



Ameritrade

Charles Schwab-TD Ameritrade

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Agenda



Industry Overview



Company Background



Strategic Rationale



Valuation



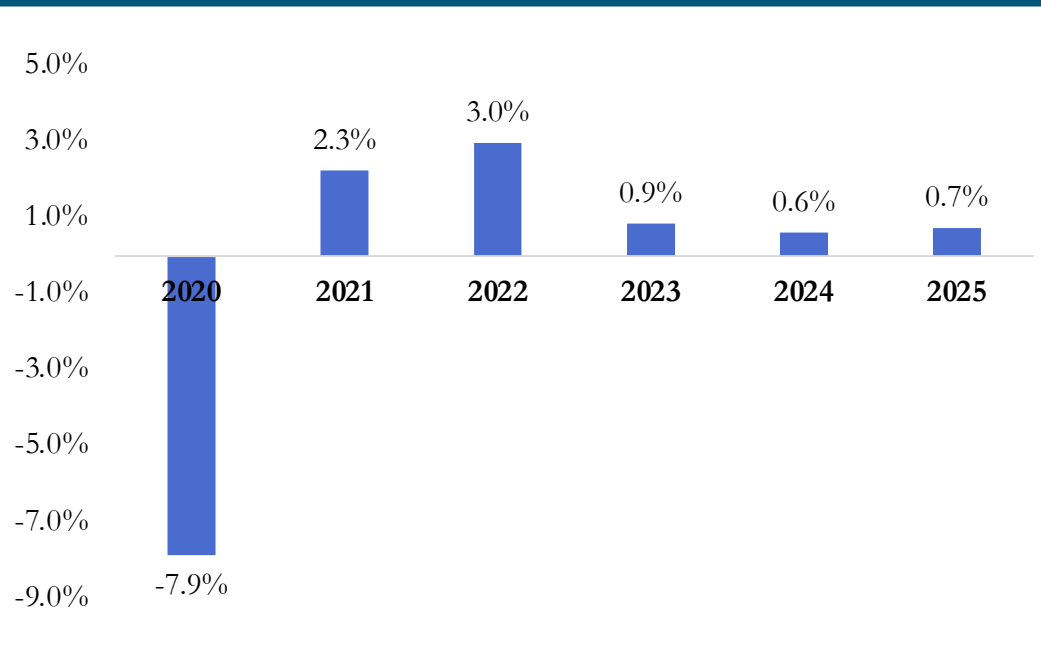
Risks

Industry Overview

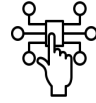
Financial Services – Securities Brokering Industry

Brokerages act as **intermediaries** that connect buyers and sellers to **facilitate transactions involving securities**. The brokerage firms typically **charge fees** as compensation once the transactions have been completed.

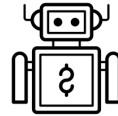
Securities Brokering Revenue Growth (%)



Growth Drivers and Opportunities



Tap into growing demand for digital services



Collaboration with fintech firms to improve technological capabilities and services



COVID-19 has increased trading activity and account creation

Trends

- Increasing usage of **robotic and algorithmic customer assistance** online
- **Decreasing commissions** paid to brokerage companies
- **Digital distribution channels** to utilize brokerage services have become more popular
- Heightened market volatility and generally lower stock prices during COVID-19 have **increased transaction volume**

Industry Overview

Recent Brokerage Deals

Morgan Stanley / E*Trade

- **Closed October 2nd, 2020; \$13 billion**
- Strengthened wealth management products, improved online accessibility for MS, diversified account sizes (E*Trade brought in smaller personal accounts)

