Waters' markets in the Americas and Europe. Measures to contain the virus are likely disrupting demand. Management has implemented $100 million in cost reductions, reducing executive payroll, suspending share repurchases and deferring capital spending. The company has withdrawn previous guidance but has described scenarios that could govern a recovery and return to growth in these regional markets. With this input, we lowered our 2020 sales and adjusted share-net estimates by $270 million and $1.95, respectively, to $2.22 billion and $7.85. We believe the return to growth will commence before yearend, enabling a mid-single digit top-line advance, to $2.38 billion in 2021, generating earnings per share of $9.15.

We rank Waters shares 2 (Above Average) for Timeliness. The stock has declined nearly 20% since our last report, roughly in line with the market averages. Moreover, appreciation potential is decent to 2023-2025, and well above average over the 18-month horizon.

Glenn Pierr Johnson *May 15, 2020*

(A) Diluted earnings. Excludes non-recurring gains (losses): '04, ($0.10); '05, ($0.25); '06, ($0.12); '08 ($0.04); '18 ($0.40). Figures may not sum due to rounding. Next earnings report due late July.
(B) Includes intangibles. In 2019: $596.3 mill., $9.53/sh
(C) In millions

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	80
Earnings Predictability	95

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WEST PHARM. NYSE-WST

RECENT PRICE **188.32** | P/E RATIO **NMF** (Trailing: NMF; Median: 31.0) | RELATIVE P/E RATIO **NMF** | DIV'D YLD **0.3%** | VALUE LINE

TIMELINESS **1** Raised 7/26/19
SAFETY **2** Raised 11/22/13
TECHNICAL **2** Raised 5/15/20
BETA 85 (1 00 = Market)

High	20 9	22 4	24 0	28 0	50 6	55 3	64 6	86 5	103 4	125 1	152 1	201 8
Low	13 9	16 4	17 8	18 7	27 3	39 1	48 7	53 9	78 0	82 7	93 1	124 5

18-Month Target Price Range
Low-High Midpoint (% to Mid)
$119-$186 $153 (-20%)

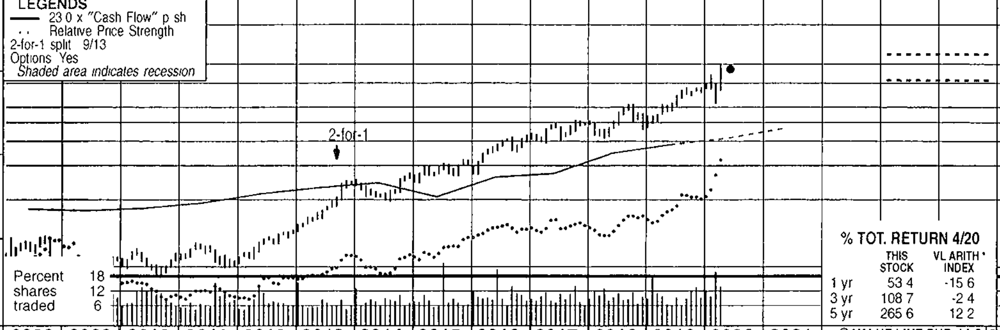
2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	225	(+20%)	5%
Low	165	(-10%)	-2%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	175	206	231
to Sell	163	165	182
Hld's(000)	67582	67131	67783

LEGENDS
—— 23 0 x "Cash Flow" p sh
. . Relative Price Strength
2-for-1 split 9/13
Options Yes
Shaded area indicates recession



% TOT. RETURN 4/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	53 4	-15 6
3 yr	108 7	-2 4
5 yr	265 6	12 2

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
10 00	11 98	13 88	15 79	16 07	16 00	16 59	17 69	19 02	19 44	19 91	19 36	20 64	21 64	23 18	24 83	*26.70*	*28.95*	Sales per sh	*39.45*
1.37	1.58	1 79	2 15	2.18	2 13	2.19	2 34	2.61	2 81	2 97	2 51	3 17	3 32	4 20	4 66	*5.05*	*5.70*	"Cash Flow" per sh	*7.75*
67	70	97	1 19	1 19	1 06	1 05	1 17	1 38	1 57	1 75	1 30	1 91	1 99	2 74	3 21	*3.55*	*4.00*	Earnings per sh A	*5.75*
22	23	25	27	29	31	33	35	37	39	41	46	50	54	58	62	*.64*	*.70*	Div'ds Decl'd per sh B■	*1.15*
1 06	93	1.37	2.00	2 12	1.59	1 07	1 42	1.97	2 16	1 68	1.82	2 33	1 77	1.41	1.71	*1 75*	*1.85*	Cap'l Spending per sh	*2.00*
5 56	5 71	6 30	7 51	7 45	8 77	9 39	9 72	10 94	12 88	13.40	14.16	15 29	17.32	18 84	21.23	*23.30*	*26.20*	Book Value per sh C	*35.20*
54 18	58 43	65 80	64 60	65 40	66 00	66 60	67 40	66 60	70 40	71 40	72.30	73 10	73.90	74 10	74.10	*73.00*	*72.50*	Common Shs Outst'g D	*71.00*
15 1	19 0	19 6	18.8	18.0	17.1	18 1	17 8	17 2	23 7	26 1	43 8	38 1	45 6	37 0	39 5	*Bold figures are*		Avg Ann'l P/E Ratio	*34.0*
80	1 01	1 06	1 00	1.08	1 14	1.15	1.12	1.09	1 33	1 37	2 21	2 00	2 29	2 00	2.14	*Value Line*		Relative P/E Ratio	*1.90*
2 1%	1 7%	1 3%	1.2%	1.4%	1 7%	1 7%	1 7%	1 6%	1 0%	9%	8%	7%	6%	6%	5%	*estimates*		Avg Ann'l Div'd Yield	*.8%*

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
1104.7	1192.3	1266 4	1368 4	1421 4	1399 8	1509 1	1599 1	1717 4	1839 9	*1950*	*2100*	Sales ($mill)	*2800*
16 1%	16 2%	16 8%	18 1%	18 8%	19 6%	20 7%	20 3%	20 2%	21 7%	*22.5%*	*23.0%*	Operating Margin	*24.0%*
73 2	75 7	76 9	85 2	84 8	86 1	88 1	94 3	104 4	103 4	*105*	*115*	Depreciation ($mill)	*140*
72.8	82.0	97 1	112 3	127 1	95 6	143 6	150 7	206 9	241 7	*265*	*300*	Net Profit ($mill)	*410*
22.8%	24.8%	27 3%	27 3%	27 9%	22 7%	28 7%	36 4%	17 2%	20 2%	*22.0%*	*22.5%*	Income Tax Rate	*23.0%*
6.6%	6.9%	7 7%	8 2%	8 9%	6 8%	9 5%	9 4%	12 0%	13.1%	*13.6%*	*14.3%*	Net Profit Margin	*14.6%*
266 9	228 8	295 5	413 8	406 8	359 4	400 9	464 0	610 7	717 1	*900*	*1150*	Working Cap'l ($mill)	*1600*
358 1	299 3	378 8	371 3	309 5	228 9	226 2	197 0	196 0	255 0	*200*	*175*	Long-Term Debt ($mill)	*125*
625 7	654.9	728.9	906 4	956 9	1023 9	1117 5	1279 9	1396 3	1573 2	*1700*	*1900*	Shr. Equity ($mill)	*2500*
8.3%	9 5%	9 5%	9 5%	10 7%	8 1%	11 0%	10 5%	13 3%	13.5%	*14.0%*	*14.5%*	Return on Total Cap'l	*15.5%*
11 6%	12 5%	13 3%	12 4%	13 3%	9 3%	12 9%	11 8%	14 8%	15 4%	*15.5%*	*16.0%*	Return on Shr. Equity	*16.5%*
8.2%	9 0%	9 9%	9 4%	10 2%	6 2%	9 6%	8 7%	11 8%	12 5%	*13.0%*	*13.0%*	Retained to Com Eq	*13.0%*
30%	28%	26%	24%	23%	34%	25%	26%	20%	19%	*18%*	*17%*	All Div'ds to Net Prof	*20%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $256.7 mill **Due in 5 Yrs** $90 0 mill
LT Debt $254 4 mill **LT Interest** $8 0 mill
(15% of Cap'l)

Leases, Uncapitalized Annual rentals $12.1 mill

Pension Assets-12/19 $244 1 mill **Oblig.** $287 9 mill

Pfd Stock None
Common Stock 73,602,233 shares

MARKET CAP. $13.9 billion (Large Cap)

CURRENT POSITION ($MILL.)	2018	2019	3/31/20
Cash Assets	337 4	439 1	335 3
Receivables	288 2	319 3	333 0
Inventory (LIFO)	214 5	235 7	251 0
Other	54.3	64 6	58 2
Current Assets	894 4	1058 7	977 5
Accts Payable	130 4	156 8	157 9
Debt Due	1	2 3	2 3
Other	153 2	182 5	184 2
Current Liab.	283 7	341 6	344.4

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Sales	4 0%	3 5%	*9 0%*
"Cash Flow"	6.5%	7 5%	*12.0%*
Earnings	9 0%	11 0%	*14 0%*
Dividends	7 0%	8.5%	*12 0%*
Book Value	9 0%	9 0%	*11 0%*

Calendar	QUARTERLY SALES ($ mill.) Mar.Per	Jun.Per	Sep.Per	Dec.31	Full Year
2017	387.7	397.6	398 2	415 6	1599 1
2018	415.7	447.5	431.7	422 5	1717 4
2019	443 5	469.7	456 1	470 6	1839 9
2020	491 5	*490*	*475*	*493.5*	*1950*
2021	*500*	*525*	*525*	*550*	*2100*

Calendar	EARNINGS PER SHARE A Mar.Per	Jun.Per	Sep.Per	Dec.31	Full Year
2017	80	51	67	01	1 99
2018	58	75	73	69	2 74
2019	73	88	75	84	3 21
2020	99	*.89*	*.82*	*.85*	*3.55*
2021	*1.05*	*1.00*	*.95*	*1.00*	*4.00*

Calendar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	12	12	12	13	49
2017	.13	.13	13	14	.53
2018	14	14	14	15	57
2019	.15	15	15	16	61
2020	16	16			

BUSINESS: West Pharmaceutical Services manufactures systems and component parts (stoppers, seals, syringe components) used in the delivery of injectible drugs Also supplies packaging and delivery system components to food processors and makers of personal care products. Its West Monarch Analytical Labs division provides testing services that help drug companies meet closure/packaging regulatory guidelines. Foreign sales 55 7% of '19 total; R&D 2 1% Has about 8,200 employees Officers & directors own about 1 6% of common, BlackRock, 11 0%, Vanguard, 10 1%, T Rowe Price, 9 2% (3/20 Proxy) President & CEO Eric M Green Inc PA Address 530 Herman O West Drive, Exton, PA 19341 Telephone 610-594-2900 Internet www westpharma com

Shares of West Pharmaceutical have been on a wild ride since our February report. They tumbled roughly 25% in value shortly after the release of our review on initial fears of the coronvirus. However, the stock has since rallied handsomely, recouping those losses on its way to setting a new high-water mark as it became clear that the company could actually benefit from an increased need for its services going forward.

First-quarter results probably helped boost investor sentiment. Both the top and bottom lines came in ahead of expectations. Sales increased 10.8% during the period, thanks to double-digit gains at both the Proprietary Products and Contract-Manufactured Products segments. Meanwhile, earnings tallied $0.99 a share, 36% higher than the year-earlier mark and ahead of consensus estimates.

Guidance seemed to hit the spot, too. Management said that it expects to earn between $3.52 and $3.62 a share for all of 2020, up $0 07 at both ends of its previous range. Organic sales growth is pegged to be about 8% (the high end of its earlier 7%-8% range), despite an expected $26 million currency headwind. In this vein, we've upped our expectations, now looking for earnings to increase 11%, to $3.55 a share, on a near-6% top-line advance. Demand for West's products should remain healthy, if not gain further momentum during the global coronavirus pandemic.

We see earnings hitting the $4.00-a-share mark next year and being in the $5.75-a-share neighborhood by 2023-2025. Demand should remain strong, benefiting from favorable demographic trends. Plus, we believe that management will be able to better control costs and expand the operating margin.

This stock is richly valued, but is ranked 1 (Highest) for Timeliness and may well interest momentum accounts. That said, it loses some luster from a longer-term perspective. To wit, the recent run-up in price discounts a healthy portion of the longer-term gains we envision, and these shares already trade firmly in the middle of our 2023-2025 Target Price Range. Additionally, 18-month prospects are unfavorable

Andre J. Costanza *May 15, 2020*

(A) Diluted earnings Excl nonrec gains/(losses) '04, (12¢), '05, (6¢), '07, (16¢), '08, 6¢, '09, 01¢, and '10, (11¢), GAAP as of 2015. Next earnings report due late July
(B) Dividends historically paid early Feb, May, Aug , and Nov ■ Dividend reinvestment plan available (C) Incl. intangibles On 12/31/19 $137 6 mill , $1 86/share (D) In millions, adjusted for splits

Company's Financial Strength	A
Stock's Price Stability	90
Price Growth Persistence	95
Earnings Predictability	55

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WESTERN UNION NYSE-WU

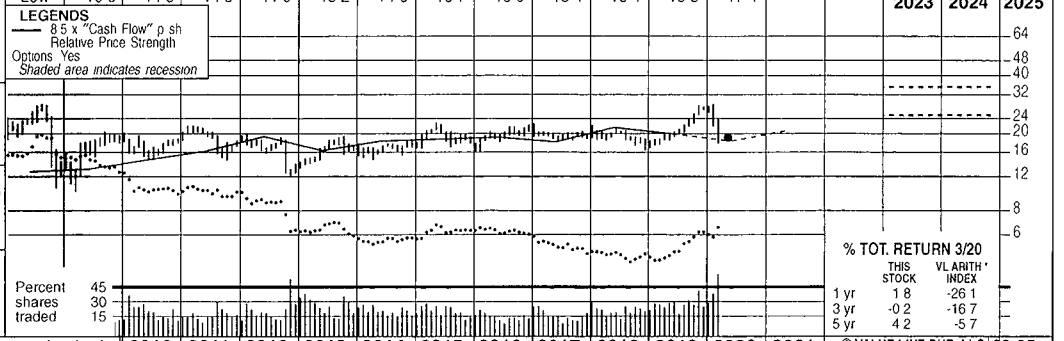
RECENT PRICE 19.13 | P/E RATIO 13.1 (Trailing: 11.2 Median: 12.0) | RELATIVE P/E RATIO 0.81 | DIV'D YLD 4.7% | VALUE LINE

TIMELINESS 3 Raised 9/28/18
SAFETY 3 New 11/24/06
TECHNICAL 1 Raised 5/1/20
BETA .95 (1.00 = Market)

High	20.6	20.3	22.0	19.8	19.5	18.7	22.8	22.3	22.7	22.2	28.0	28.5
Low	10.0	14.6	14.5	11.9	13.2	14.6	16.7	16.0	18.4	16.4	16.8	17.4

Target Price Range 2023 | 2024 | 2025

LEGENDS
— 8.5 x "Cash Flow" p sh
Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$19-$31	$25 (30%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	35	(+85%)	20%
Low	25	(+30%)	11%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	207	236	280
to Sell	276	246	248
Hld's(000)	460556	462348	469676

% TOT. RETURN 3/20

	THIS STOCK	VL ARITH.* INDEX
1 yr	1.8	-26.1
3 yr	-0.2	-16.7
5 yr	4.2	-5.7

The Western Union Company, a leader in global money transfer processes and services was spunoff in a 100% tax-free offering to the shareholders of First Data Corp. on September 29, 2006. Approximately 765 million shares of common stock were distributed

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
7.94	8.87	9.90	10.04	10.75	10.92	11.26	12.04	12.67	12.66	**11.80**	**13.15**	Revenues per sh	**15.70**
1.72	1.91	2.28	1.92	2.16	2.21	2.26	2.14	2.53	2.35	**2.15**	**2.45**	"Cash Flow" per sh	**3.15**
1.42	1.57	1.74	1.43	1.59	1.62	1.66	1.60	1.87	1.71	**1.50**	**1.75**	Earnings per sh A	**2.35**
.25	.31	.43	.50	.50	.62	.64	.70	.76	.80	**.90**	**.94**	Div'ds Decl'd per sh D	**1.06**
.08	.09	.11	.15	.13	.19	.14	.15	.31	.12	**.15**	**.20**	Cap'l Spending per sh	**.25**
8.89	1.44	1.64	2.00	2.49	2.80	1.87	d1.07	d.70	d.09	**.05**	**.15**	Book Value per sh B	**.30**
654.00	619.40	572.10	552.20	521.50	502.40	481.50	459.00	441.20	418.00	**415.00**	**400.00**	Common Shs Outst'g C	**360.00**
12.0	12.1	9.7	11.5	10.5	12.0	11.8	12.3	10.4	12.5	*Bold figures are*		Avg Ann'l P/E Ratio	**12.0**
.76	.76	.62	.65	.55	.60	.62	.62	.56	.68	*Value Line*		Relative P/E Ratio	**.65**
1.5%	1.6%	2.5%	3.0%	3.0%	3.2%	3.3%	3.6%	3.9%	3.7%	*estimates*		Avg Ann'l Div'd Yield	**3.8%**
5192.7	5491.4	5664.8	5542.0	5607.2	5483.7	5422.9	5524.3	5589.9	5292.1	**4900**	**5250**	Revenues ($mill)	**5660**
29.4%	29.6%	28.6%	24.7%	25.2%	25.4%	24.3%	21.7%	24.8%	24.7%	**22.0%**	**23.0%**	Operating Margin	**25.0%**
175.9	192.6	246.1	262.8	271.9	270.2	263.2	262.9	264.7	257.7	**260**	**265**	Depreciation ($mill)	**280**
949.9	992.7	1056.6	798.4	852.4	837.8	824.2	718.0	851.9	724.6	**625**	**715**	Net Profit ($mill)	**860**
20.5%	24.9%	12.8%	13.9%	12.0%	11.0%	9.7%	11.5%	14.1%	20.4%	**16.0%**	**16.0%**	Income Tax Rate	**16.0%**
18.3%	18.1%	18.7%	14.4%	15.2%	15.3%	15.2%	13.0%	15.2%	13.7%	**12.8%**	**13.6%**	Net Profit Margin	**15.2%**
1280.4	533.5	1002.0	1217.3	609.8	308.6	d618.4	d1185	645.5	d465.8	**d350**	**d300**	Working Cap'l ($mill)	**d300**
3289.9	3583.2	4029.2	4213.0	3720.4	3225.6	2786.1	3033.6	3308.7	3229.3	**3300**	**3400**	Long-Term Debt ($mill)	**3600**
582.7	894.8	940.6	1104.7	1300.4	1404.9	902.2	d491.4	d309.8	d39.5	**25.0**	**50.0**	Shr. Equity ($mill) B	**100**
26.7%	24.2%	23.1%	16.9%	18.7%	19.9%	24.4%	31.0%	30.9%	27.2%	**19.0%**	**21.0%**	Return on Total Cap'l	**23.0%**
NMF	NMF	NMF	72.3%	65.5%	59.6%	91.4%	NMF	NMF	NMF	**NMF**	**NMF**	Return on Shr. Equity	**NMF**
NMF	NMF	NMF	47.2%	45.2%	37.1%	56.8%	NMF	NMF	NMF	**NMF**	**NMF**	Retained to Com Eq	**NMF**
17%	20%	24%	35%	31%	38%	38%	45%	40%	47%	**60%**	**54%**	All Div'ds to Net Prof	**45%**

CAPITAL STRUCTURE as of 12/31/19
Total Debt $3229.3 mill. Due in 5 Yrs $2000 mill.
LT Debt $3229.3 mill. LT Interest $150 mill.
(Total interest coverage: 6.7x)
(NMF of Cap'l)

Leases, Uncapitalized Annual rentals $44.1 mill.

Pension Assets 12/19 $237.1 mill.
Oblig. $248.5 mill.

Common Stock 418,000,000 shares

MARKET CAP: $8.0 billion (Large Cap)

CURRENT POSITION ($MILL.)	2017	2018	12/31/19
Cash Assets	838.2	973.4	1450.5
Receivables	--	--	--
Inventory	--	--	--
Other	4188.9	3813.8	3296.7
Current Assets	5027.1	4787.2	4747.2
Accts Payable	718.5	564.9	601.9
Debt Due	--	--	--
Other	4188.9	4867.8	4316.4
Current Liab.	4907.4	5432.7	4918.3

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	5.5%	4.0%	6.5%
"Cash Flow"	5.0%	2.0%	5.5%
Earnings	3.5%	1.5%	5.0%
Dividends	32.0%	9.5%	13.5%
Book Value	--	--	18.0%

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1302	1379	1405	1438	5524.3
2018	1389	1411	1388	1401	5589.9
2019	1337	1340	1307	1308	5292.1
2020	**1250**	**1100**	**1250**	**1300**	**4900**
2021	**1300**	**1300**	**1325**	**1325**	**5250**

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.33	.35	.51	.41	1.60
2018	.46	.47	.46	.48	1.87
2019	.39	.45	.49	.38	1.71
2020	**.37**	**.30**	**.41**	**.42**	**1.50**
2021	**.42**	**.43**	**.45**	**.45**	**1.75**

Cal-endar	QUARTERLY DIVIDENDS PAID D Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.160	.160	.160	.160	.64
2017	.175	.175	.175	.175	.70
2018	.190	.190	.190	.190	.76
2019	.200	.200	.200	.200	.80
2020	.225				

BUSINESS: The Western Union Company is a leader in global money movement and payment services. Services are available through a global network of roughly 510,000 agent locations in more than 200 countries. About 90% of locations are outside of the United States. Spunoff from First Data Corp. on 9/29/06. Consumer segment accounted for about 83% of '19 revenues, Business Solutions, 7%, other, 10%. International consisted of 62% of revenues. Employs 11,500. President & CEO: Hikmet Ersek. Chairman: Jack Greenberg. BlackRock owns 13.8% of common stock, Vanguard, 12.6%, FMR LLC, 7.5% (4/20 proxy). Incorporated: DE. Address: 7001 East Belleview Avenue, Denver, Colorado 80237. Telephone: 866-405-5012. Internet: www.westernunion.com.

Western Union has withdrawn its full-year 2020 outlook due to the coronavirus pandemic. The company—which was scheduled to report first-quarter results shortly after this Issue went to press—said the spread of COVID-19 started to have a significant impact on its business by late March. That seemed to coincide with the strict social distancing measures that many governments around the world have implemented to combat the disease. Such policies have resulted in sharply lower consumer activity across many of Western Union's core markets. The company also had to close most of its agent locations to comply with the rules.

We are lowering our estimates and projections to reflect what will likely be a challenging time for Western Union and many other businesses. COVID-19 and the measures taken to combat it may well spark a global recession, with the severity to be determined by the duration of the virus. Accordingly, we are reducing our 2020 top- and bottom-line estimates by $410 million and $0.50 a share, respectively, to $4.9 billion and $1.50. Although visibility remains low, we believe the current quarter is likely to be the weakest (our models suggest an 18% sales decline and a 33% drop in share earnings.) Assuming the world can get a handle on COVID-19, a gradual recovery should take place by the second half of 2020, followed by a more pronounced bounceback in 2021.

Meanwhile, the dividend was raised in the first quarter. This is the usual timing of the annual increase. The board of directors boosted the disbursement by $0.025 a share (12.5%) quarterly.

Western Union has continued to expand its digital offerings during the pandemic. Indeed, the company now offers digital money transfer services to over 75 countries, and has partnered with some of the largest financial institutions in the world to expand its addressable market.

These shares may appeal to income-oriented investors. At 4.7%, the dividend yield sits well above the *Value Line* median. Apart from that, the stock doesn't offer much Capital appreciation potential to 2023-2025 is below average, while the issue is neutrally ranked for year-ahead price performance (Timeliness: 3).

Daniel Henigson, CFA *May 8, 2020*

(A) Diluted earnings. Next earnings report due early August. Excludes nonrecurring gains/(losses): '10, (6¢); '11, 27¢, '12, (5¢), '16 ($d1.16), '17 (d$2.85), '19, 75¢.
(B) Includes intangibles. In 2019: $3061.5 million, $7.32 a share.
(C) In millions.
(D) Quarterly dividend initiated '09, Q4. '11, Q3 dividend paid during Q4. Dividends typically paid late March, June, September, and December.

Company's Financial Strength	B+
Stock's Price Stability	90
Price Growth Persistence	25
Earnings Predictability	90

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Size Study

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High-financial-risk Study

Mouse over any element of the equation to change inputs

MY SCENARIO

See full data tables

$$K = 3.00\% + 0.60 \times RP_m + -0.28\%$$

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$$K_e = 3.00\% + 0.60 \times RP_m + 0.50\%$$

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Size Study

Risk Premium Report Study

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$$K = 3.00\% + 0.60 \times RP_m + 0.73\%$$

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$$K = 3.00\% + 0.60 \times RP_m + 0.79\%$$

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K_e = 3.00% + 0.60 × RP_m + 1.10%

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Estimate 2020 Size Deciles

STEP 1 STEP 3 STEP 4

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$$K = 3.00\% + 0.60 \times RP_m + 1.34\%$$

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Estimate 2020 Size Deciles

STEP 1 STEP STEP 3 STEP 4

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Size Study

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$$K_e = 3.00\% + 0.60 \times RP_m + 1.47\%$$

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STEP 1 STEP 2 STEP 3 STEP 4

CRSP Deciles Size Study

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$$K = 3.00\% + 0.60 \times RP_m + 1.59\%$$

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Estimate 2020 Size Deciles

STEP 1 STEP 2 STEP 3 STEP 4

Size Study

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Risk Premium Report Study

High-financial-risk Study

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MY SCENARIO

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$$K = 3.00\% + 0.60 \times RP_m + 2.22\%$$

Previous

Estimate 2020 Size Deciles

STEP 1 STEP 3 STEP 4

Risk Premium Report Study

High-financial-risk Study

Build up

Mouse over any element of the equation to change inputs

MY SCENARIO

See full data tables

$$K = 3.00\% + 0.60 \times RP_m + 4.99\%$$

Previous

SOUTHWESTERN ELECTRIC POWER COMPANY
Detailed Statement of Income
For the Test Year Ended March 31, 2020

Line No	(1) Description	(2) Account No	(3) Total Company March 31, 2020	(4) A-3 1 SWEPCo Payroll	(5) A-3 2 SWEPCo Annual Incentive	(6) A-3 3 SWEPCo Long Term Incentive Plan	(7) A-3 4 Depreciation Expense	(8) A-3 5 Factoring Expense	(9) A-3 6 Misc Rider	(10) A-3 7 Retired Unit O&M Costs	(11) A-3 8 Amort Adjustment	(12) A-3 9 Credit Line Fee Expense
1	REVENUES											
2	Base Revenues											
3	Residential Sales-W/Space Htg	4400001	111,631,522	0	0	0	0	0	0	0	0	0
4	Residential Sales-W/O Space Ht	4400002	337,316,645	0	0	0	0	0	0	0	0	0
5	Commercial Sales	4420001	247,392,445	0	0	0	0	0	0	0	0	0
6	Industrial Sales (Excl Mines)	4420002	185,763,374	0	0	0	0	0	0	0	0	0
7	Sales to Pub Auth - Schools	4420006	6,955,066	0	0	0	0	0	0	0	0	0
8	Sales to Pub Auth - Ex Schools	4420007	58,666,117	0	0	0	0	0	0	0	0	0
9	Public Street/Highway Lighting	4440000	6,501,338	0	0	0	0	0	0	0	0	0
10	Whsal/Muni/Pub Auth Base Rev	4470033	69,114,855	0	0	0	0	0	0	0	0	0
12	Transm Rev -Dedic Whlsl/Muni	4470150	3,858,464	0	0	0	0	0	0	0	0	0
13	Total Base Revenues		1,027,199,826	0	0	0	0	0	0	0	0	0
14	Fuel Revenues											
15	Residential Fuel Rev	4400005	185,484,707	0	0	0	0	0	0	0	0	0
16	Residential O/U Fuel Rev	4400006	(7,352,852)	0	0	0	0	0	0	0	0	0
17	Res Dolet Hills O/U Fuel Rev	4400007	0	0	0	0	0	0	0	0	0	0
18	Commercial Fuel Rev	4420013	171,591,353	0	0	0	0	0	0	0	0	0
19	Commercial O/U Fuel Rev	4420014	(6,692,276)	0	0	0	0	0	0	0	0	0
20	Comm Dolet Hills O/U Fuel Rev	4420015	0	0	0	0	0	0	0	0	0	0
21	Industrial Fuel Rev	4420016	156,680,345	0	0	0	0	0	0	0	0	0
22	Industrial O/U Fuel Rev	4420017	(8,153,109)	0	0	0	0	0	0	0	0	0
23	Ind Dolet Hills O/U Fuel Rev	4420018	0	0	0	0	0	0	0	0	0	0
24	Public St & Hwy Light Fuel Rev	4440002	2,363,160	0	0	0	0	0	0	0	0	0
25	Pb St & Hwy Light O/U Fuel Rev	4440003	(82,270)	0	0	0	0	0	0	0	0	0
26	Pb St&HwyLt-Dolet O/U Fuel Rev	4440004	0	0	0	0	0	0	0	0	0	0
27	Whsal/Muni/Pb Ath Fuel Rev	4470027	64,877,887	0	0	0	0	0	0	0	0	0
28	Total Fuel Revenues		558,716 946	0	0	0	0	0	0	0	0	0
29	Miscellaneous Revenues											
30	Sales for Resale - Assoc Cos	4470001	(17,551)	0	0	0	0	0	0	0	0	0
31	Sales for Resale - NonAssoc	4470002	(620,054)	0	0	0	0	0	0	0	0	0
32	Sales for Resale-Bookout Sales	4470006	1 555,282	0	0	0	0	0	0	0	0	0
33	Sales for Resale-Bookout Purch	4470010	(1,422,903)	0	0	0	0	0	0	0	0	0
34	Sale/Resale - NA - Fuel Rev	4470028	30,517,197	0	0	0	0	0	0	0	0	0
35	Sales for Resale - ERCOT	4470030	0	0	0	0	0	0	0	0	0	0
36	Capacity Revenue - Affiliated	4470032	0	0	0	0	0	0	0	0	0	0
37	Sls for Rsl - Fuel Rev - Assoc	4470035	0	0	0	0	0	0	0	0	0	0
38	Sales for Resale- Fuel - ERCOT	4470036	766,621	0	0	0	0	0	0	0	0	0
39	Financial Spark Gas - Realized	4470081	0	0	0	0	0	0	0	0	0	0
40	Financial Electric Realized	4470082	0	0	0	0	0	0	0	0	0	0
41	Non-Trading Bookout Sales-OSS	4470112	0	0	0	0	0	0	0	0	0	0
42	Non-Trading Bookout Purch-OSS	4470131	(22 177)	0	0	0	0	0	0	0	0	0
43	Sls for Rsle-Fuel-ERCOT-NonDed	4470133	0	0	0	0	0	0	0	0	0	0
44	SPP Load Imbalance Ded-Sales	4470135	0	0	0	0	0	0	0	0	0	0
45	SPP Rev Neutrality Ded-Sales	4470136	524,021	0	0	0	0	0	0	0	0	0
46	SPP Resource Imb Ded-Sales	4470142	0	0	0	0	0	0	0	0	0	0
47	Realiz Sharing - 06 SIA	4470144	0	0	0	0	0	0	0	0	0	0
48	Sls for Res (Trdg) ERCOT area	4470148	0	0	0	0	0	0	0	0	0	0
49	Pur Power Trading Ercot Affil	4470151	0	0	0	0	0	0	0	0	0	0
50	OSS Physical Margin Reclass	4470155	0	0	0	0	0	0	0	0	0	0
51	OSS Optim Margin Reclass	4470156	0	0	0	0	0	0	0	0	0	0

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SOUTHWESTERN ELECTRIC POWER COMPANY
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Line No	(1) Description	(2) Account No	(13) A-3 10 Pension Expense	(14) A-3 11 SFAS 106 Expense	(15) A-3 12 SFAS 112 Expense	(16) A-3 13 Other Taxes	(17) A-3 14 Advertising, Due Contributions Memberships	(10) A-3 15 USWAG Membrshp Dues	(19) A-3 16 Catastrophe Reserve/ Storm O&M	(21) A-3 17 IPP System Upgrade Interest	(22) A-3 18 AEPSC Adjustment	(23) A-3 19 Regulatory Expense	(24) A-3 20 Vegetation Management
1	REVENUES												
2	Base Revenues												
3	Residential Sales-W/Space Htg	4400001	0	0	0	0	0	0	0	0	0	0	0
4	Residential Sales-W/O Space Ht	4400002	0	0	0	0	0	0	0	0	0	0	0
5	Commercial Sales	4420001	0	0	0	0	0	0	0	0	0	0	0
6	Industrial Sales (Excl Mines)	4420002	0	0	0	0	0	0	0	0	0	0	0
7	Sales to Pub Auth - Schools	4420006	0	0	0	0	0	0	0	0	0	0	0
8	Sales to Pub Auth - Ex Schools	4420007	0	0	0	0	0	0	0	0	0	0	0
9	Public Street/Highway Lighting	4440000	0	0	0	0	0	0	0	0	0	0	0
10	Whsal/Muni/Pub Auth Base Rev	4470033	0	0	0	0	0	0	0	0	0	0	0
12	Transm Rev -Dedic Whlsl/Muni	4470150	0	0	0	0	0	0	0	0	0	0	0
13	Total Base Revenues		0	0	0	0	0	0	0	0	0	0	0
14	Fuel Revenues												
15	Residential Fuel Rev	4400005	0	0	0	0	0	0	0	0	0	0	0
16	Residential O/U Fuel Rev	4400006	0	0	0	0	0	0	0	0	0	0	0
17	Res Dolet Hills O/U Fuel Rev	4400007	0	0	0	0	0	0	0	0	0	0	0
18	Commercial Fuel Rev	4420013	0	0	0	0	0	0	0	0	0	0	0
19	Commercial O/U Fuel Rev	4420014	0	0	0	0	0	0	0	0	0	0	0
20	Comm Dolet Hills O/U Fuel Rev	4420015	0	0	0	0	0	0	0	0	0	0	0
21	Industrial Fuel Rev	4420016	0	0	0	0	0	0	0	0	0	0	0
22	Industrial O/U Fuel Rev	4420017	0	0	0	0	0	0	0	0	0	0	0
23	Ind Dolet Hills O/U Fuel Rev	4420018	0	0	0	0	0	0	0	0	0	0	0
24	Public St & Hwy Light Fuel Rev	4440002	0	0	0	0	0	0	0	0	0	0	0
25	Pb St & Hwy Light O/U Fuel Rev	4440003	0	0	0	0	0	0	0	0	0	0	0
26	Pb St&HwyLt-Dolet O/U Fuel Rev	4440004	0	0	0	0	0	0	0	0	0	0	0
27	Whsal/Muni/Pb Ath Fuel Rev	4470027	0	0	0	0	0	0	0	0	0	0	0
28	Total Fuel Revenues		0	0	0	0	0	0	0	0	0	0	0
29	Miscellaneous Revenues												
30	Sales for Resale - Assoc Cos	4470001	0	0	0	0	0	0	0	0	0	0	0
31	Sales for Resale - NonAssoc	4470002	0	0	0	0	0	0	0	0	0	0	0
32	Sales for Resale-Bookout Sales	4470006	0	0	0	0	0	0	0	0	0	0	0
33	Sales for Resale-Bookout Purch	4470010	0	0	0	0	0	0	0	0	0	0	0
34	Sale/Resale - NA - Fuel Rev	4470028	0	0	0	0	0	0	0	0	0	0	0
35	Sales for Resale - ERCOT	4470030	0	0	0	0	0	0	0	0	0	0	0
36	Capacity Revenue - Affiliated	4470032	0	0	0	0	0	0	0	0	0	0	0
37	Sls for Rsl - Fuel Rev - Assoc	4470035	0	0	0	0	0	0	0	0	0	0	0
38	Sales for Resale- Fuel - ERCOT	4470036	0	0	0	0	0	0	0	0	0	0	0
39	Financial Spark Gas - Realized	4470081	0	0	0	0	0	0	0	0	0	0	0
40	Financial Electric Realized	4470082	0	0	0	0	0	0	0	0	0	0	0
41	Non-Trading Bookout Sales-OSS	4470112	0	0	0	0	0	0	0	0	0	0	0
42	Non-Trading Bookout Purch-OSS	4470131	0	0	0	0	0	0	0	0	0	0	0
43	Sls for Rsle-Fuel-ERCOT-NonDed	4470133	0	0	0	0	0	0	0	0	0	0	0
44	SPP Load Imbalance Ded-Sales	4470135	0	0	0	0	0	0	0	0	0	0	0
45	SPP Rev Neutrality Ded-Sales	4470136	0	0	0	0	0	0	0	0	0	0	0
46	SPP Resource Imb Ded-Sales	4470142	0	0	0	0	0	0	0	0	0	0	0
47	Realiz Sharing - 06 SIA	4470144	0	0	0	0	0	0	0	0	0	0	0
48	Sls for Res (Trdg) ERCOT area	4470148	0	0	0	0	0	0	0	0	0	0	0
49	Pur Power Trading Ercot Affil	4470151	0	0	0	0	0	0	0	0	0	0	0
50	OSS Physical Margin Reclass	4470155	0	0	0	0	0	0	0	0	0	0	0
51	OSS Optim Margin Reclass	4470156	0	0	0	0	0	0	0	0	0	0	0

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SOUTHWESTERN ELECTRIC POWER COMPANY
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Line No	(1) Description	(2) Account No	(33) A-3 21 State Income Taxes	(26) A-3 22 Interest on Customer Deposits	(27) A-3 23 Federal Income Tax Adjustment	(28) A-3 24 Provision For Rate Refund	(34) A-3 25 Miscellaneous Expenses	(35) A-3 26 Revenue Adjustments	(36) A-3 27 Fuel Expense	(32) A-3 28 Miscellaneous Revenues	(38) Total Adjustments	(39) B-1 4 Post Test Year Adj
1	REVENUES											
2	Base Revenues											
3	Residential Sales-W/Space Htg	4400001	0	0	0	0	0	(53 980,011)	0	0	(53,980,011)	0
4	Residential Sales-W/O Space Ht	4400002	0	0	0	0	0	0	0	0	0	
5	Commercial Sales	4420001	0	0	0	0	0	0	0	0	0	
6	Industrial Sales (Excl Mines)	4420002	0	0	0	0	0	0	0	0	0	
7	Sales to Pub Auth - Schools	4420006	0	0	0	0	0	0	0	0	0	
8	Sales to Pub Auth - Ex Schools	4420007	0	0	0	0	0	0	0	0	0	
9	Public Street/Highway Lighting	4440000	0	0	0	0	0	0	0	0	0	
10	Whsal/Muni/Pub Auth Base Rev	4470033	0	0	0	0	0	(13,326,870)	0	0	(13,326,870)	
12	Transm Rev -Dedic Whlsl/Muni	4470150	0	0	0	0	0	0	0	0	0	
13	Total Base Revenues		0	0	0	0	0	(67,306,881)	0	0	(67,306 881)	0
14	Fuel Revenues											
15	Residential Fuel Rev	4400005	0	0	0	0	0	(185,484,707)	0	0	(185,484,707)	
16	Residential O/U Fuel Rev	4400006	0	0	0	0	0	7,352,852	0	0	7,352,852	
17	Res Dolet Hills O/U Fuel Rev	4400007	0	0	0	0	0	0	0	0	0	
18	Commercial Fuel Rev	4420013	0	0	0	0	0	(171,591,353)	0	0	(171 591,353)	
19	Commercial O/U Fuel Rev	4420014	0	0	0	0	0	6,692,276	0	0	6,692,276	
20	Comm Dolet Hills O/U Fuel Rev	4420015	0	0	0	0	0	0	0	0	0	
21	Industrial Fuel Rev	4420016	0	0	0	0	0	(156,680 345)	0	0	(156,680,345)	
22	Industrial O/U Fuel Rev	4420017	0	0	0	0	0	8,153 109	0	0	8,153 109	
23	Ind Dolet Hills O/U Fuel Rev	4420018	0	0	0	0	0	0	0	0	0	
24	Public St & Hwy Light Fuel Rev	4440002	0	0	0	0	0	(2,363,160)	0	0	(2 363,160)	
25	Pb St & Hwy Light O/U Fuel Rev	4440003	0	0	0	0	0	82,270	0	0	82,270	
26	Pb St&HwyLt-Dolet O/U Fuel Rev	4440004	0	0	0	0	0	0	0	0	0	
27	Whsal/Muni/Pb Ath Fuel Rev	4470027	0	0	0	0	0	(64,877,887)	0	0	(64,877,887)	
28	Total Fuel Revenues		0	0	0	0	0	(558,716,946)	0	0	(558,716,946)	0
29	Miscellaneous Revenues											
30	Sales for Resale - Assoc Cos	4470001	0	0	0	0	0	17,551	0	0	17,551	
31	Sales for Resale - NonAssoc	4470002	0	0	0	0	0	620,054	0	0	620,054	
32	Sales for Resale-Bookout Sales	4470006	0	0	0	0	0	(1,555,282)	0	0	(1,555,282)	
33	Sales for Resale-Bookout Purch	4470010	0	0	0	0	0	1,422,903	0	0	1,422,903	
34	Sale/Resale - NA - Fuel Rev	4470028	0	0	0	0	0	(30,517 197)	0	0	(30 517,197)	
35	Sales for Resale - ERCOT	4470030	0	0	0	0	0	0	0	0	0	
36	Capacity Revenue - Affiliated	4470032	0	0	0	0	0	0	0	0	0	
37	Sls for Rsl - Fuel Rev - Assoc	4470035	0	0	0	0	0	0	0	0	0	
38	Sales for Resale- Fuel - ERCOT	4470036	0	0	0	0	0	(766,621)	0	0	(766,621)	
39	Financial Spark Gas - Realized	4470081	0	0	0	0	0	0	0	0	0	
40	Financial Electric Realized	4470082	0	0	0	0	0	0	0	0	0	
41	Non-Trading Bookout Sales-OSS	4470112	0	0	0	0	0	0	0	0	0	
42	Non-Trading Bookout Purch-OSS	4470131	0	0	0	0	0	22,177	0	0	22,177	
43	Sls for Rsle-Fuel-ERCOT-NonDed	4470133	0	0	0	0	0	0	0	0	0	
44	SPP Load Imbalance Ded-Sales	4470135	0	0	0	0	0	0	0	0	0	
45	SPP Rev Neutrality Ded-Sales	4470136	0	0	0	0	0	(524,021)	0	0	(524,021)	
46	SPP Resource Imb Ded-Sales	4470142	0	0	0	0	0	0	0	0	0	
47	Realiz Sharing - 06 SIA	4470144	0	0	0	0	0	0	0	0	0	
48	Sls for Res (Trdg) ERCOT area	4470148	0	0	0	0	0	0	0	0	0	
49	Pur Power Trading Ercot Affil	4470151	0	0	0	0	0	0	0	0	0	
50	OSS Physical Margin Reclass	4470155	0	0	0	0	0	0	0	0	0	
51	OSS Optim Margin Reclass	4470156	0	0	0	0	0	0	0	0	0	

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SOUTHWESTERN ELECTRIC POWER COMPANY
Detailed Statement of Income
For the Test Year Ended March 31, 2020

Line No	(1) Description	(2) Account No	(40) Total Company Proforma Balance
1	REVENUES		
2	Base Revenues		
3	Residential Sales-W/Space Htg	4400001	57,651,511
4	Residential Sales-W/O Space Ht	4400002	337,316,645
5	Commercial Sales	4420001	247,392,445
6	Industrial Sales (Excl Mines)	4420002	185 763,374
7	Sales to Pub Auth - Schools	4420006	6,955,066
8	Sales to Pub Auth - Ex Schools	4420007	58,666,117
9	Public Street/Highway Lighting	4440000	6 501,338
10	Whsal/Muni/Pub Auth Base Rev	4470033	55 787,985
12	Transm Rev -Dedic Whlsl/Muni	4470150	3,858,464
13	Total Base Revenues		959 892,945
14	Fuel Revenues		
15	Residential Fuel Rev	4400005	0
16	Residential O/U Fuel Rev	4400006	(0)
17	Res Dolet Hills O/U Fuel Rev	4400007	0
18	Commercial Fuel Rev	4420013	0
19	Commercial O/U Fuel Rev	4420014	0
20	Comm Dolet Hills O/U Fuel Rev	4420015	0
21	Industrial Fuel Rev	4420016	0
22	Industrial O/U Fuel Rev	4420017	0
23	Ind Dolet Hills O/U Fuel Rev	4420018	0
24	Public St & Hwy Light Fuel Rev	4440002	(0)
25	Pb St & Hwy Light O/U Fuel Rev	4440003	(0)
26	Pb St&HwyLt-Dolet O/U Fuel Rev	4440004	0
27	Whsal/Muni/Pb Ath Fuel Rev	4470027	0
28	Total Fuel Revenues		0
29	Miscellaneous Revenues		
30	Sales for Resale - Assoc Cos	4470001	(0)
31	Sales for Resale - NonAssoc	4470002	(0)
32	Sales for Resale-Bookout Sales	4470006	0
33	Sales for Resale-Bookout Purch	4470010	0
34	Sale/Resale - NA - Fuel Rev	4470028	0
35	Sales for Resale - ERCOT	4470030	0
36	Capacity Revenue - Affiliated	4470032	0
37	Sls for Rsl - Fuel Rev - Assoc	4470035	0
38	Sales for Resale- Fuel - ERCOT	4470036	0
39	Financial Spark Gas - Realized	4470081	0
40	Financial Electric Realized	4470082	0
41	Non-Trading Bookout Sales-OSS	4470112	0
42	Non-Trading Bookout Purch-OSS	4470131	(0)
43	Sls for Rsle-Fuel-ERCOT-NonDed	4470133	0
44	SPP Load Imbalance Ded-Sales	4470135	0
45	SPP Rev Neutrality Ded-Sales	4470136	0
46	SPP Resource Imb Ded-Sales	4470142	0
47	Realiz Sharing - 06 SIA	4470144	0
48	Sls for Res (Trdg) ERCOT area	4470148	0
49	Pur Power Trading Ercot Affil	4470151	0
50	OSS Physical Margin Reclass	4470155	0
51	OSS Optim Margin Reclass	4470156	0

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Detailed Statement of Income
For the Test Year Ended March 31, 2020

Line No	(1) Description	(2) Account No	(3) Total Company March 31, 2020	(4) A-3 1 SWEPCo Payroll	(5) A-3 2 SWEPCo Annual Incentive	(6) A-3 3 SWEPCo Long Term Incentive Plan	(7) A-3 4 Depreciation Expense	(8) A-3 5 Factoring Expense	(9) A-3 6 Misc Rider	(10) A-3 7 Retired Unit O&M Costs	(11) A-3 8 Amort Adjustment	(12) A-3 9 Credit Line Fee Expense
52	Interest Rate Swaps-Power	4470168	0	0	0	0	0	0	0	0	0	0
53	OSS Sharing Reclass - Retail	4470175	9,183,522	0	0	0	0	0	0	0	0	0
54	OSS Sharing Reclass-Reduction	4470176	(9,183 522)	0	0	0	0	0	0	0	0	0
55	Merchant Fuel Revenue	4470219	10,270,580	0	0	0	0	0	0	0	0	0
56	Merchant Sales Margin	4470223	2,863,937	0	0	0	0	0	0	0	0	0
57	SPP Net Regulation OSS	4470320	2,031 657	0	0	0	0	0	0	0	0	0
58	SPP Net Spinning Reserve OSS	4470321	4,125,103	0	0	0	0	0	0	0	0	0
59	SPP Net Supp Reserve OSS	4470324	138,210	0	0	0	0	0	0	0	0	0
60	SPP Net Marginal Losses OSS	4470326	1 189 578	0	0	0	0	0	0	0	0	0
61	SPP Net Make Whole Payment OSS	4470328	623,603	0	0	0	0	0	0	0	0	0
62	SPP Congestion Costs OSS	4470332	2,808 674	0	0	0	0	0	0	0	0	0
63	Prov Rate Refund-Nonaffiliated	4491002	(24,534,148)	0	0	0	0	0	0	0	0	0
64	Prov Rate Refund - Retail	4491003	0	0	0	0	0	0	0	0	0	0
65	Prov Rate Refund - Affiliated	4491004	(25,134,067)	0	0	0	0	0	0	0	0	0
66	Prov Rate Refund-Exces Protect	4491019	(3,035,670)	0	0	0	0	0	0	0	0	0
67	Forfeited Discounts	4500000	4,580,410	0	0	0	0	0	0	0	0	0
68	Misc Service Rev - Nonaffil	4510001	1,797,133	0	0	0	0	0	0	0	0	0
69	Rent From Elect Property - Af	4540001	1,470,793	0	0	0	0	0	0	0	0	0
70	Rent From Elect Property-NAC	4540002	2 172,206	0	0	0	0	0	0	0	0	0
71	Rent From Elect Prop-ABD-Nonaf	4540004	48,329	0	0	0	0	0	0	0	0	0
72	Rent from Elec Prop-Pole Attch	4540005	5,908,473	0	0	0	0	0	0	0	0	0
73	Oth Elect Rev - DSM Program	4560007	0	0	0	0	0	0	0	0	0	0
74	Oth Elect Rev - Royalties	4560010	946,623	0	0	0	0	0	0	0	0	0
75	Oth Elect Rev - Nonaffiliated	4560012	1,622,464	0	0	0	0	0	0	0	0	0
76	Oth Elect Rev-Trans-Nonaffil	4560013	855,193	0	0	0	0	0	0	0	0	0
77	Other Electric Revenues - ABD	4560015	1,112,334	0	0	0	0	0	0	0	0	0
78	Financial Trading Rev-Unreal	4560016	0	0	0	0	0	0	0	0	0	0
79	Plant Operations O/H Revenues	4560025	2,867 189	0	0	0	0	0	0	0	0	0
80	DSM Security Deposit Revenues	4560038	0	0	0	0	0	0	0	0	0	0
81	Miscellaneous Revenue-NonAffil	4560041	0	0	0	0	0	0	0	0	0	0
82	Merch Generation Finan -Realzd	4560049	0	0	0	0	0	0	0	0	0	0
83	Oth Elec Rev-Coal Trd Rlzd G-L	4560050	0	0	0	0	0	0	0	0	0	0
84	Oth Elect Rev-Trans-ERCOT area	4560102	0	0	0	0	0	0	0	0	0	0
85	Interest Rate Swaps-Coal	4560109	0	0	0	0	0	0	0	0	0	0
86	SPP Non-Affil Base Fundng Rev	4561008	28 476,752	0	0	0	0	0	0	0	0	0
87	SPP Affil Base Funding Cost	4561009	(16,819,995)	0	0	0	0	0	0	0	0	0
88	SPP Affl Base Funding Rev	4561010	22,976,524	0	0	0	0	0	0	0	0	0
89	SPP Pt to Pt Trans Serv Rev	4561011	5,725,201	0	0	0	0	0	0	0	0	0
90	SPP Direct Assignment	4561012	1,254,603	0	0	0	0	0	0	0	0	0
91	SPP Affiliated NITS Revenue	4561013	82,547,540	0	0	0	0	0	0	0	0	0
92	SPP Ancillary Services	4561014	479,223	0	0	0	0	0	0	0	0	0
93	SPP Ancillary Schedule 1	4561015	362 833	0	0	0	0	0	0	0	0	0
94	SPP Affiliated Trans NITS Cost	4561016	(61,875,827)	0	0	0	0	0	0	0	0	0
95	Oth Elect Revenues - Ancillary	4561017	840	0	0	0	0	0	0	0	0	0
96	Oth Elec Rev Trans Non Affil	4561019	0	0	0	0	0	0	0	0	0	0
97	SPP NITS	4561021	27,962,012	0	0	0	0	0	0	0	0	0
98	SPP Pt to Pt Trans Affil Cost	4561038	0	0	0	0	0	0	0	0	0	0
99	SPP Pt to Pt Trans Affil Rev	4561039	0	0	0	0	0	0	0	0	0	0
100	Affil SPPAncillary Sch 1 Cost	4561040	(589,379)	0	0	0	0	0	0	0	0	0
101	Affil SPPAncillary Sch 1 Rev	4561041	772,680	0	0	0	0	0	0	0	0	0
102	SPP Base Funding - Contra	4561042	982,208	0	0	0	0	0	0	0	0	0
103	PROVISION RTO Cost - Affi	4561062	(1,019,310)	0	0	0	0	0	0	0	0	0
104	PROVISION RTO Rev Affiliated	4561063	1,349,664	0	0	0	0	0	0	0	0	0
105	PROVISION RTO Rev - NonAff	4561065	3,630,222	0	0	0	0	0	0	0	0	0

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SOUTHWESTERN ELECTRIC POWER COMPANY
Detailed Statement of Income
For the Test Year Ended March 31, 2020

Line No	(1) Description	(2) Account No	(13) A-3 10 Pension Expense	(14) A-3 11 SFAS 106 Expense	(15) A-3 12 SFAS 112 Expense	(16) A-3 13 Other Taxes	(17) A-3 14 Advertising, Due Contributions Memberships	(10) A-3 15 USWAG Membrshp Dues	(19) A-3 16 Catastrophe Reserve/ Storm O&M	(21) A-3 17 IPP System Upgrade Interest	(22) A-3 18 AEPSC Adjustment	(23) A-3 19 Regulatory Expense	(24) A-3 20 Vegetation Management
52	Interest Rate Swaps-Power	4470168	0	0	0	0	0	0	0	0	0	0	0
53	OSS Sharing Reclass - Retail	4470175	0	0	0	0	0	0	0	0	0	0	0
54	OSS Sharing Reclass-Reduction	4470176	0	0	0	0	0	0	0	0	0	0	0
55	Merchant Fuel Revenue	4470219	0	0	0	0	0	0	0	0	0	0	0
56	Merchant Sales Margin	4470223	0	0	0	0	0	0	0	0	0	0	0
57	SPP Net Regulation OSS	4470320	0	0	0	0	0	0	0	0	0	0	0
58	SPP Net Spinning Reserve OSS	4470321	0	0	0	0	0	0	0	0	0	0	0
59	SPP Net Supp Reserve OSS	4470324	0	0	0	0	0	0	0	0	0	0	0
60	SPP Net Marginal Losses OSS	4470326	0	0	0	0	0	0	0	0	0	0	0
61	SPP Net Make Whole Payment OSS	4470328	0	0	0	0	0	0	0	0	0	0	0
62	SPP Congestion Costs OSS	4470332	0	0	0	0	0	0	0	0	0	0	0
63	Prov Rate Refund-Nonaffiliated	4491002	0	0	0	0	0	0	0	0	0	0	0
64	Prov Rate Refund - Retail	4491003	0	0	0	0	0	0	0	0	0	0	0
65	Prov Rate Refund - Affiliated	4491004	0	0	0	0	0	0	0	0	0	0	0
66	Prov Rate Refund-Exces Protect	4491019	0	0	0	0	0	0	0	0	0	0	0
67	Forfeited Discounts	4500000	0	0	0	0	0	0	0	0	0	0	0
68	Misc Service Rev - Nonaffil	4510001	0	0	0	0	0	0	0	0	0	0	0
69	Rent From Elect Property - Af	4540001	0	0	0	0	0	0	0	0	0	0	0
70	Rent From Elect Property-NAC	4540002	0	0	0	0	0	0	0	0	0	0	0
71	Rent From Elect Prop-ABD-Nonaf	4540004	0	0	0	0	0	0	0	0	0	0	0
72	Rent from Elec Prop-Pole Attch	4540005	0	0	0	0	0	0	0	0	0	0	0
73	Oth Elect Rev - DSM Program	4560007	0	0	0	0	0	0	0	0	0	0	0
74	Oth Elect Rev - Royalties	4560010	0	0	0	0	0	0	0	0	0	0	0
75	Oth Elect Rev - Nonaffiliated	4560012	0	0	0	0	0	0	0	0	0	0	0
76	Oth Elect Rev-Trans-Nonaffil	4560013	0	0	0	0	0	0	0	0	0	0	0
77	Other Electric Revenues - ABD	4560015	0	0	0	0	0	0	0	0	0	0	0
78	Financial Trading Rev-Unreal	4560016	0	0	0	0	0	0	0	0	0	0	0
79	Plant Operations O/H Revenues	4560025	0	0	0	0	0	0	0	0	0	0	0
80	DSM Security Deposit Revenues	4560038	0	0	0	0	0	0	0	0	0	0	0
81	Miscellaneous Revenue-NonAffil	4560041	0	0	0	0	0	0	0	0	0	0	0
82	Merch Generation Finan -Realzd	4560049	0	0	0	0	0	0	0	0	0	0	0
83	Oth Elec Rev-Coal Trd Rlzd G-L	4560050	0	0	0	0	0	0	0	0	0	0	0
84	Oth Elect Rev-Trans-ERCOT area	4560102	0	0	0	0	0	0	0	0	0	0	0
85	Interest Rate Swaps-Coal	4560109	0	0	0	0	0	0	0	0	0	0	0
86	SPP Non-Affil Base Fundng Rev	4561008	0	0	0	0	0	0	0	0	0	0	0
87	SPP Affil Base Funding Cost	4561009	0	0	0	0	0	0	0	0	0	0	0
88	SPP Affl Base Funding Rev	4561010	0	0	0	0	0	0	0	0	0	0	0
89	SPP Pt to Pt Trans Serv Rev	4561011	0	0	0	0	0	0	0	0	0	0	0
90	SPP Direct Assignment	4561012	0	0	0	0	0	0	0	0	0	0	0
91	SPP Affiliated NITS Revenue	4561013	0	0	0	0	0	0	0	0	0	0	0
92	SPP Ancillary Services	4561014	0	0	0	0	0	0	0	0	0	0	0
93	SPP Ancillary Schedule 1	4561015	0	0	0	0	0	0	0	0	0	0	0
94	SPP Affiliated Trans NITS Cost	4561016	0	0	0	0	0	0	0	0	0	0	0
95	Oth Elect Revenues - Ancillary	4561017	0	0	0	0	0	0	0	0	0	0	0
96	Oth Elec Rev Trans Non Affil	4561019	0	0	0	0	0	0	0	0	0	0	0
97	SPP NITS	4561021	0	0	0	0	0	0	0	0	0	0	0
98	SPP Pt to Pt Trans Affil Cost	4561038	0	0	0	0	0	0	0	0	0	0	0
99	SPP Pt to Pt Trans Affil Rev	4561039	0	0	0	0	0	0	0	0	0	0	0
100	Affil SPPAncillary Sch 1 Cost	4561040	0	0	0	0	0	0	0	0	0	0	0
101	Affil SPPAncillary Sch 1 Rev	4561041	0	0	0	0	0	0	0	0	0	0	0
102	SPP Base Funding - Contra	4561042	0	0	0	0	0	0	0	0	0	0	0
103	PROVISION RTO Cost - Affi	4561062	0	0	0	0	0	0	0	0	0	0	0
104	PROVISION RTO Rev Affiliated	4561063	0	0	0	0	0	0	0	0	0	0	0
105	PROVISION RTO Rev - NonAff	4561065	0	0	0	0	0	0	0	0	0	0	0

Sponsored by Michael Baird

SOUTHWESTERN ELECTRIC POWER COMPANY
Detailed Statement of Income
For the Test Year Ended March 31, 2020