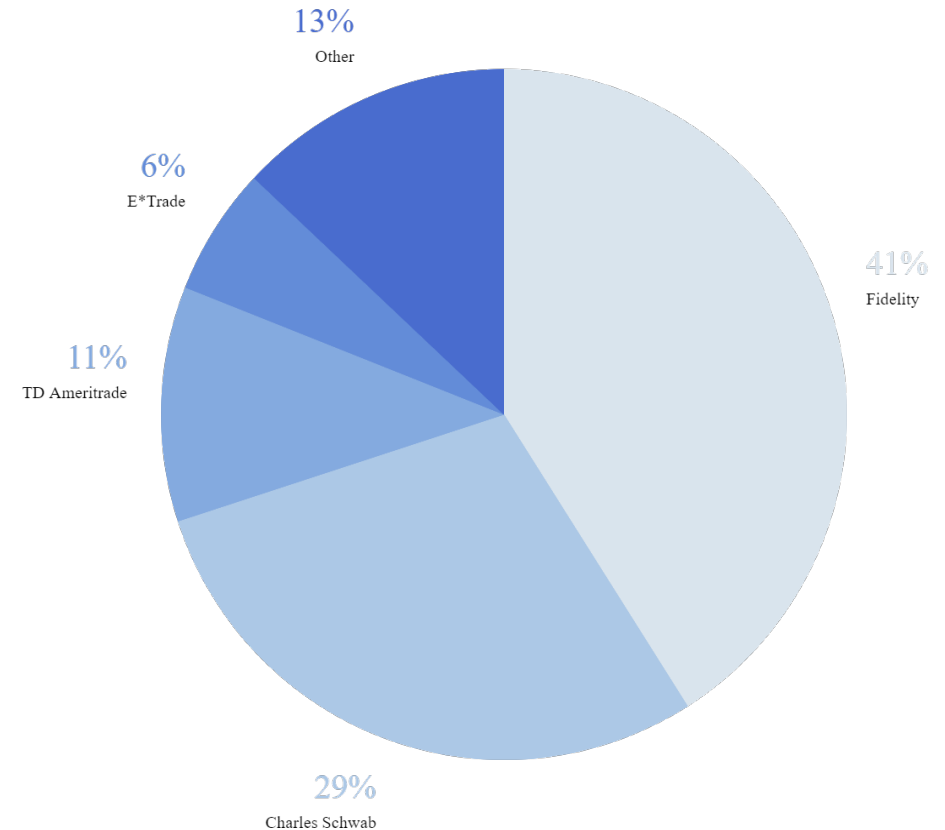
SoFi / Galileo Financial Technologies

- **Closed April 7th, 2020; \$1.2 billion**
- Allowed SoFi to improve payment platforms and fintech services

Morgan Stanley / Eaton Vance

- **Announced October 8th, 2020; \$7 billion**
- Not yet completed but will help wealth managers customize portfolios

Market Breakdown

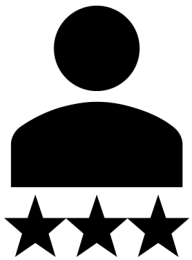


Charles Schwab

Products and Services

- Investment Products
 - Brokerage and Trading
 - Retirement and IRA
 - Global Investing
- Financial Planning/ Research
- Banking and Borrowing

Competitive Advantage



Clients First



Investing Strategies

Schwab's "Virtuous Cycle"



Note: All growth metrics are 2019 vs. 2018.

*Estimated annualized cost savings for clients from strategic pricing moves announced in October 2019.

TD Ameritrade

Products and Services

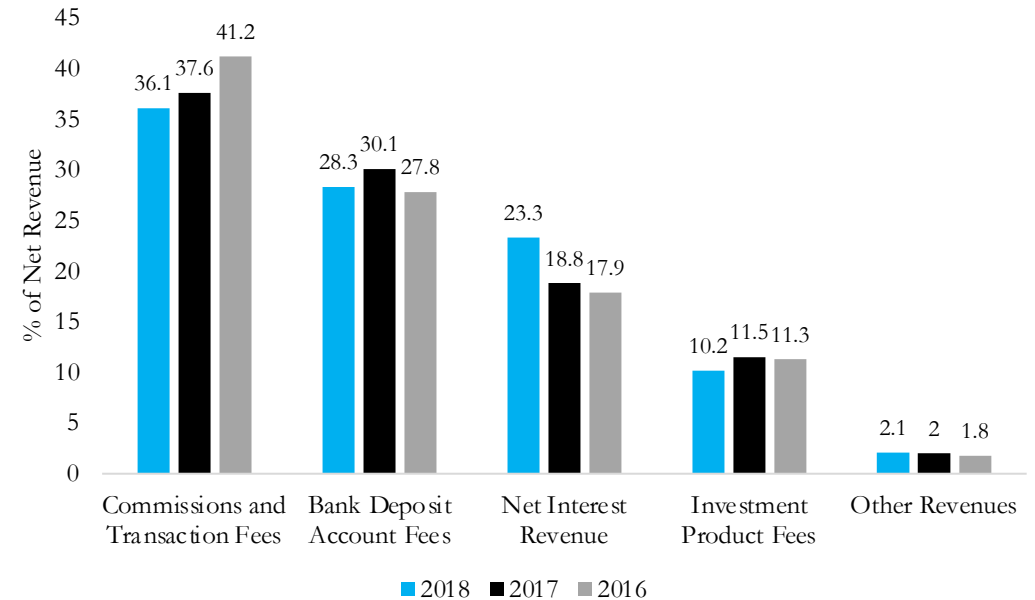
Main Products

1. Common and preferred stock
2. ETFs
3. Options
4. Futures
5. Foreign exchange
6. Mutual funds
7. Fixed income
8. New and secondary issue securities
9. Margin lending
10. Cash management services
11. Annuities

New Services

- Touch-tone trading
- Mobile trading
- Unlimited, streaming, free real-time quotes
- Extended trading hours
- Direct access to market destinations
- Commitment on the speed of order execution and trading via chatbot and voice commands
- Proprietary trading platform

Net Revenue Breakdown

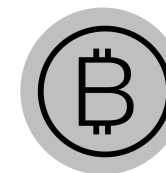


Competitive Advantage

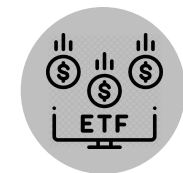
TD Ameritrade Network



Bitcoin Futures Contracts



Launched ETF Market Center



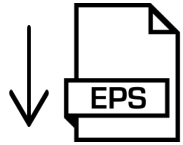
Performance

Recent Performance



- As they prepare to merge, TD Ameritrade reports daily average trades of 3.4 million in the latest quarter vs Schwab's 1.6 million
- TD Ameritrade's latest results benefited from high trading volumes that offset lower interest rate-related revenue. The brokerage firm's strong fiscal third-quarter performance also highlights key differences between it and **Charles Schwab** ahead of their 2020 merger.