Line No	(1) Description	(2) Account No	(33) A-3 21 State Income Taxes	(26) A-3 22 Interest on Customer Deposits	(27) A-3 23 Federal Income Tax Adjustment	(28) A-3 24 Provision For Rate Refund	(34) A-3 25 Miscellaneous Expenses	(35) A-3 26 Revenue Adjustments	(36) A-3 27 Fuel Expense	(32) A-3 28 Miscellaneous Revenues	(38) Total Adjustments	(39) B-1 4 Post Test Year Adj
52	Interest Rate Swaps-Power	4470168	0	0	0	0	0	0	0	0	0	
53	OSS Sharing Reclass - Retail	4470175	0	0	0	0	0	(9,183,522)	0	0	(9,183,522)	
54	OSS Sharing Reclass-Reduction	4470176	0	0	0	0	0	9,183,522	0	0	9,183,522	
55	Merchant Fuel Revenue	4470219	0	0	0	0	0	(10,270,580)	0	0	(10,270,580)	
56	Merchant Sales Margin	4470223	0	0	0	0	0	(2 863,937)	0	0	(2,863,937)	
57	SPP Net Regulation OSS	4470320	0	0	0	0	0	(2,031,657)	0	0	(2,031,657)	
58	SPP Net Spinning Reserve OSS	4470321	0	0	0	0	0	(4,125,103)	0	0	(4,125,103)	
59	SPP Net Supp Reserve OSS	4470324	0	0	0	0	0	(138,210)	0	0	(138,210)	
60	SPP Net Marginal Losses OSS	4470326	0	0	0	0	0	(1,189,578)	0	0	(1,189,578)	
61	SPP Net Make Whole Payment OSS	4470328	0	0	0	0	0	(623,603)	0	0	(623,603)	
62	SPP Congestion Costs OSS	4470332	0	0	0	0	0	(2,808,674)	0	0	(2,808,674)	
63	Prov Rate Refund-Nonaffiliated	4491002	0	0	0	24,534,148	0	0	0	0	24,534,148	
64	Prov Rate Refund - Retail	4491003	0	0	0	0	0	0	0	0	0	
65	Prov Rate Refund - Affiliated	4491004	0	0	0	25,134,067	0	0	0	0	25,134,067	
66	Prov Rate Refund-Exces Protect	4491019	0	0	0	3,035,670	0	0	0	0	3,035,670	
67	Forfeited Discounts	4500000	0	0	0	0	0	0	0	0	0	
68	Misc Service Rev - Nonaffil	4510001	0	0	0	0	0	0	0	0	0	
69	Rent From Elect Property - Af	4540001	0	0	0	0	0	0	0	0	0	
70	Rent From Elect Property-NAC	4540002	0	0	0	0	0	0	0	0	0	
71	Rent From Elect Prop-ABD-Nonaf	4540004	0	0	0	0	0	0	0	0	0	
72	Rent from Elec Prop-Pole Attch	4540005	0	0	0	0	0	0	0	(3,494)	(3,494)	
73	Oth Elect Rev - DSM Program	4560007	0	0	0	0	0	0	0	0	0	
74	Oth Elect Rev - Royalties	4560010	0	0	0	0	0	0	0	0	0	
75	Oth Elect Rev - Nonaffiliated	4560012	0	0	0	0	0	0	0	0	0	
76	Oth Elect Rev-Trans-Nonaffil	4560013	0	0	0	0	0	0	0	0	0	
77	Other Electric Revenues - ABD	4560015	0	0	0	0	0	0	0	0	0	
78	Financial Trading Rev-Unreal	4560016	0	0	0	0	0	0	0	0	0	
79	Plant Operations O/H Revenues	4560025	0	0	0	0	0	0	0	0	0	
80	DSM Security Deposit Revenues	4560038	0	0	0	0	0	0	0	0	0	
81	Miscellaneous Revenue-NonAffil	4560041	0	0	0	0	0	0	0	0	0	
82	Merch Generation Finan -Realzd	4560049	0	0	0	0	0	0	0	0	0	
83	Oth Elec Rev-Coal Trd Rlzd G-L	4560050	0	0	0	0	0	0	0	0	0	
84	Oth Elect Rev-Trans-ERCOT area	4560102	0	0	0	0	0	0	0	0	0	
85	Interest Rate Swaps-Coal	4560109	0	0	0	0	0	0	0	0	0	
86	SPP Non-Affil Base Fundng Rev	4561008	0	0	0	0	0	0	0	(1,030,186)	(1,030,186)	
87	SPP Affil Base Funding Cost	4561009	0	0	0	0	0	0	0	16,819,995	16,819,995	
88	SPP Affl Base Funding Rev	4561010	0	0	0	0	0	0	0	(743,449)	(743,449)	
89	SPP Pt to Pt Trans Serv Rev	4561011	0	0	0	0	0	0	0	(218 591)	(218 591)	
90	SPP Direct Assignment	4561012	0	0	0	0	0	0	0	0	0	
91	SPP Affiliated NITS Revenue	4561013	0	0	0	0	0	0	0	(2,003,979)	(2,003 979)	
92	SPP Ancillary Services	4561014	0	0	0	0	0	0	0	0	0	
93	SPP Ancillary Schedule 1	4561015	0	0	0	0	0	0	0	0	0	
94	SPP Affiliated Trans NITS Cost	4561016	0	0	0	0	0	0	0	61,875,827	61,875,827	
95	Oth Elect Revenues - Ancillary	4561017	0	0	0	0	0	0	0	0	0	
96	Oth Elec Rev Trans Non Affil	4561019	0	0	0	0	0	0	0	0	0	
97	SPP NITS	4561021	0	0	0	0	0	0	0	(656,660)	(656,660)	
98	SPP Pt to Pt Trans Affil Cost	4561038	0	0	0	0	0	0	0	0	0	
99	SPP Pt to Pt Trans Affil Rev	4561039	0	0	0	0	0	0	0	0	0	
100	Affil SPPAncillary Sch 1 Cost	4561040	0	0	0	0	0	0	0	589,379	589,379	
101	Affil SPPAncillary Sch 1 Rev	4561041	0	0	0	0	0	0	0	0	0	
102	SPP Base Funding - Contra	4561042	0	0	0	0	0	0	0	0	0	
103	PROVISION RTO Cost - Affi	4561062	0	0	0	0	0	0	0	0	0	
104	PROVISION RTO Rev Affiliated	4561063	0	0	0	0	0	0	0	(449 888)	(449,888)	
105	PROVISION RTO Rev - NonAff	4561065	0	0	0	0	0	0	0	(592 002)	(592,002)	

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SOUTHWESTERN ELECTRIC POWER COMPANY
Detailed Statement of Income
For the Test Year Ended March 31, 2020

Line No	(1) Description	(2) Account No	(40) Total Company Proforma Balance
52	Interest Rate Swaps-Power	4470168	0
53	OSS Sharing Reclass - Retail	4470175	(0)
54	OSS Sharing Reclass-Reduction	4470176	0
55	Merchant Fuel Revenue	4470219	0
56	Merchant Sales Margin	4470223	0
57	SPP Net Regulation OSS	4470320	(0)
58	SPP Net Spinning Reserve OSS	4470321	0
59	SPP Net Supp Reserve OSS	4470324	(0)
60	SPP Net Marginal Losses OSS	4470326	0
61	SPP Net Make Whole Payment OSS	4470328	0
62	SPP Congestion Costs OSS	4470332	0
63	Prov Rate Refund-Nonaffiliated	4491002	0
64	Prov Rate Refund - Retail	4491003	0
65	Prov Rate Refund - Affiliated	4491004	0
66	Prov Rate Refund-Exces Protect	4491019	(0)
67	Forfeited Discounts	4500000	4,580,410
68	Misc Service Rev - Nonaffil	4510001	1,797,133
69	Rent From Elect Property - Af	4540001	1,470,793
70	Rent From Elect Property-NAC	4540002	2 172,206
71	Rent From Elect Prop-ABD-Nonaf	4540004	48,329
72	Rent from Elec Prop-Pole Attch	4540005	5,904,979
73	Oth Elect Rev - DSM Program	4560007	0
74	Oth Elect Rev - Royalties	4560010	946,623
75	Oth Elect Rev - Nonaffiliated	4560012	1 622,464
76	Oth Elect Rev-Trans-Nonaffil	4560013	855,193
77	Other Electric Revenues - ABD	4560015	1,112,334
78	Financial Trading Rev-Unreal	4560016	0
79	Plant Operations O/H Revenues	4560025	2,867,189
80	DSM Security Deposit Revenues	4560038	0
81	Miscellaneous Revenue-NonAffil	4560041	0
82	Merch Generation Finan -Realzd	4560049	0
83	Oth Elec Rev-Coal Trd Rlzd G-L	4560050	0
84	Oth Elect Rev-Trans-ERCOT area	4560102	0
85	Interest Rate Swaps-Coal	4560109	0
86	SPP Non-Affil Base Fundng Rev	4561008	27,446,566
87	SPP Affil Base Funding Cost	4561009	0
88	SPP Affl Base Funding Rev	4561010	22,233,075
89	SPP Pt to Pt Trans Serv Rev	4561011	5,506,610
90	SPP Direct Assignment	4561012	1,254,603
91	SPP Affiliated NITS Revenue	4561013	80,543,561
92	SPP Ancillary Services	4561014	479,223
93	SPP Ancillary Schedule 1	4561015	362,833
94	SPP Affiliated Trans NITS Cost	4561016	0
95	Oth Elect Revenues - Ancillary	4561017	840
96	Oth Elec Rev Trans Non Affil	4561019	0
97	SPP NITS	4561021	27 305,352
98	SPP Pt to Pt Trans Affil Cost	4561038	0
99	SPP Pt to Pt Trans Affil Rev	4561039	0
100	Affil SPPAncillary Sch 1 Cost	4561040	0
101	Affil SPPAncillary Sch 1 Rev	4561041	772,680
102	SPP Base Funding - Contra	4561042	982,208
103	PROVISION RTO Cost - Affi	4561062	(1,019,310)
104	PROVISION RTO Rev Affiliated	4561063	899,776
105	PROVISION RTO Rev - NonAff	4561065	3,038,220

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SOUTHWESTERN ELECTRIC POWER COMPANY
Detailed Statement of Income
For the Test Year Ended March 31, 2020

Line No	(1) Description	(2) Account No	(3) Total Company March 31, 2020	(4) A-3 1 SWEPCo Payroll	(5) A-3 2 SWEPCo Annual Incentive	(6) A-3 3 SWEPCo Long Term Incentive Plan	(7) A-3 4 Depreciation Expense	(8) A-3 5 Factoring Expense	(9) A-3 6 Misc Rider	(10) A-3 7 Retired Unit O&M Costs	(11) A-3 8 Amort Adjustment	(12) A-3 9 Credit Line Fee Expense
106	PROVISION RTO Rev-Affil NoElim	4561073	2,293 575	0	0	0	0	0	0	0	0	0
107	Total Miscellaneous Revenues		124,518,406	0	0	0	0	0	0	0	0	0
108	Required Adjustment for Rate Filing		0	0	0	0	0	0	0	0	0	0
109	Total Electric Operating Revenues		1 710 435,177	0	0	0	0	0	0	0	0	0
110	Production Expense - Steam Generation											
111	Operations											
112	Operation supervision and engineering	5000	21,645,237	151,922	(372,466)	(18,437)	0	0	0	(45,086)	0	0
113	Fuel Reconcilable	5010	399,631 093	1,460	(5 903)	(256)	0	0	0	0	0	0
114	Fuel Non Reconcilable	5010	0	0	0	0	0	0	0	0	0	0
115	Steam Expenses	5020	19,098 323	197,578	(700,194)	(29,594)	0	0	0	(127,644)	0	0
116	Electric expenses	5050	10,576 275	205,071	(599,134)	(26,157)	0	0	0	(112,471)	0	0
117	Miscellaneous steam power expenses	5060	16,480,428	91,619	1,235,465	(4,800)	0	0	0	(21,000)	0	0
118	Rents	5070	3,339	0	0	0	0	0	0	0	0	0
119	Operations supplies and expenses	5080	0	0	0	0	0	0	0	0	0	0
120	Allowance Expense	5090	333,862	0	0	0	0	0	0	0	0	0
121	Total Operation		467,768,557	647,651	(442,232)	(79 243)	0	0	0	(306,201)	0	0
122	Maintenance											
123	Maintenance supervision and engineering	5100	5,221,988	113,178	(300,773)	(12,761)	0	0	0	(74,032)	0	0
124	Maintenance of structures	5110	5,930,496	23,959	(67,427)	(2,903)	0	0	0	(29,747)	0	0
125	Maintenance of boiler plant	5120	36,899,429	236,109	(697,665)	(30,352)	0	0	0	(151,667)	0	0
126	Maintenance of electric plant	5130	8,232,373	50 366	(179,340)	(7,256)	0	0	0	(23,423)	0	0
127	Maintenance of misc steam plant	5140/ 5170-535	7,151,128	53,217	(133,311)	(6,183)	0	0	0	(12,621)	0	0
128	Total Maintenance		63,435,414	476,830	(1,378,517)	(59,456)	0	0	0	(291,490)	0	0
129	Total Production Expense - Steam		531,203,971	1,124,481	(1,820,749)	(138,699)	0	0	0	(597,691)	0	0
130	Other Power Generation											
131	Operation											
132	Operation supervision and engineering	70/5390/5450/5	4,833	0	0	0	0	0	0	(518)	0	0
133	Fuel	5470	10,520,437	0	0	0	0	0	0	0	0	0
134	Generation expenses	5480	257,827	5,944	(16,555)	(756)	0	0	0	0	0	0
135	Misc other power generation expenses	5490	6,031	0	0	0	0	0	0	0	0	0
136	Underground Storage Expenses	8140	53	0	0	0	0	0	0	0	0	0
137	Total Operation		10,789,181	5,944	(16,555)	(756)	0	0	0	(518)	0	0

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SOUTHWESTERN ELECTRIC POWER COMPANY
Detailed Statement of Income
For the Test Year Ended March 31, 2020

Line No	(1) Description	(2) Account No	(13) A-3 10 Pension Expense	(14) A-3 11 SFAS 106 Expense	(15) A-3 12 SFAS 112 Expense	(16) A-3 13 Other Taxes	(17) A-3 14 Advertising, Due Contributions Memberships	(10) A-3 15 USWAG Membrshp Dues	(19) A-3 16 Catastrophe Reserve/ Storm O&M	(21) A-3 17 IPP System Upgrade Interest	(22) A-3 18 AEPSC Adjustment	(23) A-3 19 Regulatory Expense	(24) A-3 20 Vegetation Management
106	PROVISION RTO Rev-Affil NoElim	4561073	0	0	0	0	0	0	0	0	0	0	0
107	Total Miscellaneous Revenues		0	0	0	0	0	0	0	0	0	0	0
108	Required Adjustment for Rate Filing		0	0	0	0	0	0	0	0	0	0	0
109	Total Electric Operating Revenues		0	0	0	0	0	0	0	0	0	0	0
110	Production Expense - Steam Generation												
111	Operations												
112	Operation supervision and engineering	5000	0	0	0	0	0	0	0	0	(1,014 687)	0	0
113	Fuel Reconcilable	5010	0	0	0	0	0	0	0	0	(42 056)	0	0
114	Fuel Non Reconcilable	5010	0	0	0	0	0	0	0	0	0	0	0
115	Steam Expenses	5020	0	0	0	0	0	0	0	0	(11 832)	0	0
116	Electric expenses	5050	0	0	0	0	0	0	0	0	(131)	0	0
117	Miscellaneous steam power expenses	5060	0	0	0	0	(120)	(489)	0	0	768 648	0	0
118	Rents	5070	0	0	0	0	0	0	0	0	0	0	0
119	Operations supplies and expenses	5080	0	0	0	0	0	0	0	0	0	0	0
120	Allowance Expense	5090	0	0	0	0	0	0	0	0	0	0	0
121	Total Operation		0	0	0	0	(120)	(489)	0	0	(300,058)	0	0
122	Maintenance												
123	Maintenance supervision and engineering	5100	0	0	0	0	0	0	0	0	(90,149)	0	0
124	Maintenance of structures	5110	0	0	0	0	0	0	0	0	(16,940)	0	0
125	Maintenance of boiler plant	5120	0	0	0	0	0	0	0	0	(124,963)	0	0
126	Maintenance of electric plant	5130	0	0	0	0	0	0	0	0	(32,366)	0	0
127	Maintenance of misc steam plant	5140/ 5170-535	0	0	0	0	(25)	0	0	0	(54,752)	0	0
128	Total Maintenance		0	0	0	0	(25)	0	0	0	(319,169)	0	0
129	Total Production Expense - Steam		0	0	0	0	(145)	(489)	0	0	(619,227)	0	0
130	Other Power Generation												
131	Operation												
132	Operation supervision and engineering	70/5390/5450/5	0	0	0	0	0	0	0	0	(8,192)	0	0
133	Fuel	5470	0	0	0	0	0	0	0	0	0	0	0
134	Generation expenses	5480	0	0	0	0	0	0	0	0	0	0	0
135	Misc other power generation expenses	5490	0	0	0	0	0	0	0	0	0	0	0
136	Underground Storage Expenses	8140	0	0	0	0	0	0	0	0	0	0	0
137	Total Operation		0	0	0	0	0	0	0	0	(8,192)	0	0

Sponsored by Michael Baird

SOUTHWESTERN ELECTRIC POWER COMPANY
Detailed Statement of Income
For the Test Year Ended March 31 2020

Line No	(1) Description	(2) Account No	(33) A-3 21 State Income Taxes	(26) A-3 22 Interest on Customer Deposits	(27) A-3 23 Federal Income Tax Adjustment	(28) A-3 24 Provision For Rate Refund	(34) A-3 25 Miscellaneous Expenses	(35) A-3 26 Revenue Adjustments	(36) A-3 27 Fuel Expense	(32) A-3 28 Miscellaneous Revenues	(38) Total Adjustments	(39) B-1 4 Post Test Year Adj
106	PROVISION RTO Rev-Affil NoElim	4561073	0	0	0	0	0	0	0	0	0	
107	Total Miscellaneous Revenues		0	0	0	52,703,884	0	(55,331,777)	0	73,586,953	70,959,061	0
108	Required Adjustment for Rate Filing		0	0	0	0	0	0	0	0	0	
109	Total Electric Operating Revenues		0	0	0	52,703 884	0	(681,355,604)	0	73,586,953	(555,064,766)	0
110	Production Expense - Steam Generation											
111	Operations											
112	Operation supervision and engineering	5000	0	0	0	0	(352)	0	0	0	(1,299 105)	
113	Fuel Reconcilable	5010	0	0	0	0	0	0	(399,631,093)	0	(399 677,847)	
114	Fuel Non Reconcilable	5010	0	0	0	0	0	0	17 146 304	0	17,146,304	
115	Steam Expenses	5020	0	0	0	0	(1,174)	0	(7,539,937)	0	(8,212,796)	
116	Electric expenses	5050	0	0	0	0	0	0	0	0	(532,822)	
117	Miscellaneous steam power expenses	5060	0	0	0	0	(44,531)	0	0	0	2,024,792	
118	Rents	5070	0	0	0	0	0	0	0	0	0	
119	Operations supplies and expenses	5080	0	0	0	0	0	0	0	0	0	
120	Allowance Expense	5090	0	0	0	0	0	0	(41,727)	0	(41,727)	
121	Total Operation		0	0	0	0	(46,057)	0	(390,066,452)	0	(390,593,201)	0
122	Maintenance											
123	Maintenance supervision and engineering	5100	0	0	0	0	(2,884)	0	0	0	(367,421)	
124	Maintenance of structures	5110	0	0	0	0	(6,310)	0	0	0	(99,368)	
125	Maintenance of boiler plant	5120	0	0	0	0	(528)	0	0	0	(769,067)	
126	Maintenance of electric plant	5130	0	0	0	0	0	0	0	0	(192,019)	
127	Maintenance of misc steam plant	5140/ 5170-535	0	0	0	0	(10,481)	0	0	0	(164,156)	
128	Total Maintenance		0	0	0	0	(20,203)	0	0	0	(1,592,030)	0
129	Total Production Expense - Steam		0	0	0	0	(66,260)	0	(390,066,452)	0	(392,185,231)	0
130	Other Power Generation											
131	Operation											
132	Operation supervision and engineering	70/5390/5450/5	0	0	0	0	0	0	0	0	(8,710)	
133	Fuel	5470	0	0	0	0	0	0	(10,520,437)	0	(10,520,437)	
134	Generation expenses	5480	0	0	0	0	0	0	0	0	(11,367)	
135	Misc other power generation expenses	5490	0	0	0	0	0	0	0	0	0	
136	Underground Storage Expenses	8140	0	0	0	0	(53)	0	0	0	(53)	
137	Total Operation		0	0	0	0	(53)	0	(10,520,437)	0	(10,540,566)	0

Sponsored by Michael Baird

SOUTHWESTERN ELECTRIC POWER COMPANY
Detailed Statement of Income
For the Test Year Ended March 31, 2020

Line No	(1) Description	(2) Account No	(40) Total Company Proforma Balance
106	PROVISION RTO Rev-Affil NoElim	4561073	2,293,575
107	Total Miscellaneous Revenues		195,477,466
108	Required Adjustment for Rate Filing		0
109	Total Electric Operating Revenues		1 155 370,411
110	Production Expense - Steam Generation		
111	Operations		
112	Operation supervision and engineering	5000	20,346,132
113	Fuel Reconcilable	5010	(46,754)
114	Fuel Non Reconcilable	5010	17 146,304
115	Steam Expenses	5020	10 885,527
116	Electric expenses	5050	10,043,453
117	Miscellaneous steam power expenses	5060	18,505,220
118	Rents	5070	3 339
119	Operations supplies and expenses	5080	0
120	Allowance Expense	5090	292,135
121	Total Operation		77,175,357
122	Maintenance		
123	Maintenance supervision and engineering	5100	4,854,567
124	Maintenance of structures	5110	5,831,128
125	Maintenance of boiler plant	5120	36,130,362
126	Maintenance of electric plant	5130	8 040,354
127	Maintenance of misc steam plant	5140/ 5170-535	6,986,972
128	Total Maintenance		61,843,384
129	Total Production Expense - Steam		139,018,740
130	Other Power Generation		
131	Operation		
132	Operation supervision and engineering	70/5390/5450/5	(3,877)
133	Fuel	5470	(0)
134	Generation expenses	5480	246,461
135	Misc other power generation expenses	5490	6,031
136	Underground Storage Expenses	8140	0
137	Total Operation		248,615

Sponsored by Michael Baird

SOUTHWESTERN ELECTRIC POWER COMPANY
Detailed Statement of Income
For the Test Year Ended March 31, 2020

Line No	(1) Description	(2) Account No	(3) Total Company March 31, 2020	(4) A-3 1 SWEPCo Payroll	(5) A-3 2 SWEPCo Annual Incentive	(6) A-3 3 SWEPCo Long Term Incentive Plan	(7) A-3 4 Depreciation Expense	(8) A-3 5 Factoring Expense	(9) A-3 6 Misc Rider	(10) A-3 7 Retired Unit O&M Costs	(11) A-3 8 Amort Adjustment	(12) A-3 9 Credit Line Fee Expense
138	Maintenance											
139	Maint Supv & Engineering	5510	(35)	0	0	0	0	0	0	0	0	0
140	Maintenance of structures	5420/5440/5520/5430	961	66	(298)	(8)	0	0	0	0	0	0
141	Maintenance of generating and elec plant	5530	827,970	9,008	(24,602)	(1,061)	0	0	0	0	0	0
142	Maint of Misc other power gen plant	5540	81,759	0	0	0	0	0	0	0	0	0
143	Total Maintenance		910,655	9,074	(24,900)	(1,069)	0	0	0	0	0	0
144	Total Production Expense - Other		11,699,836	15,019	(41,455)	(1,825)	0	0	0	(518)	0	0
145	Other Power Supply Expenses											
146	Purchased power and power exchange	5550	207 609,120	0	0	0	0	0	0	0	0	0
147	System control and load dispatching	5560	1,494,472	0	0	0	0	0	0	0	0	0
148	Other Production Expense	5570	1,822,709	0	0	0	0	0	0	0	0	0
149	Total other power supply expenses		210,926,301	0	0	0	0	0	0	0	0	0
150	Total Power Production Expenses		753,830,108	1,139,499	(1,862,204)	(140,524)	0	0	0	(598,209)	0	0
151	TRANSMISSION EXPENSES											
152	Operation											
153	Operation supervision and engineer	5600	10 546,443	41,888	(130,309)	(1,148)	0	0	0	(11,343)	0	0
154	Load dispatch - reliability	5611	0	0	0	0	0	0	0	0	0	0
155	Load dispatch - monitor and operate trans sys	5612	1,073,774	20	(67)	(1)	0	0	0	0	0	0
156	Load dispatch - trans service and scheduling	5613	417	0	0	0	0	0	0	0	0	0
157	Scheduling, system control and disatch services	5614	11,545,148	0	0	0	0	0	0	0	0	0
158	Reliability planning and standards development	5615	251,831	0	0	0	0	0	0	0	0	0
159	Reliability planning and standards devel services	5618	914,530	0	0	0	0	0	0	0	0	0
160	Station expenses	5620	1,235 007	6,985	(28 430)	(245)	0	0	0	0	0	0
161	Overhead line expenses	5630	430,199	588	(1 033)	(23)	0	0	0	0	0	0
162	Underground line expenses	5640	1 573	0	0	0	0	0	0	0	0	0
163	Transmission of electricity by others	5650	73,241,705	0	0	0	0	0	0	0	0	0
164	Miscellaneous transmission expenses	5660	2,924,908	8,531	273,078	(106)	0	0	0	0	0	0
165	Rents	5670	25,508	0	0	0	0	0	0	0	0	0
166	SPP Admin-MAM&SC	5757	2,366,891	0	0	0	0	0	0	0	0	0
167	Total operation		104,557,934	58,012	113,240	(1,522)	0	0	0	(11 343)	0	0
168	Maintenance											
169	Maintenance supervision and engineering	5680	15,702	93	(187)	(3)	0	0	0	0	0	0
170	Maintenance of structures	5690	36,341	137	(341)	(1)	0	0	0	0	0	0
171	Maintenance of computer hardware	5691	9 937	0	0	0	0	0	0	0	0	0
172	Maintenance of computer software	5692	642,128	0	0	0	0	0	0	0	0	0
173	Maintenance of computer equipment	5693	56,944	0	0	0	0	0	0	0	0	0
174	Maintenance of station equipment	5700	2,651,013	29,198	(86 504)	(1,268)	0	0	0	0	0	0
175	Maintenance of overhead lines	5710	14,533,315	10,523	(33,512)	(407)	0	0	0	0	0	0
176	Maintenance of Underground Lines	5720	11 239	0	0	0	0	0	0	0	0	0
177	Maintenance of Miscellaneous Transmission Plant	5730	85,869	0	0	0	0	0	0	0	0	0
178	Total Maintenance		18,042,487	39,951	(120,545)	(1,678)	0	0	0	0	0	0
179	Total Transmission Expenses		122,600,421	97,963	(7,305)	(3,201)	0	0	0	(11,343)	0	0
180	DISTRIBUTION EXPENSES											
181	Operation											
182	Operation supervision and engineer	5800	2 632,859	18,876	(80,902)	(6,707)	0	0	0	0	0	0
183	Load dispatching	5810	62,781	0	0	0	0	0	0	0	0	0

Sponsored by Michael Baird

SOUTHWESTERN ELECTRIC POWER COMPANY
Detailed Statement of Income
For the Test Year Ended March 31 2020

Line No	(1) Description	(2) Account No	(13) A-3 10 Pension Expense	(14) A-3 11 SFAS 106 Expense	(15) A-3 12 SFAS 112 Expense	(16) A-3 13 Other Taxes	(17) A-3 14 Advertising, Due Contributions Memberships	(10) A-3 15 USWAG Membrshp Dues	(19) A-3 16 Catastrophe Reserve/ Storm O&M	(21) A-3 17 IPP System Upgrade Interest	(22) A-3 18 AEPSC Adjustment	(23) A-3 19 Regulatory Expense	(24) A-3 20 Vegetation Management
138	Maintenance												
139	Maint Supv & Engineering	5510	0	0	0	0	0	0	0	0	2	0	0
140	Maintenance of structures	5420/5440/5520/5430	0	0	0	0	0	0	0	0	300	0	0
141	Maintenance of generating and elec plant	5530	0	0	0	0	0	0	0	0	(745)	0	0
142	Maint of Misc other power gen plant	5540	0	0	0	0	0	0	0	0	0	0	0
143	Total Maintenance		0	0	0	0	0	0	0	0	(443)	0	0
144	Total Production Expense - Other		0	0	0	0	0	0	0	0	(8,634)	0	0
145	Other Power Supply Expenses												
146	Purchased power and power exchange	5550	0	0	0	0	0	0	0	0	0	0	0
147	System control and load dispatching	5560	0	0	0	0	0	0	0	0	(103,460)	0	0
148	Other Production Expense	5570	0	0	0	0	0	0	0	0	(225,109)	0	0
149	Total other power supply expenses		0	0	0	0	0	0	0	0	(328,569)	0	0
150	Total Power Production Expenses		0	0	0	0	(145)	(489)	0	0	(956,430)	0	0
151	TRANSMISSION EXPENSES												
152	Operation												
153	Operation supervision and engineer	5600	0	0	0	0	0	0	0	0	(463,195)	0	0
154	Load dispatch - reliability	5611	0	0	0	0	0	0	0	0		0	0
155	Load dispatch - monitor and operate trans sys	5612	0	0	0	0	0	0	0	0	(43,787)	0	0
156	Load dispatch - trans service and scheduling	5613	0	0	0	0	0	0	0	0		0	0
157	Scheduling, system control and disatch services	5614	0	0	0	0	0	0	0	0		0	0
158	Reliability planning and standards development	5615	0	0	0	0	0	0	0	0	(9,586)	0	0
159	Reliability planning and standards devel services	5618	0	0	0	0	0	0	0	0		0	0
160	Station expenses	5620	0	0	0	0	0	0	0	0	(1,086)	0	0
161	Overhead line expenses	5630	0	0	0	0	0	0	0	0	(1,112)	0	0
162	Underground line expenses	5640	0	0	0	0	0	0	0	0	19	0	0
163	Transmission of electricity by others	5650	0	0	0	0	0	0	0	0		0	0
164	Miscellaneous transmission expenses	5660	0	0	0	0	0	0	0	373,615	(200,014)	0	0
165	Rents	5670	0	0	0	0	0	0	0	0	(1)	0	0
166	SPP Admin-MAM&SC	5757	0	0	0	0	0	0	0	0	0	0	0
167	Total operation		0	0	0	0	0	0	0	373,615	(718,762)	0	0
168	Maintenance												
169	Maintenance supervision and engineering	5680	0	0	0	0	0	0	0	0	(767)	0	0
170	Maintenance of structures	5690	0	0	0	0	0	0	0	0	11	0	0
171	Maintenance of computer hardware	5691	0	0	0	0	0	0	0	0	(312)	0	0
172	Maintenance of computer software	5692	0	0	0	0	0	0	0	0	(5,624)	0	0
173	Maintenance of computer equipment	5693	0	0	0	0	0	0	0	0		0	0
174	Maintenance of station equipment	5700	0	0	0	0	0	0	0	0	(19,395)	0	0
175	Maintenance of overhead lines	5710	0	0	0	0	0	0	0	0	(4 308)	0	0
176	Maintenance of Underground Lines	5720	0	0	0	0	0	0	0	0	111	0	0
177	Maintenance of Miscellaneous Transmission Plant	5730	0	0	0	0	0	0	0	0	(4,658)	0	0
178	Total Maintenance		0	0	0	0	0	0	0	0	(34 943)	0	0
179	Total Transmission Expenses		0	0	0	0	0	0	0	373,615	(753,705)	0	0
180	DISTRIBUTION EXPENSES												
181	Operation												
182	Operation supervision and engineer	5800	0	0	0	0	0	0	0	0	(98 318)	0	0
183	Load dispatching	5810	0	0	0	0	0	0	0	0	0	0	0

Sponsored by Michael Baird

SOUTHWESTERN ELECTRIC POWER COMPANY
Detailed Statement of Income
For the Test Year Ended March 31, 2020

Line No	(1) Description	(2) Account No	(33) A-3 21 State Income Taxes	(26) A-3 22 Interest on Customer Deposits	(27) A-3 23 Federal Income Tax Adjustment	(28) A-3 24 Provision For Rate Refund	(34) A-3 25 Miscellaneous Expenses	(35) A-3 26 Revenue Adjustments	(36) A-3 27 Fuel Expense	(32) A-3 28 Miscellaneous Revenues	(38) Total Adjustments	(39) B-1 4 Post Test Year Adj
138	Maintenance											
139	Maint Supv & Engineering	5510	0	0	0	0	0	0	0	0	2	
140	Maintenance of structures	5420/5440/55 20/5430	0	0	0	0	0	0	0	0	61	
141	Maintenance of generating and elec plant	5530	0	0	0	0	(232)	0	0	0	(17,633)	
142	Maint of Misc other power gen plant	5540	0	0	0	0	0	0	0	0	0	
143	Total Maintenance		0	0	0	0	(232)	0	0	0	(17,570)	0
144	Total Production Expense - Other		0	0	0	0	(285)	0	(10,520,437)	0	(10,558,136)	0
145	Other Power Supply Expenses											
146	Purchased power and power exchange	5550	0	0	0	0	0	0	(200,987,454)	0	(200,987,454)	
147	System control and load dispatching	5560	0	0	0	0	0	0	0	0	(103 460)	
148	Other Production Expense	5570	0	0	0	0	0	0	1,480,596	0	1,255,487	
149	Total other power supply expenses		0	0	0	0	0	0	(199,506,858)	0	(199,835,427)	0
150	Total Power Production Expenses		0	0	0	0	(66,545)	0	(600,093,747)	0	(602,578,793)	0
151	TRANSMISSION EXPENSES											
152	Operation											
153	Operation supervision and engineer	5600	0	0	0	0	(1,265)	0	0	0	(565,371)	
154	Load dispatch - reliability	5611	0	0	0	0	0	0	0	0	0	
155	Load dispatch - monitor and operate trans sys	5612	0	0	0	0	0	0	0	0	(43,835)	
156	Load dispatch - trans service and scheduling	5613	0	0	0	0	0	0	0	0	0	
157	Scheduling, system control and disatch services	5614	0	0	0	0	0	0	0	0	0	
158	Reliability planning and standards development	5615	0	0	0	0	0	0	0	0	(9,586)	
159	Reliability planning and standards devel services	5618	0	0	0	0	0	0	0	0	0	
160	Station expenses	5620	0	0	0	0	(104)	0	0	0	(22,880)	
161	Overhead line expenses	5630	0	0	0	0	(463)	0	0	0	(2,043)	
162	Underground line expenses	5640	0	0	0	0	0	0	0	0	19	
163	Transmission of electricity by others	5650	0	0	0	0	0	0	0	79,285,201	79,285,201	
164	Miscellaneous transmission expenses	5660	0	0	0	0	(2,297)	0	0	0	452,808	
165	Rents	5670	0	0	0	0	0	0	0	0	(1)	
166	SPP Admin-MAM&SC	5757	0	0	0	0	0	0	0	0	0	
167	Total operation		0	0	0	0	(4,129)	0	0	79,285,201	79,094,312	0
168	Maintenance											
169	Maintenance supervision and engineering	5680	0	0	0	0	0	0	0	0	(864)	
170	Maintenance of structures	5690	0	0	0	0	0	0	0	0	(195)	
171	Maintenance of computer hardware	5691	0	0	0	0	0	0	0	0	(312)	
172	Maintenance of computer software	5692	0	0	0	0	0	0	0	0	(5,624)	
173	Maintenance of computer equipment	5693	0	0	0	0	0	0	0	0	0	
174	Maintenance of station equipment	5700	0	0	0	0	(402)	0	0	0	(78,372)	
175	Maintenance of overhead lines	5710	0	0	0	0	0	0	0	0	(27,704)	
176	Maintenance of Underground Lines	5720	0	0	0	0	0	0	0	0	111	
177	Maintenance of Miscellaneous Transmission Plant	5730	0	0	0	0	0	0	0	0	(4,658)	
178	Total Maintenance		0	0	0	0	(402)	0	0	0	(117,617)	0
179	Total Transmission Expenses		0	0	0	0	(4,530)	0	0	79,285,201	78,976,694	0
180	DISTRIBUTION EXPENSES											
181	Operation											
182	Operation supervision and engineer	5800	0	0	0	0	(340)	0	0	0	(167,391)	
183	Load dispatching	5810	0	0	0	0	(1,281)	0	0	0	(1,281)	

Sponsored by Michael Baird

SOUTHWESTERN ELECTRIC POWER COMPANY
Detailed Statement of Income
For the Test Year Ended March 31, 2020

Line No	(1) Description	(2) Account No	(40) Total Company Proforma Balance
138	Maintenance		
139	Maint Supv & Engineering	5510	(33)
140	Maintenance of structures	5420/5440/5520/5430	1 021
141	Maintenance of generating and elec plant	5530	810,337
142	Maint of Misc other power gen plant	5540	81,759
143	Total Maintenance		893,085
144	Total Production Expense - Other		1,141,700
145	Other Power Supply Expenses		
146	Purchased power and power exchange	5550	6,621,666
147	System control and load dispatching	5560	1,391,012
148	Other Production Expense	5570	3,078,196
149	Total other power supply expenses		11,090,874
150	Total Power Production Expenses		151,251,315
151	TRANSMISSION EXPENSES		
152	Operation		
153	Operation supervision and engineer	5600	9 981 072
154	Load dispatch - reliability	5611	0
155	Load dispatch - monitor and operate trans sys	5612	1,029,939
156	Load dispatch - trans service and scheduling	5613	417
157	Scheduling, system control and disatch services	5614	11,545,148
158	Reliability planning and standards development	5615	242,245
159	Reliability planning and standards devel services	5618	914,530
160	Station expenses	5620	1,212,128
161	Overhead line expenses	5630	428,155
162	Underground line expenses	5640	1,592
163	Transmission of electricity by others	5650	152,526,905
164	Miscellaneous transmission expenses	5660	3,377,715
165	Rents	5670	25,507
166	SPP Admin-MAM&SC	5757	2,366,891
167	Total operation		183,652,246
168	Maintenance		
169	Maintenance supervision and engineering	5680	14,838
170	Maintenance of structures	5690	36,146
171	Maintenance of computer hardware	5691	9,625
172	Maintenance of computer software	5692	636,504
173	Maintenance of computer equipment	5693	56,944
174	Maintenance of station equipment	5700	2,572,641
175	Maintenance of overhead lines	5710	14,505 611
176	Maintenance of Underground Lines	5720	11,350
177	Maintenance of Miscellaneous Transmission Plant	5730	81,211
178	Total Maintenance		17,924,870
179	Total Transmission Expenses		201,577,116
180	DISTRIBUTION EXPENSES		
181	Operation		
182	Operation supervision and engineer	5800	2,465,468
183	Load dispatching	5810	61,500

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SOUTHWESTERN ELECTRIC POWER COMPANY
Detailed Statement of Income
For the Test Year Ended March 31, 2020

Line No	(1) Description	(2) Account No	(3) Total Company March 31, 2020	(4) A-3 1 SWEPCo Payroll	(5) A-3 2 SWEPCo Annual Incentive	(6) A-3 3 SWEPCo Long Term Incentive Plan	(7) A-3 4 Depreciation Expense	(8) A-3 5 Factoring Expense	(9) A-3 6 Misc Rider	(10) A-3 7 Retired Unit O&M Costs	(11) A-3 8 Amort Adjustment	(12) A-3 9 Credit Line Fee Expense
184	Station expenses	5820	749,112	8,812	(25,028)	(170)	0	0	0	0	0	0
185	Overhead line expenses	5830	1,752,384	(39,951)	(171,720)	(12,012)	0	0	0	0	0	0
186	Underground line expenses	5840	1,383,497	17,809	(60,315)	(2,864)	0	0	0	0	0	0
187	Street light and signal system exp	5850	162,030	744	(4,309)	(307)	0	0	0	0	0	0
188	Meter expenses	5860	3,819,316	73,986	(339,174)	(28 053)	0	0	0	0	0	0
189	Customer installation expenses	5870	410,742	7,546	(26,234)	(1,978)	0	0	0	0	0	0
190	Miscellaneous distribution expenses	5880	20 017,606	268,050	1 563,286	(74,626)	0	0	0	0	0	0
191	Rents	5890	889,843	0	0	0	0	0	0	0	0	0
192	Total operation		31,880,170	355,871	855,604	(126,716)	0	0	0	0	0	0
193	Maintenance											
194	Maintenance supervision and engineer	5900	166,883	3,521	(15,009)	(1,610)	0	0	0	0	0	0
195	Maintenance of structures	5910	39,491	200	(373)	(1)	0	0	0	0	0	0
196	Maintenance of station equipment	5920	2,040,674	19,495	(48,059)	(481)	0	0	0	0	0	0
197	Maintenance of overhead lines	5930	57,550,019	163 651	(1 165,149)	(107 015)	0	0	1,407,494	0	0	0
198	Maintenance of underground lines	5940	660,415	5,321	(19,961)	(1,068)	0	0	0	0	0	0
199	Maintenance of line transformers	5950	140,636	2,098	(9,129)	(969)	0	0	0	0	0	0
200	Maint of str lighting and signal sys	5960	303,595	3,852	(21,178)	(1,667)	0	0	0	0	0	0
201	Maintenance of meters	5970	442,928	9,902	(35,189)	(2,845)	0	0	0	0	0	0
202	Maintenance of misc distrib plant	5980	371,393	5,859	(20,110)	(1,276)	0	0	0	0	0	0
203	Total Maintenance		61 716 035	213,899	(1,334,157)	(116,933)	0	0	1,407,494	0	0	0
204	Total Distribution Expenses		93,596,205	569,771	(478,554)	(243,649)	0	0	1,407,494	0	0	0
205	CUSTOMER ACCOUNTS EXPENSES											
206	Operation											
207	Supervision	9010	781,491	13,326	(63,286)	(6,372)	0	0	0	0	0	0
208	Meter reading expenses	9020	2,614,840	50,164	(179,102)	(13,696)	0	0	0	0	0	0
209	Customer records and collection exp	9030	17,797,556	70,263	(270,480)	(24,580)	0	0	0	0	0	0
210	Customer Deposit Interest	9030 2	0	0	0	0	0	0	0	0	0	0
211	Uncollectible accounts	9040	724 395	0	0	0	0	0	0	0	0	0
212	Miscellaneous customer accounts exp	9050	101,498	0	0	0	0	0	0	0	0	0
213	Factoring Expense	426 5	9,711,825	0	0	0	0	(1,296,219)	0	0	0	0
214	Total customer accounts expenses		31,731,605	133,754	(512,868)	(44 648)	0	(1 296 219)	0	0	0	0
215	CUSTOMER SERVICE AND INFORMATIONAL EXPENSES											
216	Operation											
217	Supervision	9070	7 429,119	28,115	(111,035)	(7,715)	0	0	(6,638,731)	0	0	0
218	Customer assistance expenses	9080	15,029,496	54,346	(234,025)	(19,552)	0	0	(12,548,214)	0	0	0
219	DSM amortization expense	9080	0	0	0	0	0	0	0	0	0	0
220	Informational and instructional expenses	9090	0	0	0	0	0	0	0	0	0	0
221	Misc cust service and informational exp	9100	27,409	0	0	0	0	0	0	0	0	0
222	Total cust serv and informat exp		22,486 023	82 461	(345,060)	(27,267)	0	0	(19,186,946)	0	0	0
223	SALES EXPENSES											

Sponsored by Michael Baird

SOUTHWESTERN ELECTRIC POWER COMPANY
Detailed Statement of Income
For the Test Year Ended March 31, 2020

Line No	(1) Description	(2) Account No	(13) A-3 10 Pension Expense	(14) A-3 11 SFAS 106 Expense	(15) A-3 12 SFAS 112 Expense	(16) A-3 13 Other Taxes	(17) A-3 14 Advertising, Due Contributions Memberships	(10) A-3 15 USWAG Membrshp Dues	(19) A-3 16 Catastrophe Reserve/ Storm O&M	(21) A-3 17 IPP System Upgrade Interest	(22) A-3 18 AEPSC Adjustment	(23) A-3 19 Regulatory Expense	(24) A-3 20 Vegetation Management
184	Station expenses	5820	0	0	0	0	0	0	0	0	(5,439)	0	0
185	Overhead line expenses	5830	0	0	0	0	0	0	(84)	0	(24)	0	0
186	Underground line expenses	5840	0	0	0	0	0	0	0	0	(1,227)	0	0
187	Street light and signal system exp	5850	0	0	0	0	0	0	0	0	0	0	0
188	Meter expenses	5860	0	0	0	0	0	0	0	0	(8,438)	0	0
189	Customer installation expenses	5870	0	0	0	0	0	0	0	0	0	0	0
190	Miscellaneous distribution expenses	5880	0	0	0	0	0	0	0	0	367,367	0	0
191	Rents	5890	0	0	0	0	0	0	0	0	0	0	0
192	Total operation		0	0	0	0	0	0	(84)	0	253,921	0	0
193	Maintenance												
194	Maintenance supervision and engineer	5900	0	0	0	0	0	0	0	0	(814)	0	0
195	Maintenance of structures	5910	0	0	0	0	0	0	0	0	(35)	0	0
196	Maintenance of station equipment	5920	0	0	0	0	0	0	0	0	(16,871)	0	0
197	Maintenance of overhead lines	5930	0	0	0	0	0	0	(6,388,109)	0	(3,261)	0	5,000,000
198	Maintenance of underground lines	5940	0	0	0	0	0	0	0	0	2	0	0
199	Maintenance of line transformers	5950	0	0	0	0	0	0	0	0	0	0	0
200	Maint of str lighting and signal sys	5960	0	0	0	0	0	0	0	0	0	0	0
201	Maintenance of meters	5970	0	0	0	0	0	0	0	0	(7)	0	0
202	Maintenance of misc distrib plant	5980	0	0	0	0	0	0	0	0	(33)	0	0
203	Total Maintenance		0	0	0	0	0	0	(6,388,109)	0	(21,018)	0	5,000,000
204	Total Distribution Expenses		0	0	0	0	0	0	(6,388,193)	0	232,902	0	5 000,000
205	CUSTOMER ACCOUNTS EXPENSES												
206	Operation												
207	Supervision	9010	0	0	0	0	0	0	0	0	(1,481)	0	0
208	Meter reading expenses	9020	0	0	0	0	0	0	0	0	(2 340)	0	0
209	Customer records and collection exp	9030	0	0	0	0	0	0	0	0	(247,874)	0	0
210	Customer Deposit Interest	9030 2	0	0	0	0	0	0	0	0	0	0	0
211	Uncollectible accounts	9040	0	0	0	0	0	0	0	0		0	0
212	Miscellaneous customer accounts exp	9050	0	0	0	0	0	0	0	0	(323)	0	0
213	Factoring Expense	426 5	0	0	0	0	0	0	0	0	0	0	0
214	Total customer accounts expenses		0	0	0	0	0	0	0	0	(252,018)	0	0
215	CUSTOMER SERVICE AND INFORMATIONAL EXPENSES												
216	Operation												
217	Supervision	9070	0	0	0	0	0	0	0	0	(6,999)	0	0
218	Customer assistance expenses	9080	0	0	0	0	0	0	0	0	(1,779)	0	0
219	DSM amortization expense	9080	0	0	0	0	0	0	0	0	0	0	0
220	Informational and instructional expenses	9090	0	0	0	0	0	0	0	0	0	0	0
221	Misc cust service and informational exp	9100	0	0	0	0	0	0	0	0	(1,364)	0	0
222	Total cust serv and informat exp		0	0	0	0	0	0	0	0	(10 142)	0	0
223	SALES EXPENSES												

Sponsored by Michael Baird

SOUTHWESTERN ELECTRIC POWER COMPANY
Detailed Statement of Income
For the Test Year Ended March 31, 2020

Line No	(1) Description	(2) Account No	(33) A-3 21 State Income Taxes	(26) A-3 22 Interest on Customer Deposits	(27) A-3 23 Federal Income Tax Adjustment	(28) A-3 24 Provision For Rate Refund	(34) A-3 25 Miscellaneous Expenses	(35) A-3 26 Revenue Adjustments	(36) A-3 27 Fuel Expense	(32) A-3 28 Miscellaneous Revenues	(38) Total Adjustments	(39) B-1 4 Post Test Year Adj
184	Station expenses	5820	0	0	0	0	0	0	0	0	(21,825)	
185	Overhead line expenses	5830	0	0	0	0	(22)	0	0	0	(223,813)	
186	Underground line expenses	5840	0	0	0	0	0	0	0	0	(46,597)	
187	Street light and signal system exp	5850	0	0	0	0	0	0	0	0	(3,872)	
188	Meter expenses	5860	0	0	0	0	(353)	0	0	0	(302,033)	
189	Customer installation expenses	5870	0	0	0	0	(50)	0	0	0	(20,716)	
190	Miscellaneous distribution expenses	5880	0	0	0	0	(36,386)	0	0	0	2,087,691	
191	Rents	5890	0	0	0	0	0	0	0	0	0	
192	Total operation		0	0	0	0	(38,432)	0	0	0	1,300,164	0
193	Maintenance											
194	Maintenance supervision and engineer	5900	0	0	0	0	0	0	0	0	(13,911)	
195	Maintenance of structures	5910	0	0	0	0	0	0	0	0	(209)	
196	Maintenance of station equipment	5920	0	0	0	0	(374)	0	0	0	(46,290)	
197	Maintenance of overhead lines	5930	0	0	0	0	(436)	0	0	0	(1 092,825)	
198	Maintenance of underground lines	5940	0	0	0	0	0	0	0	0	(15,706)	
199	Maintenance of line transformers	5950	0	0	0	0	0	0	0	0	(8,001)	
200	Maint of str lighting and signal sys	5960	0	0	0	0	0	0	0	0	(18,992)	
201	Maintenance of meters	5970	0	0	0	0	0	0	0	0	(28,139)	
202	Maintenance of misc distrib plant	5980	0	0	0	0	0	0	0	0	(15,560)	
203	Total Maintenance		0	0	0	0	(810)	0	0	0	(1 239,634)	0
204	Total Distribution Expenses		0	0	0	0	(39,241)	0	0	0	60,530	0
205	CUSTOMER ACCOUNTS EXPENSES											
206	Operation											
207	Supervision	9010	0	0	0	0	(2,719)	0	0	0	(60,532)	
208	Meter reading expenses	9020	0	0	0	0	(233)	0	0	0	(145,207)	
209	Customer records and collection exp	9030	0	0	0	0	(350)	0	0	0	(473,021)	
210	Customer Deposit Interest	9030 2	0	1,438,097	0	0	0	0	0	0	1 438,097	
211	Uncollectible accounts	9040	0	0	0	0	0	0	0	0	0	
212	Miscellaneous customer accounts exp	9050	0	0	0	0	0	0	0	0	(323)	
213	Factoring Expense	426 5	0	0	0	0	0	0	0	0	(1 296,219)	0
214	Total customer accounts expenses		0	1,438,097	0	0	(3,302)	0	0	0	(537,204)	0
215	CUSTOMER SERVICE AND INFORMATIONAL EXPENSES											
216	Operation											
217	Supervision	9070	0	0	0	0	(2,691)	0	0	0	(6,739 056)	
218	Customer assistance expenses	9080	0	0	0	0	(579)	0	0	0	(12,749,803)	
219	DSM amortization expense	9080	0	0	0	0	0	0	0	0	0	
220	Informational and instructional expenses	9090	0	0	0	0	0	0	0	0	0	
221	Misc cust service and informational exp	9100	0	0	0	0	0	0	0	0	(1,364)	
222	Total cust serv and informat exp		0	0	0	0	(3,270)	0	0	0	(19,490,224)	0
223	SALES EXPENSES											

Sponsored by Michael Baird

SOUTHWESTERN ELECTRIC POWER COMPANY
Detailed Statement of Income
For the Test Year Ended March 31, 2020

Line No	(1) Description	(2) Account No	(40) Total Company Proforma Balance
184	Station expenses	5820	727,287
185	Overhead line expenses	5830	1,528,571
186	Underground line expenses	5840	1,336 900
187	Street light and signal system exp	5850	158,158
188	Meter expenses	5860	3,517,283
189	Customer installation expenses	5870	390,026
190	Miscellaneous distribution expenses	5880	22,105 298
191	Rents	5890	889,843
192	Total operation		33 180 334
193	Maintenance		
194	Maintenance supervision and engineer	5900	152,972
195	Maintenance of structures	5910	39,282
196	Maintenance of station equipment	5920	1 994 384
197	Maintenance of overhead lines	5930	56,457,194
198	Maintenance of underground lines	5940	644 709
199	Maintenance of line transformers	5950	132,635
200	Maint of str lighting and signal sys	5960	284 603
201	Maintenance of meters	5970	414,790
202	Maintenance of misc distrib plant	5980	355,833
203	Total Maintenance		60,476,402
204	Total Distribution Expenses		93,656 736
205	CUSTOMER ACCOUNTS EXPENSES		
206	Operation		
207	Supervision	9010	720,959
208	Meter reading expenses	9020	2,469 633
209	Customer records and collection exp	9030	17 324 536
210	Customer Deposit Interest	9030 2	1,438,097
211	Uncollectible accounts	9040	724 395
212	Miscellaneous customer accounts exp	9050	101,175
213	Factoring Expense	426 5	8,415,606
214	Total customer accounts expenses		31 194,401
215	CUSTOMER SERVICE AND INFORMATIONAL EXPENSES		
216	Operation		
217	Supervision	9070	690 062
218	Customer assistance expenses	9080	2,279,692
219	DSM amortization expense	9080	0
220	Informational and instructional expenses	9090	0
221	Misc cust service and informational exp	9100	26,044
222	Total cust serv and informat exp		2 995 799
223	SALES EXPENSES		

Sponsored by Michael Baird

SOUTHWESTERN ELECTRIC POWER COMPANY
Detailed Statement of Income
For the Test Year Ended March 31, 2020

Line No	(1) Description	(2) Account No	(3) Total Company March 31, 2020	(4) A-3 1 SWEPCo Payroll	(5) A-3 2 SWEPCo Annual Incentive	(6) A-3 3 SWEPCo Long Term Incentive Plan	(7) A-3 4 Depreciation Expense	(8) A-3 5 Factoring Expense	(9) A-3 6 Misc Rider	(10) A-3 7 Retired Unit O&M Costs	(11) A-3 8 Amort Adjustment	(12) A-3 9 Credit Line Fee Expense
224	Operation											
225	Supervision	9110	2 198	0	0	0	0	0	0	0	0	0
226	Demonstrating and selling expenses	9120	265,976	0	0	0	0	0	0	0	0	0
227	Total sales expenses		268,174	0	0	0	0	0	0	0	0	0
228	ADMINISTRATIVE AND GENERAL EXPENSES											
229	Operation											
230	Administrative and general salaries	9200	32,325,718	124,623	(517,694)	(44 675)	0	0	0	(1 483)	0	0
231	Office supplies and expenses	9210	2,947,644	0	0	0	0	0	0	(386)	0	0
232	Admin expenses transferred - Cr	9220	(4,430,969)	(59,265)	9	0	0	0	0	0	0	0
233	Outside services employed	9230	9,712,500	0	0	0	0	0	0	0	0	0
234	Property insurance	9240	2,428,223	0	0	0	0	0	0	0	0	0
235	Injuries and damages	9250	3,657,677	5,857	(26,823)	(264)	0	0	0	0	0	0
236	Employee pensions and benefits	9260	13,373,091	0	0	0	0	0	0	0	0	0
237	Regulatory commission expenses	9280	2,624,761	57	(243)	(13)	0	0	0	0	0	0
238	General advertising expenses	9301	318,019	0	0	0	0	0	0	0	0	0
239	Miscellaneous general expenses	9302	1,724,290	3,173	(13,417)	(623)	0	0	0	(4,895)	0	696,993
240	Rents	9310	1,008,537	0	0	0	0	0	0	0	0	0
241	Total A&G operation		65,689,492	74,445	(558,168)	(45,575)	0	0	0	(6,764)	0	696 993
242	Maintenence											
243	Maintenence of general plant	9350	6,436,014	45,819	(102,061)	(8)	0	0	0	0	0	0
244	Total A&G maintenance		6,436,014	45,819	(102,061)	(8)	0	0	0	0	0	0
245	Total Administrative and General Exp		72,125,506	120,264	(660,229)	(45,583)	0	0	0	(6,764)	0	696,993
246	Total Fuel and Purchased Power Expense		617,760,649	1,460	(5,903)	(256)	0	0	0	0	0	0
248	Total Electric Non-Fuel Operations Expense		328,336,789	1,356,679	(900,137)	(325,472)	0	(1,296,219)	(19,186,946)	(324,826)	0	696 993
249	Total Electric Maintenance Expense		150 540,605	785,573	(2 960,180)	(179,145)	0	0	1,407,494	(291,490)	0	0
250	Total Electric Oper and Maint Exp		1,096,638,043	2,143,713	(3,866,220)	(504,872)	0	(1,296,219)	(17,779,451)	(616,316)	0	696 993
251	Depreciation Expense											
252	Production	4030 1	118,198,563	0	0	0	8,354,497	0	0	0	0	0
253	Transmission	4030 2	49 421,354	0	0	0	(1,487,507)	0	0	0	0	0
254	Distribution	4030 3	61,585,051	0	0	0	2,596,244	0	0	0	0	0
255	General	4030 4	7,111,545	0	0	0	(340,761)	0	0	0	0	0
			0	0	0	0		0	0	0	0	0
256	Total Depreciation Expense		236 316,513	0	0	0	9,122,473	0	0	0	0	0
257	Amortization Expense	4040	17,421,930	0	0	0	5,292 169	0	0	0	0	0
258	Amortization of Elec Plant Acquisition Adj	4060	0	0	0	0	0	0	0	0	0	0
259	Amortization expense (Regulatory Debits)	4073	860,876	0	0	0	0	0	0	0	2 288,902	0
260	Amortization Expense (Regulatory Credits)	4074	(288,585)	0	0	0	0	0	0	0	216 585	0
261	Total Amortization Expense		17,994,221	0	0	0	5,292,169	0	0	0	2,505 487	0

Sponsored by Michael Baird

SOUTHWESTERN ELECTRIC POWER COMPANY
Detailed Statement of Income
For the Test Year Ended March 31, 2020

Line No	(1) Description	(2) Account No	(13) A-3 10 Pension Expense	(14) A-3 11 SFAS 106 Expense	(15) A-3 12 SFAS 112 Expense	(16) A-3 13 Other Taxes	(17) A-3 14 Advertising Due Contributions Memberships	(10) A-3 15 USWAG Membrshp Dues	(19) A-3 16 Catastrophe Reserve/ Storm O&M	(21) A-3 17 IPP System Upgrade Interest	(22) A-3 18 AEPSC Adjustment	(23) A-3 19 Regulatory Expense	(24) A-3 20 Vegetation Management
224	Operation												
225	Supervision	9110	0	0	0	0	0	0	0	0	0	0	0
226	Demonstrating and selling expenses	9120	0	0	0	0	0	0	0	0	(6,700)	0	0
227	Total sales expenses		0	0	0	0	0	0	0	0	(6,700)	0	0
228	ADMINISTRATIVE AND GENERAL EXPENSES												
229	Operation												
230	Administrative and general salaries	9200	0	0	0	0	0	0	0	0	(2,925,574)	0	0
231	Office supplies and expenses	9210	0	0	0	0	0	0	0	0	(1,202,555)	0	0
232	Admin expenses transferred - Cr	9220	0	0	0	0	0	0	0	0	(0)	0	0
233	Outside services employed	9230	0	0	0	0	0	0	0	0	7,254	0	0
234	Property insurance	9240	0	0	0	0	0	0	1,689 700	0	0	0	0
235	Injuries and damages	9250	0	0	0	0	0	0	0	0	(8,298)	0	0
236	Employee pensions and benefits	9260	2,649,813	546,861	(275,815)	0	0	0	0	0	(5,872)	0	0
237	Regulatory commission expenses	9280	0	0	0	0	0	0	0	0	(1,736,726)	(757,823)	0
238	General advertising expenses	9301	0	0	0	0	0	0	0	0	(636)	0	0
239	Miscellaneous general expenses	9302	0	0	0	0	969,554	0	0	0	81,592	0	0
240	Rents	9310	0	0	0	0	0	0	0	0	(585)	0	0
241	Total A&G operation		2,649,813	546,861	(275,815)	0	969,554	0	1,689,700	0	(5,791,400)	(757,823)	0
242	Maintenence												
243	Maintenence of general plant	9350	0	0	0	0	0	0	0	0	(11,744)	0	0
244	Total A&G maintenance		0	0	0	0	0	0	0	0	(11 744)	0	0
245	Total Administrative and General Exp		2,649 813	546,861	(275 815)	0	969,554	0	1,689,700	0	(5,803,144)	(757,823)	0
246	Total Fuel and Purchased Power Expense		0	0	0	0	0	0	0	0	(42,056)	0	0
248	Total Electric Non-Fuel Operations Expense		2,649 813	546,861	(275,815)	0	969,434	(489)	1,689,616	373 615	(7,119,864)	(757,823)	0
249	Total Electric Maintenance Expense		0	0	0	0	(25)	0	(6,388,109)	0	(387,317)	0	5 000,000
250	Total Electric Oper and Maint Exp		2,649,813	546 861	(275,815)	0	969,409	(489)	(4,698,493)	373,615	(7,549,238)	(757,823)	5 000,000
251	Depreciation Expense												
252	Production	4030 1	0	0	0	0	0	0	0	0	0	0	0
253	Transmission	4030 2	0	0	0	0	0	0	0	0	0	0	0
254	Distribution	4030 3	0	0	0	0	0	0	0	0	0	0	0
255	General	4030 4	0	0	0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0	0	0	0
256	Total Depreciation Expense		0	0	0	0	0	0	0	0	0	0	0
257	Amortization Expense	4040	0	0	0	0	0	0	0	0	0	0	0
258	Amortization of Elec Plant Acquisition Adj	4060	0	0	0	0	0	0	0	0	0	0	0
259	Amortization expense (Regulatory Debits)	4073	0	0	0	0	0	0	0	0	0	0	0
260	Amortization Expense (Regulatory Credits)	4074	0	0	0	0	0	0	0	0	0	0	0
261	Total Amortization Expense		0	0	0	0	0	0	0	0	0	0	0

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SOUTHWESTERN ELECTRIC POWER COMPANY
Detailed Statement of Income
For the Test Year Ended March 31 2020

Line No	(1) Description	(2) Account No	(33) A-3 21 State Income Taxes	(26) A-3 22 Interest on Customer Deposits	(27) A-3 23 Federal Income Tax Adjustment	(28) A-3 24 Provision For Rate Refund	(34) A-3 25 Miscellaneous Expenses	(35) A-3 26 Revenue Adjustments	(36) A-3 27 Fuel Expense	(32) A-3 28 Miscellaneous Revenues	(38) Total Adjustments	(39) B-1 4 Post Test Year Adj
224	Operation											
225	Supervision	9110	0	0	0	0	0	0	0	0	0	
226	Demonstrating and selling expenses	9120	0	0	0	0	(86)	0	0	0	(6,786)	
227	Total sales expenses		0	0	0	0	(86)	0	0	0	(6,786)	0
228	ADMINISTRATIVE AND GENERAL EXPENSES											
229	Operation											
230	Administrative and general salaries	9200	0	0	0	0	0	0	0	0	(3,364,803)	
231	Office supplies and expenses	9210	0	0	0	0	(9,720)	0	0	0	(1,212,661)	
232	Admin expenses transferred - Cr	9220	0	0	0	0	0	0	0	0	(59,256)	
233	Outside services employed	9230	0	0	0	0	0	0	0	0	7,254	
234	Property insurance	9240	0	0	0	0	0	0	0	0	1,689,700	
235	Injuries and damages	9250	0	0	0	0	0	0	0	0	(29,527)	
236	Employee pensions and benefits	9260	0	0	0	0	(1,230)	0	0	0	2,913,757	
237	Regulatory commission expenses	9280	0	0	0	0	0	0	0	0	(2,494,747)	
238	General advertising expenses	9301	0	0	0	0	(493)	0	0	0	(1,129)	
239	Miscellaneous general expenses	9302	0	0	0	0	0	0	0	0	1,732,377	
240	Rents	9310	0	0	0	0	0	0	0	0	(585)	
241	Total A&G operation		0	0	0	0	(11,443)	0	0	0	(819,621)	0
242	Maintenence											
243	Maintenence of general plant	9350	0	0	0	0	(1,426)	0	0	0	(69,422)	
244	Total A&G maintenance		0	0	0	0	(1,426)	0	0	0	(69,422)	0
245	Total Administrative and General Exp		0	0	0	0	(12,869)	0	0	0	(889,043)	0
246	Total Fuel and Purchased Power Expense		0	0	0	0	0	0	(593,992,679)	0	(594,039,434)	0
248	Total Electric Non-Fuel Operations Expense		0	1,438,097	0	0	(106,770)	0	(6,101 067)	79 285,201	52,610,882	0
249	Total Electric Maintenance Expense		0	0	0	0	(23,073)	0	0	0	(3,036,273)	0
250	Total Electric Oper and Maint Exp		0	1,438,097	0	0	(129,843)	0	(600,093,747)	79,285,201	(544,464,825)	0
251	Depreciation Expense											
252	Production	4030 1	0	0	0	0	0	0	0	0	8,354,497	0
253	Transmission	4030 2	0	0	0	0	0	0	0	0	(1,487,507)	0
254	Distribution	4030 3	0	0	0	0	0	0	0	0	2,596,244	
255	General	4030 4	0	0	0	0	0	0	0	0	(340,761)	
			0	0	0	0	0	0	0	0	0	
256	Total Depreciation Expense		0	0	0	0	0	0	0	0	9,122,473	0
257	Amortization Expense	4040	0	0	0	0	0	0	0	0	5,292,169	
258	Amortization of Elec Plant Acquisition Adj	4060	0	0	0	0	0	0	0	0	0	
259	Amortization expense (Regulatory Debits)	4073	0	0	0	0	0	0	0	0	2,288,902	
260	Amortization Expense (Regulatory Credits)	4074	0	0	0	0	0	0	0	0	216,585	
261	Total Amortization Expense		0	0	0	0	0	0	0	0	7,797,656	0

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SOUTHWESTERN ELECTRIC POWER COMPANY
Detailed Statement of Income
For the Test Year Ended March 31, 2020

Line No	(1) Description	(2) Account No	(40) Total Company Proforma Balance
224	Operation		
225	Supervision	9110	2,198
226	Demonstrating and selling expenses	9120	259,190
227	Total sales expenses		261,389
228	ADMINISTRATIVE AND GENERAL EXPENSES		
229	Operation		
230	Administrative and general salaries	9200	28,960,915
231	Office supplies and expenses	9210	1,734,983
232	Admin expenses transferred - Cr	9220	(4,490,225)
233	Outside services employed	9230	9,719 753
234	Property insurance	9240	4,117,923
235	Injuries and damages	9250	3,628,150
236	Employee pensions and benefits	9260	16,286,848
237	Regulatory commission expenses	9280	130 015
238	General advertising expenses	9301	316 890
239	Miscellaneous general expenses	9302	3,456,667
240	Rents	9310	1,007,952
241	Total A&G operation		64,869 871
242	Maintenence		
243	Maintenence of general plant	9350	6,366,592
244	Total A&G maintenance		6,366,592
245	Total Administrative and General Exp		71,236,464
246	Total Fuel and Purchased Power Expense		23,721 216
248	Total Electric Non-Fuel Operations Expense		380,947,670
249	Total Electric Maintenance Expense		147,504,332
250	Total Electric Oper and Maint Exp		552 173,218
251	Depreciation Expense		
252	Production	4030 1	126,553,060
253	Transmission	4030 2	47,933,847
254	Distribution	4030 3	64,181,295
255	General	4030 4	6 770,784
			0
256	Total Depreciation Expense		245 438,986
257	Amortization Expense	4040	22,714,099
258	Amortization of Elec Plant Acquisition Adj	4060	0
259	Amortization expense (Regulatory Debits)	4073	3 149 778
260	Amortization Expense (Regulatory Credits)	4074	(72,000)
261	Total Amortization Expense		25 791,877

Sponsored by Michael Baird

SOUTHWESTERN ELECTRIC POWER COMPANY
Detailed Statement of Income
For the Test Year Ended March 31, 2020

Line No	(1) Description	(2) Account No	(3) Total Company March 31, 2020	(4) A-3 1 SWEPCo Payroll	(5) A-3 2 SWEPCo Annual Incentive	(6) A-3 3 SWEPCo Long Term Incentive Plan	(7) A-3 4 Depreciation Expense	(8) A-3 5 Factoring Expense	(9) A-3 6 Misc Rider	(10) A-3 7 Retired Unit O&M Costs	(11) A-3 8 Amort Adjustment	(12) A-3 9 Credit Line Fee Expense
262	Operation Expense	4010	2,442	0	0	0	0	0	0	0	0	0
263	Gain On Sale of SO2 Allowances	4118 4119	4	0	0	0	0	0	0	0	0	0
264	Losses from Disp Of Utility Plant	411	653,208	0	0	0	0	0	0	0	0	0
265	Accretion Expense	4111	3,484,561		0	0	0	0	0	0	0	0
266	Other Taxes	4080/4081	100,064,580	0	0	0	0	0	0	0	0	0
267	Texas Gross Margin Tax	4091 1	462,753	0	0	0	0	0	0	0	0	0
268	Current Arkansas Income Taxes	4091 1		0	0	0	0	0	0	0	0	0
269	Current Louisiana Income Taxes	4091 2		0	0	0	0	0	0	0	0	0
270	Current State Income Taxes -Other	4091 3	1,078,801	0	0	0	0	0	0	0	0	0
271	Deferred State Income Taxes	4101 4111	(2,443,565)	0	0	0	0	0	0	0	0	0
272	Total		(902,010)	0	0	0	0	0	0	0	0	0
273	Current Federal Income Taxes	4091	7,868,487	0	0	0	0	0	0	0	0	0
274	Deferred Federal Income Taxes	4101 4111	(13,505,811)	0	0	0	0	0	0	0	0	0
275	Deferred Federal ITC Amortization	4114	(1,624,687)	0	0	0	0	0	0	0	0	0
276	Net Operating Income		263,445,627	(2,143,713)	3,866,220	504,872	(14,414,642)	1,296,219	17,779,451	616,316	(2,505,487)	(696,993)

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SOUTHWESTERN ELECTRIC POWER COMPANY
Detailed Statement of Income
For the Test Year Ended March 31, 2020

Line No	(1) Description	(2) Account No	(13) A-3 10 Pension Expense	(14) A-3 11 SFAS 106 Expense	(15) A-3 12 SFAS 112 Expense	(16) A-3 13 Other Taxes	(17) A-3 14 Advertising, Due Contributions Memberships	(10) A-3 15 USWAG Membrshp Dues	(19) A-3 16 Catastrophe Reserve/ Storm O&M	(21) A-3 17 IPP System Upgrade Interest	(22) A-3 18 AEPSC Adjustment	(23) A-3 19 Regulatory Expense	(24) A-3 20 Vegetation Management
262	Operation Expense	4010	0	0	0	0	0	0	0	0	0	0	0
263	Gain On Sale of SO2 Allowances	4118 4119	0	0	0	0	0	0	0	0	0	0	0
264	Losses from Disp Of Utility Plant	411	0	0	0	0	0	0	0	0	0	0	0
265	Accretion Expense	4111	0	0	0	0	0	0	0	0	0	0	0
266	Other Taxes	4080/4081	0	0	0	(4,666,863)	0	0	0	0	0	0	0
267	Texas Gross Margin Tax	4091 1	0	0	0	0	0	0	0	0	0	0	0
268	Current Arkansas Income Taxes	4091 1	0	0	0	0	0	0	0	0	0	0	0
269	Current Louisiana Income Taxes	4091 2	0	0	0	0	0	0	0	0	0	0	0
270	Current State Income Taxes -Other	4091 3	0	0	0	0	0	0	0	0	0	0	0
271	Deferred State Income Taxes	4101 4111	0	0	0	0	0	0	0	0	0	0	0
272	Total		0	0	0	0	0	0	0	0	0	0	0
273	Current Federal Income Taxes	4091	0	0	0	0	0	0	0	0	0	0	0
274	Deferred Federal Income Taxes	4101 4111	0	0	0	0	0	0	0	0	0	0	0
275	Deferred Federal ITC Amortization	4114	0	0	0	0	0	0	0	0	0	0	0
276	Net Operating Income		(2,649 813)	(546,861)	275,815	4,666,863	(969,409)	489	4,698,493	(373,615)	7,549,238	757,823	(5,000,000)

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SOUTHWESTERN ELECTRIC POWER COMPANY
Detailed Statement of Income
For the Test Year Ended March 31, 2020

Line No	(1) Description	(2) Account No	(33) A-3 21 State Income Taxes	(26) A-3 22 Interest on Customer Deposits	(27) A-3 23 Federal Income Tax Adjustment	(28) A-3 24 Provision For Rate Refund	(34) A-3 25 Miscellaneous Expenses	(35) A-3 26 Revenue Adjustments	(36) A-3 27 Fuel Expense	(32) A-3 28 Miscellaneous Revenues	(38) Total Adjustments	(39) B-1 4 Post Test Year Adj
262	Operation Expense	4010	0	0	0	0	0	0	0	0	0	
263	Gain On Sale of SO2 Allowances	4118 4119	0	0	0	0	0	0		0	0	
264	Losses from Disp Of Utility Plant	411	0	0	0	0	0	0	0	0	0	
265	Accretion Expense	4111	0	0	0	0	0	0	0	0	0	
266	Other Taxes	4080/4081	0	0	0	0	0	0	0	0	(4,666,863)	0
267	Texas Gross Margin Tax	4091 1	(958,573)	0	0	0	0	0	0	0	(958,573)	
268	Current Arkansas Income Taxes	4091 1	0	0	0	0	0	0	0	0	0	
269	Current Louisiana Income Taxes	4091 2	0	0	0	0	0	0	0	0	0	
270	Current State Income Taxes -Other	4091 3	(1 078,801)	0	0	0	0	0	0	0	(1,078,801)	
271	Deferred State Income Taxes	4101 4111	2,443,565	0	0	0	0	0	0	0	2,443,565	
272	Total		406,190	0	0	0	0	0	0	0	406,190	0
273	Current Federal Income Taxes	4091	0	0	11,332,848	0	0	0	0	0	11,332,848	0
274	Deferred Federal Income Taxes	4101 4111	0	0	14,621,825	0	0	0	0	0	14 621,825	0
275	Deferred Federal ITC Amortization	4114	0	0	166,607	0	0	0	0	0	166,607	
276	Net Operating Income		(406,190)	########	(26,121,280)	52,703,884	129,843	(681,355,604)	600,093,747	(5,698,248)	(49,380,678)	0

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SOUTHWESTERN ELECTRIC POWER COMPANY
Detailed Statement of Income
For the Test Year Ended March 31, 2020

Line No	(1) Description	(2) Account No	(40) Total Company Proforma Balance
262	Operation Expense	4010	2,442
263	Gain On Sale of SO2 Allowances	4118 4119	4
264	Losses from Disp Of Utility Plant	411	653,208
265	Accretion Expense	4111	3,484,561
266	Other Taxes	4080/4081	95,397,717
267	Texas Gross Margin Tax	4091 1	(495,820)
268	Current Arkansas Income Taxes	4091 1	0
269	Current Louisiana Income Taxes	4091 2	0
270	Current State Income Taxes -Other	4091 3	0
271	Deferred State Income Taxes	4101 4111	0
272	Total		(495,820)
273	Current Federal Income Taxes	4091	19,201,335
274	Deferred Federal Income Taxes	4101 4111	1,116,014
275	Deferred Federal ITC Amortization	4114	(1,458,080)
276	Net Operating Income		214,064,948

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SOUTHWESTERN ELECTRIC POWER COMPANY
Analysis of cost of service activity
For the Test Year Ended March 31, 2020

(1) Description	(2) Account No	(3) Book	(4) Affiliate	(5) Payroll	(6) Schedule A-5	(7) Test Year Actual	(8) Proforma Adjustments WP A 1
Fuel Reconcilable and Non-Reconcilable	5010	399,631,092 89	0 00	0 00		399,631,092 89	(382,490,947 10)
Fuel	5470	10,520,436 69	117 61			10,520,554 30	(10,520,436 69)
Purchased power and power exchange	5550	207,609,119 80	3 33			207,609,123 13	(200,987,453 63)
TY O&M Not Adjusted					22,836,617 28	22,836,617 28	
Production Oper Expense - Steam Generation (Non F	5000-5090	68,137,464 32	(15,877,984 64)	(22,479,799 68)	0 01	29,779,680 01	(8,449,846 34)
Maintenance - Steam	5100-5170	63,435,413 82	(3,244,301 61)	(16,550,642 29)	0 00	43,640,469 92	(1,749,690 82)
Prod Operation supervision and engineering (Non-Fue	5420-5500 / 8140	268,744 46	(28,773 87)	(206,327 41)	139 89	33,783 07	(17,881 95)
Prod Maintenance	5510-5540	910,654 92	(12,782 83)	(314,964 90)	(81,758 69)	501,148 50	(26,201 90)
Other power supply expenses - non-purc power	5560-5570	3,317,181 03	(5,075,914 74)	0 00	11,692 06	(1,747,041 65)	1,480,595 81
Trans Operation (with 5757)	5600-5670	104,557,934 04	(11,566,237 35)	(2,013,593 90)	(14,815,852 00)	76,162,250 79	79,755,061 39
Trans Maintenance	5680-5730	18,042,487 11	(899,337 65)	(1,386,685 30)	(502,373 12)	15,254,091 04	(122,624 82)
Distribution Operation	5800-5890	31,880,170 23	(3,105,537 93)	(12,352,204 17)	(862,796 56)	15,559,631 57	690,372 08
Distribution Maintenance	5900-5980	61,716,035 10	(352,279 73)	(7,424,393 92)		53,939,361 45	(1,432,514 88)
Customer Accounts	9010-9050	22,019,780 89	(13,224,063 89)	(4,642,567 50)	(796,714 97)	3,356,434 53	877,279 03
Customer Service and Information	9070-9100	22,486,022 63	(373,943 49)	(2,862,207 07)	0 00	19,249,872 06	(19,562,542 74)
Sales	9110-9160	268,174 24	(150,651 24)	0 00		117,523 00	(85 79)
Administrative operation (excluding 9260)	9200-9310	52,316,401 36	(38,133,209 87)	(2,583,973 39)	(5,788,953 90)	5,810,264 19	1,977,704 78
Administrative maintenance	9350	6,436,014 08	(3,090,965 03)	(1,590,352 34)		1,754,696 71	(103,495 98)
Gain from Disposition of Allowances	4118	0 00	0 00			0 00	0 00
Affiliate			95,184,384 24			95,184,384 24	(7,549,238 08)
Payroll				74,407,711 87		74,407,711 87	2,143,712 57
Employee Benefits	9260	13,373,090 99	(48,521 31)	0 00		13,324,569 68	2,919,629 15
Factoring	903 2	9,711,824 54	0 00			9,711,824 54	(1,296,218 88)
		1,096,638,043 13	0 00	0 00	0 00	1,096,638,043 13	(544,464,824 77)
Operation supervision and engineering	5000	21,645,237 03	15,196,385 20	5,273,165 54		1,175,686 28	(436,340 52)
Fuel Reconcilable	5010	399,631,092 89	934,724 72	50,682 31		398,645,685 86	(399,637,251 14)
Fuel Non Reconcilable	5010	0 00	0 00	0 00		0 00	17,146,304 04
Steam Expenses	5020	19,098,323 05	194,210 13	6,857,893 21		12,046,219 71	(8,398,542 47)
Electric expenses	5050	10,576,275 12	4,953 77	7,117,975 61		3,453,345 73	(737,761 66)
Miscellaneous steam power expenses	5060	16,480,427 82	(455,628 63)	3,180,083 01		13,755,973 44	1,164,524 95
Rents	5070	3,339 44	3339 45	0 00	(0 01)	0 00	0 00
Operations supplies and expenses	5080	0 00	0 00	0 00		0 00	0 00
Allowance Expense	5090	333,861 87	0 00	0 00		333,861 87	(41,726 64)
Maintenance supervision and engineering	5100	5,221,988 14	401,519 57	3,928,391 88		892,076 69	(390,450 30)
Maintenance of structures	5110	5,930,495 88	612,336 20	831,627 27		4,486,532 41	(106,387 55)
Maintenance of boiler plant	5120	36,899,428 88	1,611,489 40	8,195,282 43		27,092,657 05	(880,212 40)
Maintenance of electric plant	5130	8,232,372 74	455,950 66	1,748,176 30		6,028,245 77	(210,018 91)
Maintenance of misc steam plant	5140	7,151,128 19	163,005 78	1,847,164 41		5,140,958 00	(162,621 66)
Operation supervision and engineering	5460	4,833 14	(556 20)	0 00		5,389 34	(518 00)
Fuel	5470	10,520,436 69	(117 61)	0 00		10,520,554 30	(10,520,436 69)

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SOUTHWESTERN ELECTRIC POWER COMPANY
Analysis of cost of service activity
For the Test Year Ended March 31, 2020

(1) Description	(2) Account No	(9) Revenue Deficiency Adjustments Sch A	(10) Total Company Proforma
Fuel Reconcilable and Non-Reconcilable	5010	0 00	17,140,145 79
Fuel	5470	0 00	117 61
Purchased power and power exchange	5550	0 00	6,621,669 51
TY O&M Not Adjusted			22,836,617 28
Production Oper Expense - Steam Generation (Non F	5000-5090	0 00	21,329,833 67
Maintenance - Steam	5100-5170	0 00	41,890,779 10
Prod Operation supervision and engineering (Non-Fue	5420-5500 / 8140	0 00	15,901 12
Prod Maintenance	5510-5540	0 00	474,946 61
Other power supply expenses - non-purc power	5560-5570	0 00	(266,445 84)
Trans Operation (with 5757)	5600-5670	0 00	155,917,312 18
Trans Maintenance	5680-5730	0.00	15,131,466 22
Distribution Operation	5800-5890	0 00	16,250,003 65
Distribution Maintenance	5900-5980	0.00	52,506,846 57
Customer Accounts	9010-9050	0 00	4,233,713 56
Customer Service and Information	9070-9100	0 00	(312,670 68)
Sales	9110-9160	0 00	117,437 21
Administrative operation (excluding 9260)	9200-9310	0 00	7,787,968 98
Administrative maintenance	9350	0 00	1,651,200 73
Gain from Disposition of Allowances	4118	0 00	0 00
Affiliate			87,635,146 16
Payroll			76,551,424 44
Employee Benefits	9260	0 00	16,244,198 83
Factoring	903 2	1,190,698 99	9,606,304 64
		1,190,698 99	553,363,917 35

Operation supervision and engineering	5000	739,345 76
Fuel Reconcilable	5010	(991,565 28)
Fuel Non Reconcilable	5010	17,146,304 04
Steam Expenses	5020	3,647,677 25
Electric expenses	5050	2,715,584 08
Miscellaneous steam power expenses	5060	14,920,498 39
Rents	5070	0 00
Operations supplies and expenses	5080	0 00
Allowance Expense	5090	292,135 23
Maintenance supervision and engineering	5100	501,626 39
Maintenance of structures	5110	4,380,144 85
Maintenance of boiler plant	5120	26,212,444 66
Maintenance of electric plant	5130	5,818,226 86
Maintenance of misc steam plant	5140	4,978,336 33
Operation supervision and engineering	5460	4,871 34
Fuel	5470	117 61

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SOUTHWESTERN ELECTRIC POWER COMPANY
Analysis of cost of service activity
For the Test Year Ended March 31, 2020

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Description	Account No	Book	Affiliate	Payroll	Schedule A-5	Test Year Actual	Proforma Adjustments WP A 1
Generation expenses	5480	257,827 43	23,159 02	206,327 41		28,341 00	(17,311 22)
Misc other power generation expenses	5490	6,031 16	6,171 05	0 00	(139 89)	0 00	0 00
Underground Storage Expenses	8140	52 73	0 00	0 00		52 73	(52 73)
Maint Supv & Engineering	5510	(34 50)	(34 50)	0 00	0 00	0 00	0 00
Maintenance of structures	5420/5440/5520	960 74	(157 41)	2,307 80		(1,189 65)	(306 28)
Maintenance of generating and elec plant	5530	827,969 99	12,974 74	312,657 10		502,338 15	(25,895 62)
Maint of Misc other power gen plant	5540	81,758 69	0 00	0 00	81,758 69	0 00	0 00
Purchased power and power exchange	5550	207,609,119 80	(3 33)	0 00		207,609,123 13	(200,987,453 63)
System control and load dispatching	5560	1,494,471 89	1,506,163 95	0 00	(11,692 06)	0 00	0 00
Other Production Expense	5570	1,822,709 14	3,569,750 79	0 00		(1,747,041 65)	1,480,595 81
Operation supervision and engineer	5600	10,546,442 66	7,758,807 16	1,453,938 91		1,333,696 59	(144,064 48)
Load dispatch - reliability	5611	0 00	0 00	0 00		0 00	0 00
Load dispatch - monitor and operate trans sys	5612	1,073,773 80	1,073,705 09	694 47		(625 76)	(68 26)
Load dispatch - trans service and scheduling	5613	417 41	(6,131 35)	0 00	6,548 76	0 00	0 00
Scheduling, system control and disatch services	5614	11,545,148 45	0 00	0 00	11,545,148 45	0 00	0 00
Reliability planning and standards development	5615	251,830 67	251,856 69	0 00	(26 02)	0 00	0 00
Reliability planning and standards devel services	5618	914,530 46	0 00	0 00	914,530 46	0 00	0 00
Station expenses	5620	1,235,007 24	33,463 06	242,444 96		959,099 22	(28,778 35)
Overhead line expenses	5630	430,198 64	45,098 38	20,394 23		364,706 03	(1,518 87)
Underground line expenses	5640	1,573 09	44,189 32	0 00	(42,616 23)	0 00	0 00
Transmission of electricity by others	5650	73,241,704 50	0 00	0 00		73,241,704 50	79,285,200 81
Miscellaneous transmission expenses	5660	2,924,907 92	2,365,116 38	296,121 33		263,670 21	644,290 54
Rents	5670	25,508 46	132 62	0 00	25,375 84	0 00	0 00
SPP Admin-MAM&SC	5757	2,366,890 74	0 00	0 00	2,366,890 74	0 00	0 00
Maintenance supervision and engineering	5680	15,701 82	9,842 03	3,234 79		2,625 00	(190 05)
Maintenance of structures	5690	36,340 67	374 20	4,743 03		31,223 44	(342 03)
Maintenance of computer hardware	5691	9,937 22	9,937 22	0 00	0 00	(0 00)	0 00
Maintenance of computer software	5692	642,127 58	280,999 47	0 00	361,128 11	0 00	0 00
Maintenance of computer equipment	5693	56,944 31	62 70	0 00	56,881 61	0 00	0 00
Maintenance of station equipment	5700	2,651,012 68	359,857 88	1,013,440 12		1,277,714 68	(88,173 98)
Maintenance of overhead lines	5710	14,533,315 04	225,519 76	365,267 36		13,942,527 92	(33,918 76)
Maintenance of Underground Lines	5720	11,239 14	(119 96)	0 00	11,359 10	0 00	0 00
Maintenance of Miscellaneous Transmission Plant	5730	85,868 65	12,864 35	0 00	73,004 30	0 00	0 00
Operation supervision and engineer	5800	2,632,858 74	1,441,671 69	655,175 46		536,011 59	(87,948 79)
Load dispatching	5810	62,781 39	14,612 51	0 00		48,168 88	(1,281 24)
Station expenses	5820	749,111 83	98,677 52	305,878 90		344,555 40	(25,198 44)
Overhead line expenses	5830	1,752,384 05	15,121 47	(1,386,700 78)		3,123,963 35	(183,837 34)
Underground line expenses	5840	1,383,496 94	107,856 67	618,150 40		657,489 88	(63,179 00)
Street light and signal system exp	5850	162,030 20	0 00	25,818 41		136,211 78	(4,615 68)
Meter expenses	5860	3,819,315 90	256,176 75	2,568,021 78		995,117 37	(367,579 88)
Customer installation expenses	5870	410,741 85	8,611 21	261,908 04		140,222 60	(28,262 01)
Miscellaneous distribution expenses	5880	20,017,606 33	1,135,763 67	9,303,951 96		9,577,890 70	1,452,274 47
Rents	5890	889,843 00	27,046 44	0 00	862,796 56	0 00	0 00
Maintenance supervision and engineer	5900	166,883 08	13,128 53	122,227 37		31,527 18	(16,618 57)
Maintenance of structures	5910	39,491 11	800 23	6,926 67		31,764 21	(373 87)
Maintenance of station equipment	5920	2,040,674 45	144,287 22	676,655 72		1,219,731 51	(48,913 89)

Sponsored By, Michael Baird

SOUTHWESTERN ELECTRIC POWER COMPANY
Analysis of cost of service activity
For the Test Year Ended March 31, 2020

(1) Description	(2) Account No	(9) Revenue Deficiency Adjustments Sch A	(10) Total Company Proforma
Generation expenses	5480		11,029 78
Misc other power generation expenses	5490		0 00
Underground Storage Expenses	8140		0 00
Maint Supv & Engineering	5510		0 00
Maintenance of structures	5420/5440/5520		(1,495 93)
Maintenance of generating and elec plant	5530		476,442 53
Maint of Misc other power gen plant	5540		0 00
Purchased power and power exchange	5550		6,621,669 51
System control and load dispatching	5560		0 00
Other Production Expense	5570		(266,445 84)
Operation supervision and engineer	5600		1,189,632 11
Load dispatch - reliability	5611		0 00
Load dispatch - monitor and operate trans sys	5612		(694 03)
Load dispatch - trans service and scheduling	5613		0 00
Scheduling, system control and disatch services	5614		0 00
Reliability planning and standards development	5615		0 00
Reliability planning and standards devel services	5618		0 00
Station expenses	5620		930,320 87
Overhead line expenses	5630		363,187 17
Underground line expenses	5640		0 00
Transmission of electricity by others	5650		152,526,905.31
Miscellaneous transmission expenses	5660		907,960.75
Rents	5670		0 00
SPP Admin-MAM&SC	5757		0 00
Maintenance supervision and engineering	5680		2,434 95
Maintenance of structures	5690		30,881 41
Maintenance of computer hardware	5691		(0 00)
Maintenance of computer software	5692		0 00
Maintenance of computer equipment	5693		0 00
Maintenance of station equipment	5700		1,189,540 70
Maintenance of overhead lines	5710		13,908,609 16
Maintenance of Underground Lines	5720		0 00
Maintenance of Miscellaneous Transmission Plant	5730		0 00
Operation supervision and engineer	5800		448,062 80
Load dispatching	5810		46,887 64
Station expenses	5820		319,356 96
Overhead line expenses	5830		2,940,126 01
Underground line expenses	5840		594,310 88
Street light and signal system exp	5850		131,596 11
Meter expenses	5860		627,537 49
Customer installation expenses	5870		111,960 59
Miscellaneous distribution expenses	5880		11,030,165 17
Rents	5890		0 00
Maintenance supervision and engineer	5900		14,908 61
Maintenance of structures	5910		31,390 34
Maintenance of station equipment	5920		1,170,817 61

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SOUTHWESTERN ELECTRIC POWER COMPANY
Analysis of cost of service activity
For the Test Year Ended March 31, 2020

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Description	Account No	Book	Affiliate	Payroll	Schedule A-5	Test Year Actual	Proforma Adjustments WP A 1
Maintenance of overhead lines	5930	57,550,018 97	175,209 46	5,680,297 86		51,694,511 65	(1,253,214 95)
Maintenance of underground lines	5940	660,415 10	663 34	184,702 21		475,049 55	(21,029 70)
Maintenance of line transformers	5950	140,635 88	16,665 18	72,805 36		51,165 33	(10,098 71)
Maint of str lighting and signal sys	5960	303,595 21	209 67	133,719 10		169,666 44	(22,844 97)
Maintenance of meters	5970	442,928 42	1,283 29	343,708 51		97,936 63	(38,034 12)
Maintenance of misc distrib plant	5980	371,392 87	32 81	203,351 12		168,008 95	(21,386 10)
Supervision	9010	781,491 40	83,646 95	462,558 57		235,285 87	(72,377 45)
Meter reading expenses	9020	2,614,840 02	142,954 71	1,741,188 93		730,696 37	(193,030 57)
Customer records and collection exp	9030	17,797,556 34	12,968,284 06	2,438,820 00		2,390,452 28	(295,409 87)
Customer Deposit Interest	9030 2	0 00	0 00	0 00		0 00	1,438,096 93
Uncollectible accounts	9040	724,395 04	0 00	0 00	724,395 04	0 00	0 00
Miscellaneous customer accounts exp	9050	101,498 10	29,178 17	0 00	72,319 93	0 00	0 00
Factoring Expense	426 5	9,711,824 54	0 00	0 00		9,711,824 54	(1,296,218 88)
Supervision	9070	7,429,118 52	146,609 83	975,873 86		6,306,634 83	(6,760,172 17)
Customer assistance expenses	9080	15,029,495 51	199,925 06	1,886,333 21		12,943,237 23	(12,802,370 57)
DSM amortization expense	9080	0 00	0 00	0 00		0 00	0 00
Informational and instructional expenses	9090	0 00	0 00	0 00	0 00	0 00	0 00
Misc cust service and informational exp	9100	27,408 60	27,408 60	0 00	0 00	0 00	0 00
Supervision	9110	2,198 44	2,198 44	0 00	(0 00)	0 00	0 00
Demonstrating and selling expenses	9120	265,975 80	148,452 80	0 00		117,523 00	(85 79)
Administrative and general salaries	9200	32,325,718 28	28,577,478 37	4,325,627 85		(577,387 94)	(563,852 27)
Office supplies and expenses	9210	2,947,644 09	2,115,524 89	0 00		832,119 20	(10,105 69)
Admin expenses transferred - Cr	9220	(4,430,968 75)	0 01	(2,057,087 95)		(2,373,880 81)	9 22
Outside services employed	9230	9,712,499 73	4,849,159 44	0 00	4,863,340 29	0 00	0 00
Property insurance	9240	2,428,223 48	1,749 04	0 00		2,426,474 44	1,689,700 00
Injuries and damages	9250	3,657,677 43	27,152 95	203,305 74		3,427,218 75	(27,086 75)
Employee pensions and benefits	9260	13,373,090 99	48,521 31	0 00		13,324,569 68	2,919,629 15
Regulatory commission expenses	9280	2,624,761 29	1,813,682 90	1,994 70		809,083 69	(758,078 62)
General advertising expenses	9301	318,019 30	22,305 61	0 00		295,713 69	(493 18)
Miscellaneous general expenses	9302	1,724,289 81	643,233 58	110,133 05		970,923 18	1,647,612 08
Rents	9310	1,008,536 69	82,923 08	0 00	925,613 61	0 00	0 00
Maintenence of general plant	9350	6,436,014 08	3,090,965 03	1,590,352 34		1,754,696 71	(103,495 98)
Gain from Disposition of Allowances				0 00		0 00	0 00
		1,096,638,043 13	95,184,384 24	74,407,711 87	22,836,617 28	904,209,329 74	(539,059,299 26)
			Sch G-6	WP A-2 3	Sch A-5		
Affiliate		0 00					
Payroll							
TY O&M Not Adjusted		1,096,638,043 13					
		0 00					

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SOUTHWESTERN ELECTRIC POWER COMPANY
Analysis of cost of service activity
For the Test Year Ended March 31, 2020

(1) Description	(2) Account No	(9) Revenue Deficiency Adjustments Sch A	(10) Total Company Proforma
Maintenance of overhead lines	5930		50,441,296 70
Maintenance of underground lines	5940		454,019 86
Maintenance of line transformers	5950		41,066 63
Maint of str lighting and signal sys	5960		146,821 46
Maintenance of meters	5970		59,902 51
Maintenance of misc distrib plant	5980		146,622 85
Supervision	9010		162,908 42
Meter reading expenses	9020		537,665 80
Customer records and collection exp	9030		2,095,042 41
Customer Deposit Interest	9030 2		1,438,096 93
Uncollectible accounts	9040		0 00
Miscellaneous customer accounts exp	9050		0 00
Factoring Expense	426 5	1,190,698 99	9,606,304 64
Supervision	9070		(453,537 34)
Customer assistance expenses	9080		140,866 67
DSM amortization expense	9080		0 00
Informational and instructional expenses	9090		0 00
Misc cust service and informational exp	9100		0 00
Supervision	9110		0 00
Demonstrating and selling expenses	9120		117,437 21
Administrative and general salaries	9200		(1,141,240 21)
Office supplies and expenses	9210		822,013 51
Admin expenses transferred - Cr	9220		(2,373,871 59)
Outside services employed	9230		0 00
Property insurance	9240		4,116,174 44
Injuries and damages	9250		3,400,131 99
Employee pensions and benefits	9260		16,244,198 83
Regulatory commission expenses	9280		51,005 07
General advertising expenses	9301		295,220 51
Miscellaneous general expenses	9302		2,618,535 26
Rents	9310		0 00
Maintenence of general plant	9350		1,651,200 73
Gain from Disposition of Allowances			0 00
		1,190,698 99	366,340,729 47
Affiliate			87,635,146 16
Payroll			76,551,424 44
TY O&M Not Adjusted			22,836,617 28
			553,363,917 35
			Sch A, ln 3,4

Sponsored By, Michael Baird

SOUTHWESTERN ELECTRIC POWER COMPANY
Affiliate billings - Summary of Schedule G-6 1 by FERC account
For the Test Year Ended March 31, 2020

(1) FERC Acct	(2) Test Year Actual
5000	15,196,385
5010	934,725
5020	194,210
5050	4,954
5060	(455 629)
5070	3,339
5100	401,520
5110	612,336
5120	1,611,489
5130	455,951
5140	163,006
5170	(19 65)
5200	51 25
5240	1,811 78
5280	6,291 12
5290	362 48
5300	44 20
5310	255 63
5320	582 16
5350	5,068 06
5370	1,132 07
5390	6,478 79
5420	306
5430	(47)
5440	(464)
5450	1,149
5460	(556)
5470	(118)
5490	6,171
5510	(35)
5530	12,975
5550	(3)
5560	1,506,164
5570	3,569,751
5600	7,758,807
5612	1,073,705
5613	(6 131)
5615	251,857
5620	33,463
5630	45,098
5640	44,189
5660	2,365,116
5670	133
5680	9,842
5690	374
5691	9,937
5692	280,999
5693	63
5700	359,858
5710	225,520
5720	(120)
5730	12,864
5800	1,441,672
5810	14,613
5820	98,678
5830	15,121

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SOUTHWESTERN ELECTRIC POWER COMPANY
Affiliate billings - Summary of Schedule G-6 1 by FERC account
For the Test Year Ended March 31, 2020

(1) FERC Acct	(2) Test Year Actual
5840	107,857
5860	256,177
5870	8,611
5880	1,135,764
5890	27,046
5900	13,129
5910	800
5920	144,287
5930	175,209
5940	663
5950	16,665
5960	210
5970	1,283
5980	33
9010	83,647
9020	142,955
9030	12,968,284
9050	29,178
9070	146,610
9080	199,925
9090	0
9100	27,409
9110	2,198
9120	148,453
9200	28,577,478
9210	2,115,525
9220	0
9230	4,849,159
9240	1,749
9250	27,153
9260	48,521
9280	1,813,683
9301	22,306
9302	643,234
9310	82,923
9350	3,090,965
	95,184,384

Sponsored By: Michael Baird

SOUTHWESTERN ELECTRIC POWER COMPANY
Payroll by FERC - summary of WP G-1 3 detail
For the Test Year Ended March 31, 2020

FERC	Total	
1070	30,831,093 27	
1080	5,789,925 40	36,621,018 67
1510	426,890 48	
1520	3,911,766 75	
1630	0 00	
1830	0 00	
1840	0 00	
1850	169,598 01	
1860	230,580 73	
1880	(1 060 85)	
2420	0 00	
4010	5,581 07	
4264	212,821 72	
4265	80,420 87	
4560	(46 033 45)	4,990,565 33
5000	5,273,165 54	
5010	50,682 31	
5020	6,857,893 21	
5050	7,117,975 61	
5060	3,180,083 01	
5100	3,928,391 88	
5110	831,627 27	
5120	8,195,282 43	
5130	1,748,176 30	
5140	1,847,164 41	
5420	196 70	
5440	1,125 43	
5480	206,327 41	
5520	985 67	
5530	312,657 10	
5600	1,453,938 91	
5612	694 47	
5620	242,444 96	
5630	20,394 23	
5660	296,121 33	
5680	3,234 79	
5690	4,743 03	
5700	1,013,440 12	
5710	365,267 36	
5800	655,175 46	
5820	305,878 90	
5830	(1 386 700 78)	
5840	618,150 40	
5850	25,818 41	
5860	2,568,021 78	
5870	261,908 04	
5880	9,303,951 96	
5900	122,227 37	
5910	6,926 67	
5920	676,655 72	
5930	5,680,297 86	
5940	184,702 21	
5950	72,805 36	
5960	133,719 10	
5970	343,708 51	
5980	203,351 12	
9010	462,558 57	
9020	1,741,188 93	
9030	2,438,820 00	
9070	975,873 86	
9080	1,886,333 21	
9200	4,325,627 85	
9220	(2 057 087 95)	
9250	203,305 74	
9260	0	
9280	1,994 70	
9302	110,133 05	
9350	1,590,352 34	74,407,711 87
Total	116,019,295 87	116,019,295 87
	G-1 1	

SOUTHWESTERN ELECTRIC POWER COMPANY
Other Rate Base Additions and Deductions
For the Test Year Ended March 31, 2020

Line No	(1)	(2) Test Year Actual	(3) Company Adjustments to Test Year	(4) Company Request
1	Other Rate Base Additions			
2	Leases	74,777,296	(74,777,296)	0
3	Completed construction not classified	319,647,154	0	319,647,154
4	Plant Acquisition	18,043,976	(18,043,976)	0
5	Dolet Hills Mine FAS 143 ARO Asset	61,976,617	(61,976,617)	0
6	Electric Plant Purchased or Sold	64,005	(64,005)	0
7	SFAS #106 Medicare Subsidy	2,533,221	0	2,533,221
8	Trading Deposits	2,092,064	0	2,092,064
9	Investment in Oxbow	0	16,576,181	16,576,181
10	Total Other Rate Base Additions	479,134,333	(138,285,713)	340,848,620
11	Other Rate Base Deductions			
12	SFAS #109 Regulatory Assets & Liabilities	(412,675,887)	35,506,181	(377,169,706)
13	Other Electric Plant Adjustments	(70,857,434)	0	(70,857,434)
14	Sabine mine reclamation	(0)	(64,960,236)	(64,960,236)
15	IPP Credit	(7,532,556)	0	(7,532,556)
16	Excess Earnings deferral	(2,453,476)	0	(2,453,476)
17	Advances for Construction	0	0	0
18	T V Pole Attachments	(831,313)	0	(831,313)
19	Total Other Rate Base Deductions	(81,674,778)	(64,960,236)	(146,635,014)

Sponsored By Michael Baird

Date of Storm/Index	Distribution Gross Loss	Handy-Whitman Index	Interpolated Index	Trend Factor	Trended Loss	Semi-Annual Total	Annual Total
01/01/00		304					
07/01/00		310					
12/25/00	14,634,881		315 772	2 318	33,923,654		
01/01/01		316				33,923,654	33,923,654
07/01/01		320				0	
01/01/02		326				0	0
07/01/02		326				0	
01/01/03		329				0	0
07/01/03		331				0	
01/01/04		335				0	0
06/15/04	641,212		353 242	2 072	1,328,591		
07/01/04		355				1,328,591	
01/01/05		368				0	1,328,591
07/01/05		377				0	
09/23/05	1,544,036		387 957	1 887	2,913,595		
11/27/05	38,659		396 435	1 846	0		
01/01/06		401				2,913,595	2,913,595
01/12/06	3,008		402 276	1 820	0		
02/18/06	80,574		406 569	1 800	0		
03/09/06	37,147		408 773	1 791	0		
07/01/06		422				0	
01/01/07		451				0	0
01/15/07	27,332		451 619	1 621	0		
02/24/07	74,388		453 387	1 615	0		
03/27/07	3,490		454 757	1 610	0		
06/03/07	19,999		457 762	1 599	0		
06/26/07	98,525		458 779	1 596	0		
07/01/07		459				0	
07/05/07	10,764		460 348	1 590	0		
01/01/08		521				0	0
01/29/08	47,598		519 923	1 408	0		
02/05/08	7,130		519 654	1 409	0		
03/18/08	102,349		518 038	1 413	0		
03/29/08	156,473		517 615	1 414	0		
04/10/08	45,408		517 154	1 415	0		
05/07/08	23,936		516 115	1 418	0		
05/11/08	9,213		515 962	1 419	0		
05/13/08	56,330		515 885	1 419	0		
05/14/08	73,693		515 846	1 419	0		
05/22/08	145,266		515 538	1 420	0		
06/14/08	45,678		514 654	1 422	0		
06/17/08	26,175		514 538	1 423	0		
06/28/08	59,362		514 115	1 424	0		
07/01/08		514				0	
07/13/08	30,181		515 370	1 420	0		
07/23/08	6,043		516 511	1 417	0		
08/29/08	11,324		520 734	1 406	0		
09/01/08	294,775		521 076	1 405	0		
09/12/08	2,245,332		522 332	1 401	3,145,709		
01/01/09		535				3,145,709	3,145,709
02/11/09	32,539		532 055	1 376	0		
04/02/09	19,025		528 464	1 385	0		
04/11/09	18,179		527 818	1 387	0		
05/02/09	96,286		526 309	1 391	0		
05/09/09	26,235		525 807	1 392	0		
06/10/09	70,505		523 508	1 398	0		
07/01/09		522				0	
07/16/09	30,775		523 793	1 397	0		
07/28/09	46,391		525 228	1 394	0		
10/01/09	30,465		533 000	1 373	0		
10/09/09	232,044		533 957	1 371	0		
10/29/09	28,910		536 348	1 365	0		
12/24/09	30,764		543 043	1 348	0		
01/01/10		544				0	0
01/20/10	12,967		544 945	1 343	0		
01/28/10	130,087		545 343	1 342	0		
02/11/10	732,724		546 039	1 341	982,582		
04/23/10	87,697		549 569	1 332	0		
04/30/10	1,985		549 917	1 331	0		
06/09/10	47,818		551 906	1 326	0		
07/01/10		553				982,582	
07/08/10	857		553 380	1 323	0		

Date of Storm/Index	Distribution Gross Loss	Handy-Whitman Index	Interpolated Index	Trend Factor	Trended Loss	Semi-Annual Total	Annual Total
07/26/10	6,918		554 359	1 320	0		
08/06/10	25,438		554 957	1 319	0		
10/11/10	22,991		558 543	1 311	0		
10/25/10	52,744		559 304	1 309	0		
11/01/10	4,770		559 685	1 308	0		
01/01/11		563				0	982,582
01/10/11	891,110		563 746	1 298	1,156,661		
02/01/11	65,603		565 569	1 294	0		
02/04/11	11,200		565 818	1 294	0		
02/09/11	2,876		566 232	1 293	0		
02/24/11	33,693		567 475	1 290	0		
02/28/11	5,851		567 807	1 289	0		
04/04/11	38,066		570 707	1 283	0		
04/15/11	33,429		571 619	1 281	0		
04/25/11	207,202		572 448	1 279	0		
05/02/11	36,644		573 028	1 277	0		
05/12/11	11,164		573 856	1 276	0		
05/23/11	30,099		574 768	1 274	0		
06/05/11	54,398		575 845	1 271	0		
06/20/11	19,021		577 088	1 268	0		
06/28/11	122,600		577 751	1 267	0		
06/30/11	46,621		577 917	1 267	0		
07/01/11		578				1,156,661	
07/04/11	57,614		578 065	1 266	0		
07/14/11	5,572		578 283	1 266	0		
07/24/11	9,520		578 500	1 265	0		
08/21/11	20,916		579 109	1 264	0		
08/24/11	122,072		579 174	1 264	0		
09/04/11	158,395		579 413	1 263	0		
10/17/11	24,354		580 348	1 261	0		
11/08/11	6,869		580 826	1 260	0		
11/15/11	928		580 978	1 260	0		
11/22/11	4,543		581 130	1 260	0		
01/01/12		582				0	1,156,661
01/09/12	12,948		582 440	1 257	0		
01/22/12	3,268		583 154	1 255	0		
01/25/12	10,856		583 319	1 255	0		
02/23/12	13,849		584 912	1 251	0		
03/08/12	50,650		585 681	1 250	0		
03/20/12	60,062		586 341	1 248	0		
04/02/12	134,954		587 055	1 247	0		
04/15/12	11,292		587 769	1 245	0		
04/20/12	14,766		588 044	1 245	0		
05/07/12	251,131		588 978	1 243	0		
05/15/12	6,411		589 418	1 242	0		
05/30/12	44,439		590 242	1 240	0		
06/07/12	7,330		590 681	1 239	0		
06/12/12	92,442		590 956	1 239	0		
07/01/12		592				0	
07/09/12	126,129		592 652	1 235	0		
07/21/12	23,063		593 630	1 233	0		
07/26/12	15,825		594 038	1 232	0		
08/05/12	52,143		594 853	1 231	0		
08/08/12	217,556		595 098	1 230	0		
08/15/12	38,502		595 668	1 229	0		
08/17/12	37,498		595 832	1 229	0		
08/29/12	38,082		596 810	1 227	0		
09/29/12	92,155		599 337	1 221	0		
10/14/12	31,866		600 560	1 219	0		
11/11/12	25,590		602 842	1 214	0		
12/20/12	298,167		606 022	1 208	0		
12/25/12	71,218		606 429	1 207	0		
01/01/13		607				0	0
01/29/13	68,164		608 392	1 203	0		
02/10/13	8,060		608 989	1 202	0		
02/18/13	63,072		609 387	1 201	0		
03/10/13	33,162		610 381	1 199	0		
03/31/13	96,311		611 425	1 197	0		
04/18/13	17,752		612 320	1 195	0		
05/15/13	57,059		613 663	1 193	0		
05/21/13	293,089		613 961	1 192	0		
06/06/13	16,111		614 757	1 191	0		

Date of Storm/Index	Distribution Gross Loss	Handy-Whitman Index	Interpolated Index	Trend Factor	Trended Loss	Semi-Annual Total	Annual Total
06/17/13	18,425		615 304	1 190	0		
07/01/13		616				0	
07/12/13	16,260		616 658	1 187	0		
07/19/13	6,257		617 076	1 186	0		
08/01/13	21,779		617 853	1 185	0		
08/10/13	10,058		618 391	1 184	0		
09/01/13	78,085		619 707	1 181	0		
09/11/13	23,160		620 304	1 180	0		
09/16/13	2,192		620 603	1 179	0		
09/20/13	107,651		620 842	1 179	0		
09/28/13	12,386		621 321	1 178	0		
10/27/13	4,802		623 054	1 175	0		
10/30/13	78,866		623 234	1 175	0		
01/01/14		627				0	0
01/04/14	12,987		627 116	1 167	0		
01/28/14	39,616		628 044	1 166	0		
02/11/14	93,999		628 586	1 165	0		
02/20/14	7,060		628 934	1 164	0		
03/02/14	814,915		629 320	1 163	947,746		
03/29/14	26,241		630 365	1 161	0		
04/03/14	19,688		630 558	1 161	0		
04/06/14	29,373		630 674	1 161	0		
04/13/14	8,771		630 945	1 160	0		
04/26/14	2,278		631 448	1 159	0		
04/28/14	14,483		631 525	1 159	0		
05/08/14	35,220		631 912	1 158	0		
05/12/14	411,547		632 066	1 158	0		
07/01/14		634				947,746	
07/23/14	176,933		635 793	1 151	0		
10/02/14	76,492		641 582	1 141	0		
10/13/14	42,922		642 478	1 139	0		
01/01/15		649				0	947,746
01/14/15	8,490		649 000	1 128	0		
02/23/15	116,598		649 000	1 128	0		
02/25/15	128,385		649 000	1 128	0		
04/09/15	56,369		649 000	1 128	0		
04/16/15	82,330		649 000	1 128	0		
04/24/15	164,760		649 000	1 128	0		
05/07/15	7,203		649 000	1 128	0		
05/10/15	110,415		649 000	1 128	0		
05/24/15	2,462,740		649 000	1 128	2,777,970		
06/17/15	14,499		649 000	1 128	0		
07/01/15		649				2,777,970	
08/19/15	42,315		651 397	1 124	0		
10/23/15	50,741		654 576	1 118	0		
10/30/15	10,347		654 918	1 118	0		
11/17/15	84,029		655 799	1 116	0		
11/27/15	57,589		656 288	1 115	0		
12/13/15	30,017		657 071	1 114	0		
12/27/15	443,670		657 755	1 113	0		
01/01/16		658				0	2,777,970
02/08/16	18,694		658 000	1 112	0		
02/23/16	4,751		658 000	1 112	0		
03/09/16	140,913		658 000	1 112	0		
03/23/16	51,523		658 000	1 112	0		
03/30/16	1,918		658 000	1 112	0		
04/11/16	8,759		658 000	1 112	0		
04/27/16	28,265		658 000	1 112	0		
04/29/16	306,120		658 000	1 112	0		
05/09/16	153,518		658 000	1 112	0		
05/26/16	25,533		658 000	1 112	0		
07/01/16		658				0	
07/10/16	12,121		658 685	1 111	0		
07/14/16	33,103		658 989	1 111	0		
07/25/16	3,327		659 826	1 109	0		
07/27/16	31,438		659 978	1 109	0		
08/06/16	21,842		660 739	1 108	0		
08/08/16	5,614		660 891	1 108	0		
08/12/16	6,944		661 196	1 107	0		
08/16/16	49,058		661 500	1 107	0		
08/23/16	14,677		662 033	1 106	0		
08/28/16	2,358		662 413	1 105	0		

Date of Storm/Index	Distribution Gross Loss	Handy-Whitman Index	Interpolated Index	Trend Factor	Trended Loss	Semi-Annual Total	Annual Total
11/28/16	60,024		669 413	1 093	0		
12/18/16	8,462		670 935	1 091	0		
01/01/17		672				0	0
01/02/17	9,724		672 071	1 089	0		
01/10/17	8,091		672 641	1 088	0		
01/21/17	40,771		673 425	1 087	0		
02/19/17	35,985		675 490	1 084	0		
04/10/17	33,468		679 052	1 078	0		
04/29/17	196,564		680 405	1 076	0		
05/03/17	134,678		680 690	1 075	0		
05/11/17	26,327		681 260	1 074	0		
05/19/17	10,804		681 830	1 074	0		
05/28/17	3,954,987		682 471	1 073	4,243,701		
06/23/17	13,008		684 323	1 070	0		
07/01/17		684	684 893	1 069			
07/01/17	386,130		684 893	1 069	0		
07/09/17	5,142		685 463	1 068	0		
07/23/17	3,429		686 460	1 066	0		
01/01/18		698				4,243,701	4,243,701
01/11/18	7,911		698 663	1 048	0		
01/21/18	50,137		699 326	1 047	0		
02/07/18	7,333		700 453	1 045	0		
02/20/18	16,611		701 315	1 044	0		
02/28/18	39,861		701 845	1 043	0		
03/11/18	27,013		702 575	1 042	0		
03/28/18	33,912		703 702	1 040	0		
04/03/18	79,976		704 099	1 040	0		
04/06/18	49,515		704 298	1 039	0		
04/13/18	468,039		704 762	1 039	0		
05/04/18	20,150		706 155	1 037	0		
06/05/18	23,463		708 276	1 033	0		
07/01/18		710				0	
07/03/18	135,204		710.239	1 031	0		
07/30/18	8,982		713 467	1 026	0		
10/09/18	38,629		721 957	1 014	0		
10/31/18	39,856		724 587	1 010	0		
12/07/18	23,631		729 011	1 004	0		
12/26/18	171,500		731 283	1 001	0		
01/01/19		732				0	0
01/18/19	33,529		732 000	1 000	0		
02/23/19	33,327		732 000	1 000	0		
03/09/19	7,507		732 000	1 000	0		
03/14/19	427,961		732 000	1 000	0		
03/25/19	23,876		732 000	1 000	0		
04/07/19	37,742		732 000	1 000	0		
04/13/19	109,073		732 000	1 000	0		
04/17/19	93,571		732 000	1 000	0		
05/01/19	116,579		732 000	1 000	0		
05/08/19	6,407,780		732 000	1 000	6,407,780		
05/18/19	35,021		732 000	1 000	0		
06/19/19	399,961		732 000	1 000	0		
06/22/19	182,018		732 000	1 000	0		
07/01/19		732				6,407,780	
07/10/19	196,374		732 000	1 000	0		
08/18/19	6,528		732 000	1 000	0		
09/03/19	13,948		732 000	1 000	0		
01/01/20		732				0	6,407,780
01/11/20	433,254		732 000	1 000	0		
07/01/20		732				0	0
Total							57,827,989

Total Number of Claims	233
Number of Years	20
Average per year	11 506
Avg Natural Log of Losses	10 701369
Std Dev of above	1 535254

SOUTHWESTERN ELECTRIC POWER COMPANY
COMMON EQUITY
For the Test Year Ending March 31, 2020

Line No	Acct No	Description	Per Books March 31, 2020		Adjustments	Test Year March 31, 2020
1	2010001	Common Stock Issued-Affiliated	135,659,520			135,659,520
2	2100000	Gain Rsle/Cancl Req Cap Stock	2,106,937			2,106,937
4	2110000	Miscellaneous Paid-In Capital	674,443,764			674,443,764
5	2190007	OCI-Min Pen Liab FAS 158-OPEB	(8,219)	(1)	8,219	0
7	2190015	Accum OCI-Hdg-CF-Int Rate	(1,259,816)	(2)	1,259,816	0
8	2190016	Accum OCI-Hdg-CF-For Exchg	0		0	0
10	2160001	Unapprp Retnd Erngs-Unrstrictd	1,608,054,013			1,608,054,013
11	2161001	Unap Undist Consol Sub Erng	11,487,148			11,487,148
12	2161002	Unap Undist Nonconsol Sub Erng	26,782,850			26,782,850
13						
14						0
15			2,457,266,197		1,268,035	2,458,534,232
16						

17 Adjustments
18
19 (1) Eliminate OCI since charge has not been reflected in operating income
20 (2) Includes Settled Interest Swaps reclassified to long term debt and included in Schedule K-3
21

AEP - SOUTHWESTERN ELECTRIC POWER COMPANY
ADJUSTED WEIGHTED COST OF DEBT - TEST YEAR SUPPORT
As of March 31, 2020

ISSUE COSTS

Account 181 Sr Unsecured Notes	Account	Debt Issuance Costs at 3/31/2020	Pro Forma Adjustments	Balance Reclassification	Adjusted Bal 3/31/2020
Series I	1810006	393,362			393 362
Series K	1810006	2,020,652			2,020 652
Series M	1810006	3 915,731			3 915 731
Series H	1810006	2,236,734			2,236,734
Series J	1810006	3,312,822			3,312,822
Series L	1810006	4,355,163			4,355,163
		16,234,464	0	0	16,234 464
Pollution Control Bonds		0			0
		16,234,464	0	0	16,234,464
Local Bank Cr Facility	1810003	31,330	173,571		204,901
Book Balance		16 265 793	173 571	0	16,439,364

AEP - SOUTHWESTERN ELECTRIC POWER COMPANY
ADJUSTED WEIGHTED COST OF DEBT - TEST YEAR SUPPORT
As of March 31, 2020

DISCOUNT	Account	Debt Discount Costs at 3/31/2020	Pro Forma Adjustments	Balance Reclassification	Adjusted Bal 3/31/2020
Account 226					
Sr Unsecured Notes					
Series I	2260006	258,990			258,990
Series K	2260006	266,934			266 934
Series M	2260006	0			0
Series H	2260006	97,800			97,800
Series J	2260006	2,945,973			2,945,973
Series L	2260006	896,496			896,496
		4 466,191	0	0	4,466,191
Pollution Control Bonds		0			0
		4,466,191	0	0	4 466,191
Debt Issue + Discount		20,731,985		0	20,905,556

AEP - SOUTHWESTERN ELECTRIC POWER COMPANY
ADJUSTED WEIGHTED COST OF DEBT - TEST YEAR SUPPORT
As of March 31, 2020

LOSS ON REACQUIRED DEBT
Account 189 & 257

	Account	3/31/2020 Unamortized Balance	Pro Forma Adjustments	Balance Reclassification	Adjusted Bal 3/31/2020	Annual Amortization
BB Series	1890001	761,735			761,735	152,347
Z Series	1890001	1,123 183			1,123,183	47,795
L Series	1890001	1,247			1,247	0
1992 Desoto	1890002	76,654			76,654	49,063
Capital I Trust	1890004	1,748 105			1,748,105	73,971
G Series	1890006	2,742,205			2,742,205	325,661
		6,453,129	0	0	6,453,129	648,838
Gain on Reacquired Debt						
Gain L Series	2570001	(484)	484		0	0
TOTAL		6,452,644	484	0	6,453,129	648,838

2) *SWEPCo - 2018 T-Lock Gains*

A) *Monthly Journal Entry & Reconciliation Worksheet:*

Linked to Summary
09/30/18

Business Unit	Business Unit Name	Account	Account Desription
111	TX Transmission	2190015	AOCI
		2830015	ADIT
		4270006	Interest Expense
159	Distribution	2190015	AOCI
		2830015	ADIT
		4270006	Interest Expense
161	TX Distribution	2190015	AOCI
		2830015	ADIT
		4270006	Interest Expense
168	Generation	2190015	AOCI
		2830015	ADIT
		4270006	Interest Expense
194	Transmission	2190015	AOCI
		2830015	ADIT
		4270006	Interest Expense

ii) Amortization JEs & Schedule.

Month	Notes	Balance (Gain) / Loss	Corp. Tax Rate
09/12/18		$ (2,913,404 86)	21%
09/30/18		$ (2,898,837 84)	21%
10/31/18		$ (2,874,559 46)	21%
11/30/18		$ (2,850,281 09)	21%
12/31/18		$ (2,826,002 71)	21%
01/31/19		$ (2,801,724 34)	21%
02/28/19		$ (2,777,445 97)	21%
03/31/19		$ (2,753,167 59)	21%
04/30/19		$ (2,728,889 22)	21%
05/31/19		$ (2,704,610 85)	21%
06/30/19		$ (2,680,332 47)	21%
07/31/19		$ (2,656,054 10)	21%
08/31/19		$ (2,631,775 72)	21%
09/30/19		$ (2,607,497 35)	21%
10/31/19		$ (2,583,218 98)	21%
11/30/19		$ (2,558,940 60)	21%
12/31/19		$ (2,534,662 23)	21%
01/31/20		$ (2,510,383 85)	21%
02/29/20		$ (2,486,105 48)	21%
03/31/20		$ (2,461,827 11)	21%
04/30/20		$ (2,437,548 73)	21%
05/31/20		$ (2,413,270 36)	21%
06/30/20		$ (2,388,991 99)	21%
07/31/20		$ (2,364,713 61)	21%
08/31/20		$ (2,340,435 24)	21%
09/30/20		$ (2,316,156 86)	21%
10/31/20		$ (2,291,878 49)	21%
11/30/20		$ (2,267,600 12)	21%
12/31/20		$ (2,243,321 74)	21%
01/31/21		$ (2,219,043 37)	21%
02/28/21		$ (2,194,764 99)	21%
03/31/21		$ (2,170,486 62)	21%
04/30/21		$ (2,146,208 25)	21%

05/31/21	$	(2,121,929.87)	21%
06/30/21	$	(2,097,651.50)	21%
07/31/21	$	(2,073,373.13)	21%
08/31/21	$	(2,049,094.75)	21%
09/30/21	$	(2,024,816.38)	21%
10/31/21	$	(2,000,538.00)	21%
11/30/21	$	(1,976,259.63)	21%
12/31/21	$	(1,951,981.26)	21%
01/31/22	$	(1,927,702.88)	21%
02/28/22	$	(1,903,424.51)	21%
03/31/22	$	(1,879,146.13)	21%
04/30/22	$	(1,854,867.76)	21%
05/31/22	$	(1,830,589.39)	21%
06/30/22	$	(1,806,311.01)	21%
07/31/22	$	(1,782,032.64)	21%
08/31/22	$	(1,757,754.27)	21%
09/30/22	$	(1,733,475.89)	21%
10/31/22	$	(1,709,197.52)	21%
11/30/22	$	(1,684,919.14)	21%
12/31/22	$	(1,660,640.77)	21%
01/31/23	$	(1,636,362.40)	21%
02/28/23	$	(1,612,084.02)	21%
03/31/23	$	(1,587,805.65)	21%
04/30/23	$	(1,563,527.27)	21%
05/31/23	$	(1,539,248.90)	21%
06/30/23	$	(1,514,970.53)	21%
07/31/23	$	(1,490,692.15)	21%
08/31/23	$	(1,466,413.78)	21%
09/30/23	$	(1,442,135.41)	21%
10/31/23	$	(1,417,857.03)	21%
11/30/23	$	(1,393,578.66)	21%
12/31/23	$	(1,369,300.28)	21%
01/31/24	$	(1,345,021.91)	21%
02/29/24	$	(1,320,743.54)	21%
03/31/24	$	(1,296,465.16)	21%
04/30/24	$	(1,272,186.79)	21%
05/31/24	$	(1,247,908.42)	21%
06/30/24	$	(1,223,630.04)	21%
07/31/24	$	(1,199,351.67)	21%
08/31/24	$	(1,175,073.29)	21%
09/30/24	$	(1,150,794.92)	21%
10/31/24	$	(1,126,516.55)	21%
11/30/24	$	(1,102,238.17)	21%
12/31/24	$	(1,077,959.80)	21%
01/31/25	$	(1,053,681.42)	21%
02/28/25	$	(1,029,403.05)	21%
03/31/25	$	(1,005,124.68)	21%
04/30/25	$	(980,846.30)	21%
05/31/25	$	(956,567.93)	21%
06/30/25	$	(932,289.56)	21%
07/31/25	$	(908,011.18)	21%
08/31/25	$	(883,732.81)	21%
09/30/25	$	(859,454.43)	21%
10/31/25	$	(835,176.06)	21%
11/30/25	$	(810,897.69)	21%
12/31/25	$	(786,619.31)	21%
01/31/26	$	(762,340.94)	21%
02/28/26	$	(738,062.56)	21%
03/31/26	$	(713,784.19)	21%
04/30/26	$	(689,505.82)	21%
05/31/26	$	(665,227.44)	21%
06/30/26	$	(640,949.07)	21%
07/31/26	$	(616,670.70)	21%
08/31/26	$	(592,392.32)	21%
09/30/26	$	(568,113.95)	21%
10/31/26	$	(543,835.57)	21%
11/30/26	$	(519,557.20)	21%
12/31/26	$	(495,278.83)	21%
01/31/27	$	(471,000.45)	21%
02/28/27	$	(446,722.08)	21%
03/31/27	$	(422,443.70)	21%
04/30/27	$	(398,165.33)	21%
05/31/27	$	(373,886.96)	21%
06/30/27	$	(349,608.58)	21%
07/31/27	$	(325,330.21)	21%
08/31/27	$	(301,051.84)	21%

09/30/27	$	(276,773 46)	21%
10/31/27	$	(252,495 09)	21%
11/30/27	$	(228,216 71)	21%
12/31/27	$	(203,938 34)	21%
01/31/28	$	(179,659 97)	21%
02/29/28	$	(155,381 59)	21%
03/31/28	$	(131,103 22)	21%
04/30/28	$	(106,824 84)	21%
05/31/28	$	(82,546 47)	21%
06/30/28	$	(58,268 10)	21%
07/31/28	$	(33,989 72)	21%
08/31/28	$	(9,711 35)	21%
09/30/28	$	(0 00)	21%

Journal Entry	
Debit / (Credit)	Account Balance
$ 765.21	$ (152,276.71)
$ 203.41	$ (40,478.62)
$ (968.62)	$ 192,755.32
$ 1,643.74	$ (327,103.85)
$ 436.94	$ (86,951.66)
$ (2,080.68)	$ 414,055.50
$ 850.52	$ (169,253.08)
$ 226.09	$ (44,991.33)
$ (1,076.61)	$ 214,244.41
$ 6,727.40	$ (1,338,752.10)
$ 1,788.30	$ (355,870.81)
$ (8,515.69)	$ 1,694,622.91
$ 1,521.09	$ (302,696.15)
$ 404.34	$ (80,463.53)
$ (1,925.43)	$ 383,159.69

$ (14,567.02)

		Series M Hedge Gain
	9/12/2018 Hedging Gain Initial Balance	12/31/2018 Hedging Gain Balance
AOCI deferred	$ (2,301,589.84)	$ (2,232,542.14)
ADIT	(611,815.02)	(593,460.57)
	$ (2,913,404.86)	$ (2,826,002.71)
Annual Amortization		291,340.49

Monthly Allocation Factors by AEP BU:					Sum of
111	159	161	168	194	AOCI
TX Transmission	*Distribution*	*TX Distribution*	*Generation*	*Transmission*	*2190015*
6.65%	14.28%	7.39%	58.46%	13.22%	$ (2,301,589.84)
6.65%	14.28%	7.39%	58.46%	13.22%	$ 11,507.95
6.65%	14.28%	7.39%	58.46%	13.22%	$ 19,179.92
6.65%	14.28%	7.39%	58.46%	13.22%	$ 19,179.92
6.65%	14.28%	7.39%	58.46%	13.22%	$ 19,179.92
6.65%	14.28%	7.39%	58.46%	13.22%	$ 19,179.92
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6.65%	14.28%	7.39%	58.46%	13.22%	$	19,179.92
6.65%	14.28%	7.39%	58.46%	13.22%	$	19,179.92
6.65%	14.28%	7.39%	58.46%	13.22%	$	7,671.97

	12/31/2019 Hedging Gain Balance
$	(2,002,383 16)
	(532,279 07)
$	(2,534,662 23)
	291,340 49

Monthly JE's - Debit / (Credit):		111			159		
ADIT	Interest Expense	TX Transmission			Distribution		
2830015	4270006	2190015	2830015	4270006	2190015	2830015	4270006
(611,815 02)	-	(153,041 91)	(40,682 03)	-	(328,747 58)	(87,388 60)	-
3,059 08	(14,567 02)	765 21	203 41	(968 62)	1,643 74	436 94	(2,080 68)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)

5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1 614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1 275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24 278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)

5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
5,098 46	(24,278 37)	1,275 35	339 02	(1,614 37)	2,739 56	728 24	(3,467 80)
2,039 38	(9,711 35)	510 14	135 61	(645 75)	1,095 83	291 30	(1,387 12)

Monthly JE's by Business Unit - Debit / (Credit):									
161			168			194			
TX Distribution			Generation			Transmission			T
2190015	2830015	4270006	2190015	2830015	4270006	2190015	2830015	4270006	2190015
(170,103 60)	(45,217 41)	-	(1,345,479 50)	(357,659 11)	-	(304,217 24)	(80,867 87)	-	(153,041 91)
850 52	226 09	(1,076 61)	6,727 40	1,788 30	(8,515 69)	1,521 09	404 34	(1,925 43)	(152,276 71)
1,417 53	**376.81**	**(1,794.34)**	**11,212.33**	**2,980.49**	**(14,192 82)**	**2,535.14**	**673.90**	**(3,209 04)**	(151,001 36)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(149,726 01)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(148,450 66)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(147,175 31)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(145,899 96)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(144,624 61)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(143,349 26)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(142,073 91)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(140,798 56)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(139,523 21)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(138,247 86)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(136,972 51)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(135,697 16)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(134,421 82)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(133,146 47)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(131,871 12)
1,417 53	376 81	- (1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(130,595 77)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(129,320 42)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(128,045 07)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(126,769 72)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(125,494 37)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(124,219 02)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(122,943 67)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(121,668 32)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(120,392 97)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(119,117 62)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(117,842 27)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(116,566 93)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(115,291 58)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(114,016 23)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(112,740 88)

1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(111,465 53)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(110,190 18)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(108,914 83)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(107,639 48)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(106,364 13)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(105,088 78)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(103,813 43)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(102,538 08)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(101,262 73)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(99,987 38)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(98,712 04)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(97,436 69)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(96,161 34)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(94,885 99)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(93,610 64)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(92,335 29)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(91,059 94)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(89,784 59)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(88,509 24)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(87,233 89)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(85,958 54)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(84,683 19)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(83,407 84)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(82,132 49)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(80,857 14)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(79,581 80)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(78,306 45)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(77,031 10)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(75,755 75)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(74,480 40)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(73,205 05)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(71,929 70)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(70,654 35)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(69,379 00)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(68,103 65)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(66,828 30)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(65,552 95)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(64,277 60)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(63,002 25)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(61,726 91)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(60,451 56)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(59,176 21)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(57,900 86)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(56,625 51)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(55,350 16)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(54,074 81)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(52,799 46)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(51,524 11)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(50,248 76)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(48,973 41)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(47,698 06)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(46,422 71)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(45,147 36)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(43,872 02)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(42,596 67)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(41,321 32)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(40,045 97)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(38,770 62)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(37,495 27)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(36,219 92)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(34,944 57)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(33,669 22)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(32,393 87)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(31,118 52)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(29,843 17)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(28,567 82)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(27,292 47)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(26,017 13)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(24,741 78)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(23,466 43)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(22,191 08)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(20,915 73)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(19,640 38)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(18,365 03)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(17,089 68)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(15,814 33)

1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(14,538 98)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(13,263 63)
1,417 53	376 81	(1,794 34)	11 212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(11,988 28)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(10,712 93)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(9,437 58)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(8,162 24)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(6,886 89)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(5,611 54)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(4,336 19)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(3,060 84)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(1,785 49)
1,417 53	376 81	(1,794 34)	11,212 33	2,980 49	(14,192 82)	2,535 14	673 90	(3,209 04)	(510 14)
567 01	150 72	(717 74)	4,484 93	1,192 20	(5,677 13)	1,014 06	269 56	(1,283 62)	(0 00)

					Monthly Account Balances & Remaining Amortization Expense by Business Unit - Debit			
111		159			161			
X Transmission		Distribution			TX Distribution			
2830015	4270006	2190015	2830015	4270006	2190015	2830015	4270006	2190015
(40,682 03)	-	(328,747 58)	(87,388 60)	-	(170,103 60)	(45,217 41)	-	(1,345,479 50)
(40,478 62)	192,755 32	(327,103 85)	(86,951 66)	414,055 50	(169,253 08)	(44,991 33)	214,244 41	(1,338,752 10)
(40,139 60)	191,140 96	(324,364 28)	(86,223 42)	410,587 70	(167,835 55)	(44,614 51)	212,450 07	(1,327,539 77)
(39,800 58)	189,526 59	(321,624 72)	(85,495 18)	407,119 90	(166,418 02)	(44,237 70)	210,655 72	(1,316,327 44)
(39,461 57)	187,912 22	(318,885 16)	(84,766 94)	403,652 10	(165,000 49)	(43,860 89)	208,861 38	(1,305,115 11)
(39,122 55)	186,297 86	(316,145 59)	(84,038 70)	400,184 30	(163,582 96)	(43,484 08)	207,067 04	(1,293,902 79)
(38,783 53)	184,683 49	(313,406 03)	(83,310 46)	396,716 49	(162,165 43)	(43,107 27)	205,272 70	(1,282,690 46)
(38,444 52)	183,069 13	(310,666 47)	(82,582 23)	393,248 69	(160,747 90)	(42,730 46)	203,478 36	(1,271,478 13)
(38,105 50)	181,454 76	(307,926 90)	(81,853 99)	389,780 89	(159,330 37)	(42,353 64)	201,684 02	(1,260,265 80)
(37,766 48)	179,840 39	(305,187 34)	(81,125 75)	386,313 09	(157,912 84)	(41,976 83)	199,889 67	(1,249,053 47)
(37,427 47)	178,226 03	(302,447 78)	(80,397 51)	382,845 29	(156,495 31)	(41,600 02)	198,095 33	(1,237,841 14)
(37,088 45)	176,611 66	(299,708 21)	(79,669 27)	379,377 49	(155,077 78)	(41,223 21)	196,300 99	(1,226,628 81)
(36,749 43)	174,997 29	(296,968 65)	(78,941 03)	375,909 69	(153,660 25)	(40,846 40)	194,506 65	(1,215,416 48)
(36,410 42)	173,382 93	(294,229 09)	(78,212 80)	372,441 88	(152,242 72)	(40,469 58)	192,712 31	(1,204,204 15)
(36,071 40)	171,768 56	(291,489 53)	(77,484 56)	368,974 08	(150,825 19)	(40,092 77)	190,917 96	(1,192,991 82)
(35,732 38)	170,154 20	(288,749 96)	(76,756 32)	365,506 28	(149,407 66)	(39,715 96)	189,123 62	(1,181,779 49)
(35,393 36)	168,539 83	(286,010 40)	(76,028 08)	362,038 48	(147,990 13)	(39,339 15)	187,329 28	(1,170,567 16)
(35,054 35)	166,925 46	(283,270 84)	(75,299 84)	358,570 68	(146,572 60)	(38,962 34)	185,534 94	(1,159,354 84)
(34,715 33)	165,311 10	(280,531 27)	(74,571 60)	355,102 88	(145,155 07)	(38,585 53)	183,740 60	(1,148,142 51)
(34,376 31)	163,696 73	(277,791 71)	(73,843 37)	351,635 07	(143,737 54)	(38,208 71)	181,946 26	(1,136,930 18)
(34,037 30)	162,082 37	(275,052 15)	(73,115 13)	348,167 27	(142,320 01)	(37,831 90)	180,151 91	(1,125,717 85)
(33,698 28)	160,468 00	(272,312 58)	(72,386 89)	344,699 47	(140,902 48)	(37,455 09)	178,357 57	(1,114,505 52)
(33,359 26)	158,853 63	(269,573 02)	(71,658 65)	341,231 67	(139,484 95)	(37,078 28)	176,563 23	(1,103,293 19)
(33,020 25)	157,239 27	(266,833 46)	(70,930 41)	337,763 87	(138,067 42)	(36,701 47)	174,768 89	(1,092,080 86)
(32,681 23)	155,624 90	(264,093 89)	(70,202 17)	334,296 07	(136,649 89)	(36,324 65)	172,974 55	(1,080,868 53)
(32,342 21)	154,010 53	(261,354 33)	(69,473 94)	330,828 27	(135,232 36)	(35,947 84)	171,180 21	(1,069,656 20)
(32,003 20)	152,396 17	(258,614 77)	(68,745 70)	327,360 46	(133,814 83)	(35,571 03)	169,385 86	(1,058,443 87)
(31,664 18)	150,781 80	(255,875 20)	(68,017 46)	323,892 66	(132,397 30)	(35,194 22)	167,591 52	(1,047,231 54)
(31,325 16)	149,167 44	(253,135 64)	(67,289 22)	320,424 86	(130,979 77)	(34,817 41)	165,797 18	(1,036,019 21)
(30,986 14)	147,553 07	(250,396 08)	(66,560 98)	316,957 06	(129,562 24)	(34,440 60)	164,002 84	(1,024,806 89)
(30,647 13)	145,938 70	(247,656 51)	(65,832 74)	313,489 26	(128,144 71)	(34,063 78)	162,208 50	(1,013,594 56)
(30,308 11)	144,324 34	(244,916 95)	(65,104 51)	310,021 46	(126,727 18)	(33,686 97)	160,414 15	(1,002,382 23)
(29,969 09)	142,709 97	(242,177 39)	(64,376 27)	306,553 65	(125,309 65)	(33,310 16)	158,619 81	(991,169 90)

(29,630 08)	141,095 60	(239,437 82)	(63,648 03)	303,085 85	(123,892 12)	(32,933 35)	156,825 47	(979,957 57)
(29,291 06)	139,481 24	(236,698 26)	(62,919 79)	299,618 05	(122,474 59)	(32,556 54)	155,031 13	(968,745 24)
(28,952 04)	137,866 87	(233,958 70)	(62,191 55)	296,150 25	(121,057 06)	(32,179 73)	153,236 79	(957,532 91)
(28,613 03)	136,252 51	(231,219 13)	(61,463 31)	292,682 45	(119,639 53)	(31,802 91)	151,442 45	(946,320 58)
(28,274 01)	134,638 14	(228,479 57)	(60,735 08)	289,214 65	(118,222 00)	(31,426 10)	149,648 10	(935,108 25)
(27,934 99)	133,023 77	(225,740 01)	(60,006 84)	285,746 85	(116,804 47)	(31,049 29)	147,853 76	(923,895 92)
(27,595 98)	131,409 41	(223,000 44)	(59,278 60)	282,279 04	(115,386 94)	(30,672 48)	146,059 42	(912,683 59)
(27,256 96)	129,795 04	(220,260 88)	(58,550 36)	278,811 24	(113,969 41)	(30,295 67)	144,265 08	(901,471 26)
(26,917 94)	128,180 68	(217,521 32)	(57,822 12)	275,343 44	(112,551 88)	(29,918 85)	142,470 74	(890,258 94)
(26,578 92)	126,566 31	(214,781 76)	(57,093 88)	271,875 64	(111,134 35)	(29,542 04)	140,676 40	(879,046 61)
(26,239 91)	124,951 94	(212,042 19)	(56,365 65)	268,407 84	(109,716 82)	(29,165 23)	138,882 05	(867,834 28)
(25,900 89)	123,337 58	(209,302 63)	(55,637 41)	264,940 04	(108,299 29)	(28,788 42)	137,087 71	(856,621 95)
(25,561 87)	121,723 21	(206,563 07)	(54,909 17)	261,472 24	(106,881 76)	(28,411 61)	135,293 37	(845,409 62)
(25,222 86)	120,108 84	(203,823 50)	(54,180 93)	258,004 43	(105,464 23)	(28,034 80)	133,499 03	(834,197 29)
(24,883 84)	118,494 48	(201,083 94)	(53,452 69)	254,536 63	(104,046 70)	(27,657 98)	131,704 69	(822,984 96)
(24,544 82)	116,880 11	(198,344 38)	(52,724 45)	251,068 83	(102,629 17)	(27,281 17)	129,910 34	(811,772 63)
(24,205 81)	115,265 75	(195,604 81)	(51,996 22)	247,601 03	(101,211 64)	(26,904 36)	128,116 00	(800,560 30)
(23,866 79)	113,651 38	(192,865 25)	(51,267 98)	244,133 23	(99,794 11)	(26,527 55)	126,321 66	(789,347 97)
(23,527 77)	112,037 01	(190,125 69)	(50,539 74)	240,665 43	(98,376 58)	(26,150 74)	124,527 32	(778,135 64)
(23,188 76)	110,422 65	(187,386 12)	(49,811 50)	237,197 62	(96,959 05)	(25,773 93)	122,732 98	(766,923 31)
(22,849 74)	108,808 28	(184,646 56)	(49,083 26)	233,729 82	(95,541 52)	(25,397 11)	120,938 64	(755,710 99)
(22,510 72)	107,193 91	(181,907 00)	(48,355 02)	230,262 02	(94,123 99)	(25,020 30)	119,144 29	(744,498 66)
(22,171 71)	105,579 55	(179,167 43)	(47,626 79)	226,794 22	(92,706 46)	(24,643 49)	117,349 95	(733,286 33)
(21,832 69)	103,965 18	(176,427 87)	(46,898 55)	223,326 42	(91,288 93)	(24,266 68)	115,555 61	(722,074 00)
(21,493 67)	102,350 82	(173,688 31)	(46,170 31)	219,858 62	(89,871 40)	(23,889 87)	113,761 27	(710,861 67)
(21,154 65)	100,736 45	(170,948 74)	(45,442 07)	216,390 82	(88,453 87)	(23,513 05)	111,966 93	(699,649 34)
(20,815 64)	99,122 08	(168,209 18)	(44,713 83)	212,923 01	(87,036 34)	(23,136 24)	110,172 58	(688,437 01)
(20,476 62)	97,507 72	(165,469 62)	(43,985 59)	209,455 21	(85,618 81)	(22,759 43)	108,378 24	(677,224 68)
(20,137 60)	95,893 35	(162,730 05)	(43,257 36)	205,987 41	(84,201 28)	(22,382 62)	106,583 90	(666,012 35)
(19,798 59)	94,278 99	(159,990 49)	(42,529 12)	202,519 61	(82,783 75)	(22,005 81)	104,789 56	(654,800 02)
(19,459 57)	92,664 62	(157,250 93)	(41,800 88)	199,051 81	(81,366 22)	(21,629 00)	102,995 22	(643,587 69)
(19,120 55)	91,050 25	(154,511 36)	(41,072 64)	195,584 01	(79,948 69)	(21,252 18)	101,200 88	(632,375 36)
(18,781 54)	89,435 89	(151,771 80)	(40,344 40)	192,116 20	(78,531 16)	(20,875 37)	99,406 53	(621,163 04)
(18,442 52)	87,821 52	(149,032 24)	(39,616 16)	188,648 40	(77,113 63)	(20,498 56)	97,612 19	(609,950 71)
(18,103 50)	86,207 15	(146,292 68)	(38,887 93)	185,180 60	(75,696 10)	(20,121 75)	95,817 85	(598,738 38)
(17,764 49)	84,592 79	(143,553 11)	(38,159 69)	181,712 80	(74,278 57)	(19,744 94)	94,023 51	(587,526 05)
(17,425 47)	82,978 42	(140,813 55)	(37,431 45)	178,245 00	(72,861 04)	(19,368 13)	92,229 17	(576,313 72)
(17,086 45)	81,364 06	(138,073 99)	(36,703 21)	174,777 20	(71,443 51)	(18,991 31)	90,434 83	(565,101 39)
(16,747 43)	79,749 69	(135,334 42)	(35,974 97)	171,309 40	(70,025 98)	(18,614 50)	88,640 48	(553,889 06)
(16,408 42)	78,135 32	(132,594 86)	(35,246 73)	167,841 59	(68,608 45)	(18,237 69)	86,846 14	(542,676 73)
(16,069 40)	76,520 96	(129,855 30)	(34,518 50)	164,373 79	(67,190 92)	(17,860 88)	85,051 80	(531,464 40)
(15,730 38)	74,906 59	(127,115 73)	(33,790 26)	160,905 99	(65,773 39)	(17,484 07)	83,257 46	(520,252 07)
(15,391 37)	73,292 23	(124,376 17)	(33,062 02)	157,438 19	(64,355 86)	(17,107 25)	81,463 12	(509,039 74)
(15,052 35)	71,677 86	(121,636 61)	(32,333 78)	153,970 39	(62,938 33)	(16,730 44)	79,668 77	(497,827 41)
(14,713.33)	70,063 49	(118,897 04)	(31,605 54)	150,502 59	(61,520 80)	(16,353 63)	77,874 43	(486,615 09)
(14,374 32)	68 449 13	(116,157 48)	(30,877 30)	147,034 78	(60,103 27)	(15,976 82)	76,080 09	(475,402 76)
(14,035 30)	66,834 76	(113,417 92)	(30,149 07)	143,566 98	(58,685 74)	(15,600 01)	74,285 75	(464,190 43)
(13,696 28)	65,220 39	(110,678 35)	(29,420 83)	140,099 18	(57,268 21)	(15,223 20)	72,491 41	(452,978 10)
(13,357 27)	63,606 03	(107,938 79)	(28,692 59)	136,631 38	(55,850 68)	(14,846 38)	70,697 07	(441,765.77)
(13,018 25)	61,991 66	(105,199 23)	(27,964 35)	133,163 58	(54,433 15)	(14,469 57)	68,902 72	(430,553 44)
(12,679 23)	60,377 30	(102,459 66)	(27,236 11)	129,695 78	(53,015 62)	(14,092 76)	67,108 38	(419,341 11)
(12,340 22)	58 762 93	(99,720 10)	(26,507 87)	126,227 98	(51 598 09)	(13,715 95)	65,314 04	(408,128 78)
(12,001 20)	57,148 56	(96,980 54)	(25,779 64)	122,760 17	(50,180 56)	(13,339 14)	63,519 70	(396,916 45)
(11,662 18)	55,534 20	(94,240 97)	(25,051 40)	119,292 37	(48,763 03)	(12,962 32)	61,725 36	(385,704 12)
(11,323 16)	53,919 83	(91,501 41)	(24,323 16)	115,824 57	(47,345 50)	(12,585 51)	59,931 02	(374,491 79)
(10,984 15)	52,305 46	(88,761 85)	(23,594 92)	112,356 77	(45,927 97)	(12,208 70)	58,136 67	(363,279 46)
(10,645 13)	50,691 10	(86,022 28)	(22,866 68)	108,888 97	(44,510 44)	(11,831 89)	56,342 33	(352,067 14)
(10,306 11)	49,076 73	(83,282 72)	(22,138 44)	105,421 17	(43,092 91)	(11,455 08)	54,547 99	(340,854 81)
(9,967 10)	47,462 37	(80,543 16)	(21,410 21)	101,953 36	(41,675 38)	(11,078 27)	52,753 65	(329 642 48)
(9,628 08)	45,848 00	(77,803 60)	(20,681 97)	98,485 56	(40,257 85)	(10,701 45)	50,959 31	(318,430 15)
(9,289 06)	44,233 63	(75,064 03)	(19,953 73)	95,017 76	(38 840 32)	(10,324 64)	49,164 96	(307,217 82)
(8,950 05)	42,619 27	(72,324 47)	(19,225 49)	91,549 96	(37,422 79)	(9,947 83)	47,370 62	(296,005 49)
(8 611 03)	41,004 90	(69,584 91)	(18,497 25)	88,082 16	(36,005 26)	(9,571 02)	45 576 28	(284,793 16)
(8,272 01)	39,390 54	(66,845 34)	(17,769 02)	84,614 36	(34,587 73)	(9,194 21)	43,781 94	(273,580 83)
(7,933 00)	37,776 17	(64,105 78)	(17,040 78)	81,146 56	(33,170 20)	(8,817 40)	41,987 60	(262,368 50)
(7,593 98)	36,161 80	(61,366 22)	(16,312 54)	77,678 75	(31,752 67)	(8,440 58)	40,193 26	(251,156 17)
(7,254 96)	34,547 44	(58,626 65)	(15,584 30)	74,210 95	(30,335 14)	(8,063 77)	38,398 91	(239,943 84)
(6,915 94)	32,933 07	(55,887 09)	(14,856 06)	70,743 15	(28,917 61)	(7,686 96)	36,604 57	(228,731 51)
(6,576 93)	31,318 70	(53,147 53)	(14,127 82)	67,275 35	(27,500 08)	(7,310 15)	34,810 23	(217,519 19)
(6,237 91)	29,704 34	(50,407 96)	(13,399 59)	63,807 55	(26,082 55)	(6,933 34)	33,015 89	(206,306 86)
(5,898 89)	28,089 97	(47,668 40)	(12,671 35)	60,339 75	(24,665 02)	(6,556 52)	31,221 55	(195,094 53)
(5,559 88)	26,475 61	(44,928 84)	(11,943 11)	56,871 95	(23,247 49)	(6,179 71)	29,427 21	(183,882 20)
(5,220 86)	24,861 24	(42,189 27)	(11,214 87)	53,404 14	(21,829 96)	(5,802 90)	27,632 86	(172,669 87)
(4,881 84)	23,246 87	(39,449 71)	(10,486 63)	49,936 34	(20,412 43)	(5,426 09)	25,838 52	(161,457 54)
(4,542 83)	21,632 51	(36,710 15)	(9,758 39)	46,468 54	(18,994 90)	(5,049 28)	24,044 18	(150,245 21)
(4,203 81)	20,018 14	(33,970 58)	(9,030 16)	43,000 74	(17,577 37)	(4,672 47)	22,249 84	(139,032 88)

(3,864 79)	18,403 77	(31,231 02)	(8,301 92)	39,532 94	(16,159 84)	(4,295 65)	20,455 50	(127,820 55)
(3,525 78)	16,789 41	(28,491 46)	(7,573 68)	36,065 14	(14,742 31)	(3,918 84)	18,661 15	(116,608 22)
(3,186 76)	15,175 04	(25,751 89)	(6,845 44)	32,597 33	(13,324 78)	(3,542 03)	16,866 81	(105,395 89)
(2,847 74)	13,560 68	(23,012 33)	(6,117 20)	29,129 53	(11,907 25)	(3,165 22)	15,072 47	(94,183 56)
(2,508 73)	11,946 31	(20,272 77)	(5,388 96)	25,661 73	(10,489 72)	(2,788 41)	13,278 13	(82,971 24)
(2,169 71)	10,331 94	(17,533 20)	(4,660 73)	22,193 93	(9,072 19)	(2,411 60)	11,483 79	(71,758 91)
(1,830 69)	8,717 58	(14,793 64)	(3,932 49)	18,726 13	(7,654 66)	(2,034 78)	9,689 45	(60,546 58)
(1,491 67)	7,103 21	(12,054 08)	(3,204 25)	15,258 33	(6,237 13)	(1,657 97)	7,895 10	(49,334 25)
(1,152 66)	5,488 85	(9,314 51)	(2,476 01)	11,790 53	(4,819 60)	(1,281 16)	6,100 76	(38,121 92)
(813 64)	3,874 48	(6,574 95)	(1,747 77)	8,322 72	(3,402 07)	(904 35)	4,306 42	(26,909 59)
(474 62)	2,260 11	(3,835 39)	(1,019 53)	4,854 92	(1,984 54)	(527 54)	2,512 08	(15,697 26)
(135 61)	645 75	(1,095 83)	(291 30)	1,387 12	(567 01)	(150 72)	717 74	(4,484 93)
(0 00)	0 00	(0 00)	(0 00)	0 00	(0 00)	(0 00)	0 00	(0 00)

t / (Credit):								
168		194						
Generation		Transmission				CHECK	CHECK	CHECK
2830015	4270006	2190015	2830015	4270006		2190015	2830015	4270006
(357,659 11)	-	(304,217 24)	(80,867 87)	-		-	-	-
(355,870 81)	1,694,622 91	(302,696 15)	(80,463 53)	383,159 69	-	(0 00)	0 00	0 00
(352,890 32)	1,680,430 09	(300,161 01)	(79,789 64)	379,950 65	-	(0 00)	0 00	0 00
(349,909 83)	1,666,237 27	(297,625 87)	(79,115 74)	376,741 60	-	0 00	(0 00)	(0 00)
(346,929 33)	1,652,044 45	(295,090 72)	(78,441 84)	373,532 56	-	(0 00)	0 00	0 00
(343,948 84)	1,637,851 63	(292,555 58)	(77,767 94)	370,323 52	-	(0 00)	0 00	0 00
(340,968 35)	1,623,658 81	(290,020 44)	(77,094 04)	367,114 48	-	0 00	(0 00)	(0 00)
(337,987 86)	1,609,465 98	(287,485 29)	(76,420 14)	363,905 43	-	(0 00)	(0 00)	0 00
(335,007 36)	1,595,273 16	(284,950 15)	(75,746 24)	360,696 39	-	(0 00)	(0 00)	0 00
(332,026 87)	1,581,080 34	(282,415 00)	(75,072 34)	357,487 35	-	0 00	0 00	(0 00)
(329,046 38)	1,566,887 52	(279,879 86)	(74,398 44)	354,278 31	-	(0 00)	(0 00)	0 00
(326,065 89)	1,552,694 70	(277,344 72)	(73,724 55)	351,069 26	-	(0 00)	(0 00)	0 00
(323,085 39)	1,538,501 87	(274,809 57)	(73,050 65)	347,860 22	-	0 00	0 00	(0 00)
(320,104 90)	1,524,309 05	(272,274 43)	(72,376 75)	344,651 18	-	(0 00)	(0 00)	0 00
(317,124 41)	1,510,116 23	(269,739 29)	(71,702 85)	341,442 13	-	(0 00)	0 00	0 00
(314,143 92)	1,495,923 41	(267,204 14)	(71,028 95)	338,233 09	-	0 00	(0 00)	(0 00)
(311,163 42)	1,481,730 59	(264,669 00)	(70,355 05)	335,024 05	-	0 00	0 00	(0 00)
(308,182 93)	1,467,537 77	(262,133 86)	(69,681 15)	331,815 01	-	0 00	(0 00)	(0 00)
(305,202 44)	1,453,344 94	(259,598 71)	(69,007 25)	328,605 96	-	(0 00)	(0 00)	0 00
(302,221 95)	1,439,152 12	(257,063 57)	(68,333 35)	325,396 92	-	(0 00)	0 00	0 00
(299,241 45)	1,424,959 30	(254,528 42)	(67,659 45)	322,187 88	-	0 00	(0 00)	(0 00)
(296,260 96)	1,410,766 48	(251,993 28)	(66,985 56)	318,978 84	-	(0 00)	(0 00)	0 00
(293,280 47)	1,396,573 66	(249,458 14)	(66,311 66)	315,769 79	-	(0 00)	(0 00)	0 00
(290,299 98)	1,382,380 84	(246,922 99)	(65,637 76)	312,560 75	-	0 00	0 00	(0 00)
(287,319 48)	1,368,188 01	(244,387 85)	(64,963 86)	309,351 71	-	0 00	(0 00)	(0 00)
(284,338 99)	1,353,995 19	(241,852 71)	(64,289 96)	306,142 67	-	(0 00)	(0 00)	0 00
(281,358 50)	1,339,802 37	(239,317 56)	(63,616 06)	302,933 62	-	(0 00)	0 00	0 00
(278,378 01)	1,325,609 55	(236,782 42)	(62,942 16)	299,724 58	-	-	(0 00)	0 00
(275,397 51)	1,311,416 73	(234,247 27)	(62,268 26)	296,515 54	-	0 00	0 00	(0 00)
(272,417 02)	1,297,223 91	(231,712 13)	(61,594 36)	293,306 50	-	(0 00)	(0 00)	0 00
(269,436 53)	1,283,031 08	(229,176 99)	(60,920 47)	290,097 45	-	0 00	0 00	(0 00)
(266,456 04)	1,268,838 26	(226,641 84)	(60,246 57)	286,888 41	-	-	(0 00)	0 00
(263,475 54)	1,254,645 44	(224,106 70)	(59,572 67)	283,679 37	-	0 00	0 00	(0 00)

(260,495 05)	1,240,452 62	(221,571 56)	(58,898 77)	280,470 32	-	(0 00)	(0 00)	0 00
(257,514 56)	1,226,259 80	(219,036 41)	(58,224 87)	277,261 28	-	0 00	0 00	(0 00)
(254,534 06)	1,212,066 98	(216,501 27)	(57,550 97)	274,052 24	-	0 00	(0 00)	(0 00)
(251,553 57)	1,197,874 15	(213,966 13)	(56,877 07)	270,843 20	-	(0 00)	(0 00)	0 00
(248,573 08)	1,183,681 33	(211,430 98)	(56,203 17)	267,634 15	-	0 00	0 00	(0 00)
(245,592 59)	1,169,488 51	(208,895 84)	(55,529 27)	264,425 11	-	(0 00)	(0 00)	0 00
(242,612 09)	1,155,295 69	(206,360 69)	(54,855 37)	261,216 07	-	0 00	(0 00)	0 00
(239,631 60)	1,141,102 87	(203,825 55)	(54,181 48)	258,007 03	-	0 00	0 00	(0 00)
(236,651 11)	1,126,910 04	(201,290 41)	(53,507 58)	254,797 98	-	(0 00)	(0 00)	0 00
(233,670 62)	1,112,717 22	(198,755 26)	(52,833 68)	251,588 94	-	0 00	(0 00)	(0 00)
(230,690 12)	1,098,524 40	(196,220 12)	(52,159 78)	248,379 90	-	0 00	0 00	(0 00)
(227,709 63)	1,084,331 58	(193,684 98)	(51,485 88)	245 170 86	-	0 00	(0 00)	(0 00)
(224,729 14)	1,070,138 76	(191,149 83)	(50,811 98)	241,961 81	-	0 00	0 00	(0 00)
(221,748 65)	1,055,945 94	(188,614 69)	(50,138 08)	238,752 77	-	(0 00)	0 00	0 00
(218,768 15)	1,041,753 11	(186,079 55)	(49,464 18)	235,543 73	-	0 00	(0 00)	0 00
(215,787 66)	1,027,560 29	(183,544 40)	(48,790 28)	232,334 69	-	0 00	0 00	(0 00)
(212,807 17)	1,013,367 47	(181,009 26)	(48,116 39)	229,125 64	-	0 00	(0 00)	(0 00)
(209,826 68)	999,174 65	(178,474 11)	(47,442 49)	225,916 60	-	(0 00)	(0 00)	0 00
(206,846 18)	984,981 83	(175,938 97)	(46,768 59)	222,707 56	-	(0 00)	0 00	0 00
(203,865 69)	970,789 01	(173,403 83)	(46,094 69)	219,498 52	-	0 00	(0 00)	(0 00)
(200,885 20)	956,596 18	(170,868 68)	(45,420 79)	216,289 47	-	0 00	(0 00)	(0 00)
(197,904 71)	942,403 36	(168,333 54)	(44,746 89)	213,080 43	-	0 00	0 00	(0 00)
(194,924 21)	928,210 54	(165,798 40)	(44,072 99)	209,871 39	-	0 00	(0 00)	(0 00)
(191,943 72)	914,017 72	(163,263 25)	(43,399 09)	206,662 34	-	(0 00)	(0 00)	0 00
(188,963 23)	899,824 90	(160,728 11)	(42,725 19)	203,453 30	-	0 00	0 00	(0 00)
(185,982 74)	885,632 08	(158,192 96)	(42,051 29)	200,244 26	-	0 00	(0 00)	0 00
(183,002 24)	871 439 25	(155,657 82)	(41,377 40)	197,035 22	-	0 00	0 00	(0 00)
(180,021 75)	857,246 43	(153,122 68)	(40,703 50)	193,826 17	-	0 00	(0 00)	(0 00)
(177,041 26)	843,053 61	(150,587 53)	(40,029 60)	190,617 13	-	0 00	(0 00)	(0 00)
(174,060 77)	828,860 79	(148,052 39)	(39,355 70)	187,408 09	-	(0 00)	0 00	0 00
(171,080 27)	814,667 97	(145,517 25)	(38,681 80)	184,199 05	-	0 00	(0 00)	(0 00)
(168,099 78)	800,475 15	(142,982 10)	(38,007 90)	180,990 00	-	0 00	(0 00)	(0 00)
(165,119 29)	786,282 32	(140,446 96)	(37,334 00)	177,780 96	-	0 00	0 00	(0 00)
(162,138 80)	772,089 50	(137,911 82)	(36,660 10)	174,571 92	-	(0 00)	(0 00)	0 00
(159,158 30)	757,896 68	(135,376 67)	(35,986 20)	171,362 88	-	0 00	(0 00)	(0 00)
(156,177 81)	743,703 86	(132,841 53)	(35,312 30)	168,153 83	-	0 00	0 00	(0 00)
(153,197 32)	729,511 04	(130,306 38)	(34,638 41)	164,944 79	-	0 00	(0 00)	0 00
(150,216 83)	715,318 21	(127,771 24)	(33,964 51)	161,735 75	-	(0 00)	0 00	0 00
(147,236 33)	701,125 39	(125,236 10)	(33,290 61)	158,526 71	-	0 00	(0 00)	(0 00)
(144,255 84)	686,932 57	(122,700 95)	(32,616 71)	155,317 66	-	0 00	(0 00)	(0 00)
(141,275 35)	672,739 75	(120,165 81)	(31,942 81)	152,108 62	-	0 00	0 00	(0 00)
(138,294 85)	658,546 93	(117,630 67)	(31,268 91)	148,899 58	-	0 00	0 00	(0 00)
(135,314 36)	644,354 11	(115,095 52)	(30,595 01)	145,690 53	-	(0 00)	(0 00)	0 00
(132,333 87)	630,161 28	(112,560 38)	(29,921 11)	142,481 49	-	(0 00)	(0 00)	0 00
(129,353 38)	615,968 46	(110,025 24)	(29,247 21)	139,272 45	-	(0 00)	0 00	(0 00)
(126,372 88)	601,775 64	(107,490 09)	(28,573 32)	136,063 41	-	0 00	0 00	(0 00)
(123,392 39)	587,582 82	(104,954 95)	(27,899 42)	132,854 36	-	0 00	(0 00)	(0 00)
(120,411 90)	573,390 00	(102,419 80)	(27,225 52)	129,645 32	-	(0 00)	0 00	0 00
(117,431 41)	559,197 18	(99,884 66)	(26,551 62)	126,436 28	-	0 00	0 00	(0 00)
(114,450 91)	545,004 35	(97,349 52)	(25,877 72)	123,227 24	-	(0 00)	0 00	0 00
(111,470 42)	530,811 53	(94,814 37)	(25,203 82)	120,018 19	-	0 00	(0 00)	(0 00)
(108,489 93)	516,618 71	(92,279 23)	(24,529 92)	116,809 15	-	0 00	0 00	(0 00)
(105,509 44)	502,425 89	(89,744 09)	(23,856 02)	113,600 11	-	(0 00)	0 00	0 00
(102,528 94)	488,233 07	(87,208 94)	(23,182 12)	110,391 07	-	0 00	(0 00)	(0 00)
(99,548 45)	474,040 25	(84,673 80)	(22,508 22)	107,182 02	-	0 00	0 00	(0 00)
(96,567 96)	459,847 42	(82,138 65)	(21,834 33)	103,972 98	-	(0 00)	0 00	0 00
(93,587 47)	445,654 60	(79,603 51)	(21,160 43)	100,763 94	-	0 00	0 00	(0 00)
(90,606 97)	431,461 78	(77,068 37)	(20,486 53)	97,554 90	-	(0 00)	(0 00)	0 00
(87,626 48)	417,268 96	(74,533 22)	(19,812 63)	94,345 85	-	0 00	0 00	(0 00)
(84,645 99)	403,076 14	(71,998 08)	(19,138 73)	91,136 81	-	0 00	0 00	(0 00)
(81,665 50)	388,883 32	(69,462 94)	(18,464 83)	87,927 77	-	(0 00)	(0 00)	0 00
(78,685 00)	374,690 49	(66,927 79)	(17,790 93)	84,718 73	-	0 00	0 00	(0 00)
(75,704 51)	360,497 67	(64,392 65)	(17,117 03)	81,509 68	-	(0 00)	0 00	0 00
(72,724 02)	346,304 85	(61,857 51)	(16,443 13)	78,300 64	-	0 00	(0 00)	(0 00)
(69,743 53)	332,112 03	(59,322 36)	(15,769 24)	75,091 60	-	0 00	(0 00)	(0 00)
(66,763 03)	317,919 21	(56,787 22)	(15,095 34)	71,882 55	-	(0 00)	0 00	0 00
(63,782 54)	303,726 38	(54,252 07)	(14,421 44)	68,673 51	-	0 00	(0 00)	(0 00)
(60,802 05)	289,533 56	(51,716 93)	(13,747 54)	65,464 47	-	0 00	0 00	(0 00)
(57,821 56)	275,340 74	(49,181 79)	(13,073 64)	62,255 43	-	0 00	0 00	(0 00)
(54,841 06)	261,147 92	(46,646 64)	(12,399 74)	59,046 38	-	-	(0 00)	0 00
(51,860 57)	246,955 10	(44,111 50)	(11,725 84)	55,837 34	-	0 00	0 00	(0 00)
(48,880 08)	232,762 28	(41,576 36)	(11,051 94)	52,628 30	-	(0 00)	(0 00)	0 00
(45,899 59)	218,569 45	(39,041 21)	(10,378 04)	49,419 26	-	(0 00)	0 00	(0 00)
(42,919 09)	204,376 63	(36,506 07)	(9,704 14)	46,210 21	-	-	0 00	(0 00)
(39,938 60)	190,183 81	(33,970 93)	(9,030 25)	43,001 17	-	0 00	(0 00)	-
(36,958 11)	175,990 99	(31,435 78)	(8,356 35)	39,792 13	-	-	0 00	(0 00)

(33,977 62)	161,798 17	(28,900 64)	(7,682 45)	36,583 09	-	0 00	(0 00)	(0 00)
(30,997 12)	147,605 35	(26,365 49)	(7,008 55)	33,374 04	-	(0 00)	(0 00)	0 00
(28,016 63)	133,412 52	(23,830 35)	(6,334 65)	30,165 00	-	0 00	(0 00)	-
(25,036 14)	119,219 70	(21,295 21)	(5,660 75)	26,955 96	-	0 00	(0 00)	(0 00)
(22,055 64)	105,026 88	(18,760 06)	(4,986 85)	23,746 92	-	(0 00)	0 00	0 00
(19,075 15)	90,834 06	(16,224 92)	(4,312 95)	20,537 87	-	-	0 00	(0 00)
(16,094 66)	76,641 24	(13,689 78)	(3,639 05)	17,328 83	-	0 00	(0 00)	(0 00)
(13,114 17)	62,448 42	(11,154 63)	(2,965 16)	14,119 79	-	(0 00)	0 00	-
(10,133 67)	48,255 59	(8,619 49)	(2,291 26)	10,910 74	-	0 00	(0 00)	-
(7,153 18)	34,062 77	(6,084 34)	(1,617 36)	7,701 70	-	(0 00)	-	-
(4,172 69)	19,869 95	(3,549 20)	(943 46)	4,492 66	-	-	-	(0 00)
(1,192 20)	5,677 13	(1,014 06)	(269 56)	1,283 62	-	-	-	-
(0 00)	0 00	(0 00)	(0 00)	0 00	-	(0 00)	-	-

SWEPCo Settled Swaps - Feb. 2012

For the 10-year Debt Issuance in Feb. 2012 3.55% Senior Notes, Series I, due 2022
Settlement Values

		Amount
UBS	$	(5,992,616 00)
JP Morgan	$	(2,410,115 00)
RBS	$	(7,074,090 00)
Barclays	$	(7,294,268 00)
Loss	$	(22,771,089 00)

Total amount to OCI and Deferred Tax for am	(22,771,089 00)	**Loss**	
Amount recognized in Q3 for missing forecast	644,557 45	418,962 34	
Loss to Amtz	(22,126,531 55)		(14,382,245 51)

Initial Reclassify entry:
Credit account 1810002 on BU 161 only. Then allocate the debits to accts. 190 & 219 based on Swepco bu allocations

		DR	CR
1810002	Unamortized Debt Expense - Installment Purchase Contracts		$ 22,771,089 00
1900015	Deferred Tax Asset - CF - IR	$ 7,969,881 15	
2190015	Accumulated OCI - CF - IR	$ 14,801,207 85	

To reclassify the payments to the appropriate AOCI and Deferred Tax accounts because all the payments on the wire transfer forms were coded to 1810002

Monthly Entry for Sep 2012 through Dec '21

		DR	CR
4270006	Interest Expense on LTD - Senior Unsec Debt	184,387 77	
1900015	Deferred Tax Asset - CF - IR		64,535 72
2190015	Accumulated OCI - CF - IR		119,852 05

Monthly amortization of the out-of-the-money value for the SWEPCO 10-year interest rate swaps associated with the Feb '12 issuance of $275 million 10-year debt Semi-annual interest payments due on Feb and August 15th

Monthly Entry for Jan '22

		DR	CR
4270006	Interest Expense on LTD - Senior Unsec Debt	184,388 11	
1900015	Deferred Tax Asset - CF - IR		64,536 55
2190015	Accumulated OCI - CF - IR		119,851 56

Monthly amortization of the out-of-the-money value for the SWEPCO 10-year interest rate swaps associated with the Feb '12 issuance of $275 million 10-year debt Semi-annual interest payments due on Feb and August 15th

WP G-7.13 - CONSOLIDATED TAX RETURN (Highly Sensitive information)

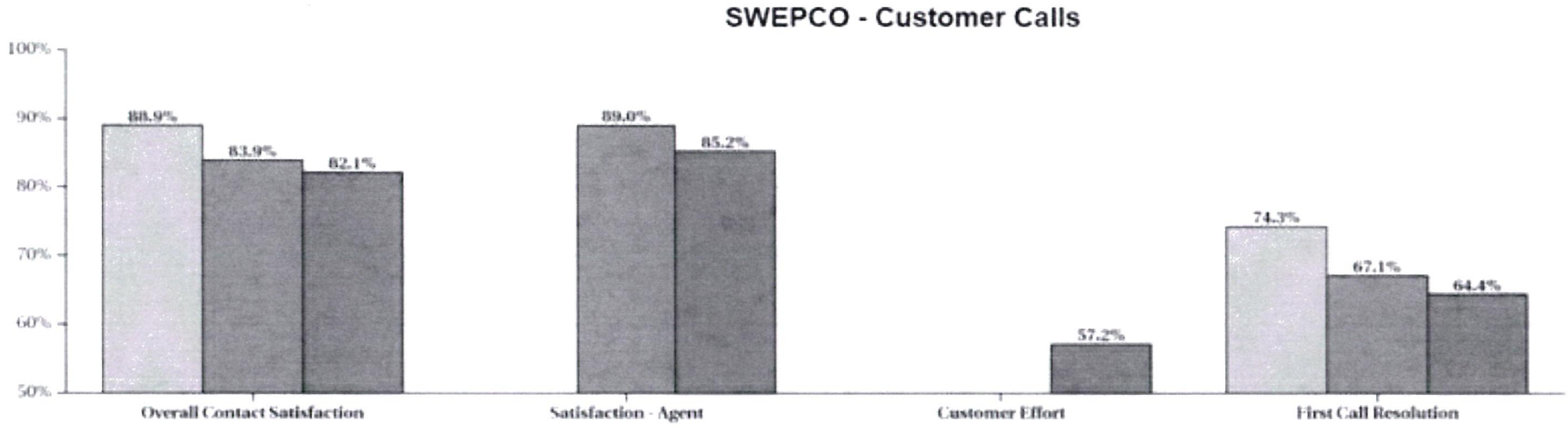
The information responsive to this request is HIGHLY SENSITIVE under the terms of the Protective Order. The Highly Sensitive information is available for review at the Austin offices of American Electric Power Company (AEP), 400 West 15th Street, Suite 1520, Austin, Texas, 78701, (512) 481-4562, during normal business hours.

Sponsored by: Renee V. Hawkins

Contact Study

2017 Year-End | 2018 Year-End | 2019 YTD

All AEP
Individual OPCO View
Individual COC (Customer Operations Center) View



SOUTHWESTERN ELECTRIC POWER COMPANY
an AEP company

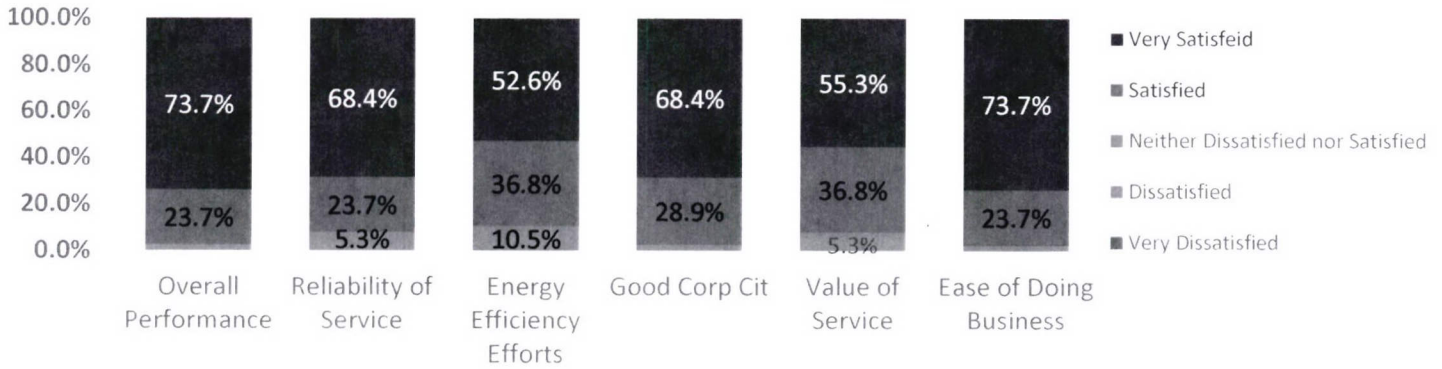
Spring 2019 Managed Account Survey Results

Satisfaction with *Utility* (% Satisfied and Very Satisfied)	
Overall Performance	97.4%
Reliability of Service	92.1%
Efforts to Increase Energy Efficiency	89.5%
Good Corporate Citizen	97.4%
Value of Service	92.1%
Ease of Doing Business	97.4%

Satisfaction with *Account Manager* (% Satisfied and Very Satisfied)	
Overall Performance	100.0%
Easy to Get in Touch With	100.0%
Treats as a Valued Partner	100.0%
Provides Solutions to Meet Needs	100.0%
Communicates Topics Important to Me	100.0%

Overall Performance % Sat & Very Sat.	W1 2017	W2 2017	**Total 2017**	W1 2018	W2 2018	**Total 2018**	W1 2019	W2 2019	**Total 2019**
Utility	94%	88%	**93%**	94%	82%	**93%**	97%		97%
Account Manager	98%	100%	**98%**	100%	100%	**100%**	100%		100%
# of Responses	124	17	**141**	89	11	**100**	38		**38**

Satisfaction with Utility



Satisfaction with Account Manager

Survey Period: May 8-May 31
Invitations Sent: 109 **Responses Received:** 38 **Response Rate:** 36%

SOUTHWESTERN ELECTRIC POWER COMPANY

Spring 2019 Managed Account Survey Results

Utility

Q1 Overall Performance
Q2 Reliability of Service
Q3 Efforts to Increase Energy Efficiency
Q4 Good Corp Citizen
Q5 Value of Service
Q6 Ease of Doing Business

Account Manager

Q7 Overall Performance
Q8 Easy to Get in Touch
Q9 Treats as a Valued Partner
Q10 Provides Solutions to Meet Needs
Q11 Communicates Topics Important to Me

	Utility						Account Manager				
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11
SWEPCO, *38*	97.4%	92.1%	89.5%	97.4%	92.1%	97.4%	100.0%	100.0%	100.0%	100.0%	100.0%
Carolyn Hampton, *1*	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Charles Easterling, *1*	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Dale Colvin, *11*	90.9%	81.8%	100.0%	100.0%	90.9%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Joey Lawrence, *3*	100.0%	100.0%	66.7%	100.0%	66.7%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Karen Sibert, *5*	100.0%	100.0%	80.0%	80.0%	80.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Keith McFarland, *1*	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Mark Mobley, *7*	100.0%	85.7%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Mark Stump, *1*	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Nancy Guisinger, *1*	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Ray Fenton, *3*	100.0%	100.0%	66.7%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tom Patty, *4*	100.0%	100.0%	75.0%	100.0%	100.0%	75.0%	100.0%	100.0%	100.0%	100.0%	100.0%

What customers are saying....

Our account manager has provided everything that was asked of him. He does a great job.

Your team is always available when I call and when I need assistance you are easy to get setup. The recent total plant outage went very well and your operators were willing to make sure we could lock the fuses out to provide as much of a preventive measure to keep the power from being turned back on without my team allowing it.

Tariff analysis helps keep costs down.

Continue providing ways to cut energy cost. Annual charts showing energy cost to previous year and the relationship of total cost, consumption and other factors related to our bills which may highlight problem areas.

Continue to provide Training Classes that are beneficial to their customers in our local area. Also, assist in 'Micro-Grid' & other Information on new technologies in the Electrical industry.

SOUTHWESTERN ELECTRIC POWER COMPANY
An AEP Company

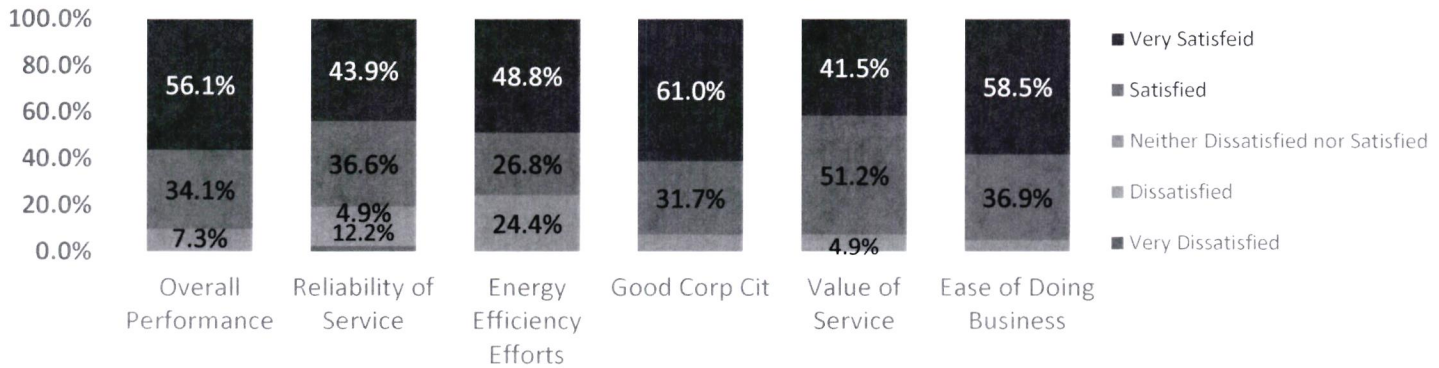
Annual 2019 Managed Account Survey Results

Satisfaction with *Utility* (% Satisfied and Very Satisfied)	*Fall Only*
Overall Performance	90.2%
Reliability of Service	80.5%
Efforts to Increase Energy Efficiency	75.6%
Good Corporate Citizen	92.7%
Value of Service	92.7%
Ease of Doing Business	95.1%

Satisfaction with *Account Manager* (% Satisfied and Very Satisfied)	*Fall Only*
Overall Performance	97.6%
Easy to Get in Touch With	100.0%
Treats as a Valued Partner	100.0%
Provides Solutions to Meet Needs	97.6%
Communicates Topics Important to Me	95.1%

Overall Performance % Sat & Very Sat.	W1 2017	W2 2017	**Total 2017**	W1 2018	W2 2018	**Total 2018**	W1 2019	W2 2019	**Total 2019**
Utility	94%	88%	**93%**	94%	82%	**93%**	97%	90%	94%
Account Manager	98%	100%	**98%**	100%	100%	**100%**	100%	97%	99%
# of Responses	124	17	**141**	89	11	**100**	38	41	**79**

Satisfaction with Utility – Fall Only



Satisfaction with Account Manager – Fall Only

Survey Period: September 18 – October 11
Invitations Sent: 69 **Responses Received:** 41 **Response Rate:** 59%

SOUTHWESTERN ELECTRIC POWER COMPANY

Annual 2019 Managed Account Survey Results

Utility
- Q1 Overall Performance
- Q2 Reliability of Service
- Q3 Efforts to Increase Energy Efficiency
- Q4 Good Corp Citizen
- Q5 Value of Service
- Q6 Ease of Doing Business

Account Manager
- Q7 Overall Performance
- Q8 Easy to Get in Touch
- Q9 Treats as a Valued Partner
- Q10 Provides Solutions to Meet Needs
- Q11 Communicates Topics Important to Me

	Utility						Account Manager				
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11
SWEPCO, 79	93 7%	86.1%	50.6%	64.6%	92.4%	96.2%	98 7%	100 0%	100 0%	98 7%	97 5%
Carolyn Hampton, 2	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100 0%	100 0%	100 0%	100 0%	100 0%
Charles Easterling, *1*	100.0%	100.0%	100.0%	100.0%	100.0%	100 0%	100 0%	100 0%	100 0%	100 0%	100 0%
Dale Colvin, 20	95.0%	85.0%	55.0%	80.0%	95.0%	95.0%	100 0%	100 0%	100 0%	100 0%	95 0%
Joey Lawrence, 6	83.3%	50.0%	33.3%	33.3%	66.7%	100.0%	100 0%	100 0%	100 0%	100 0%	100 0%
Karen Sibert, 7	100.0%	100.0%	85.7%	85.7%	85.7%	100.0%	100 0%	100 0%	100 0%	100 0%	100 0%
Keith McFarland, 3	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	100 0%	100 0%	100 0%	100 0%	100 0%
Mark Mobley, 10	100.0%	90.0%	40.0%	60.0%	90.0%	90 0%	100 0%	100 0%	100 0%	100 0%	100 0%
Mark Stump, 2	100.0%	100.0%	50.0%	50.0%	100.0%	100 0%	100 0%	100 0%	100 0%	100 0%	100 0%
Michael Tyler, *10*	80.0%	90.0%	40.0%	60.0%	90.0%	100.0%	90 0%	100 0%	100 0%	90 0%	90 0%
Nancy Guisinger, *1*	100.0%	100.0%	0.0%	100.0%	100.0%	100.0%	100 0%	100 0%	100 0%	100 0%	100 0%
Ray Fenton, 5	100.0%	60.0%	40.0%	20.0%	100.0%	100.0%	100 0%	100 0%	100 0%	100 0%	100 0%
Stephen Brocato, *1*	0.0%	0.0%	0.0%	0.0%	100.0%	100 0%	100 0%	100 0%	100 0%	100 0%	100 0%
Tom Patty, *11*	100.0%	100.0%	63.6%	81.8%	100.0%	90.9%	100 0%	100 0%	100 0%	100 0%	100 0%

What customers are saying....

More aggressive tree trimming efforts and a plan to get our critical facilities back up after power outages.

The lunch and learns have been a nice addition to your services. Informative and nice to see and hear what other facilities are doing best practice, energy savings, etc.

Ability to pull consolidated statements online or have them emailed.

No suggestions other than stay on top as the industry leader.

We have started converting our lighting to LED, and just completed the first phase of the project. The LEDs look great and the cost reduction.