Short-term Outlook



- SCHW's EPS forecasts support the low-to-good P/E ratio. Analysts forecast EPS to hit a low of \$1.81 in December 2021 but then rise to an all-time high in December 2024. Thus, suggesting a decline in earnings in the short-term but a positive correction over the next four years.

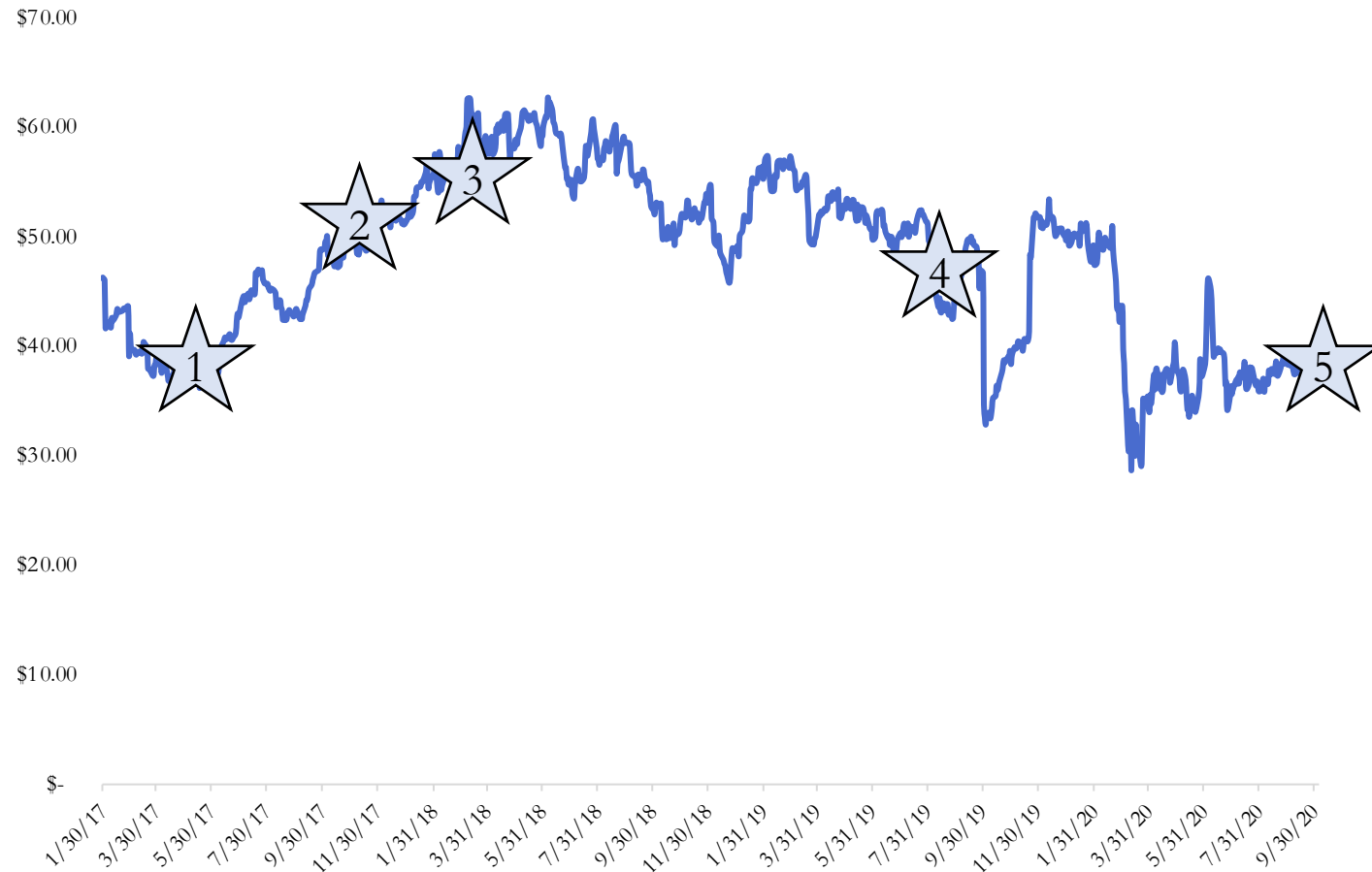
Long-term Outlook



- **Oligopoly:** The sheer size allows the new company to lose money on commission fees and make up for it in volume. Schwabitrade's economies of scale do not stop at volume and should trickle down to advertising and other marketing expenses.
- **Financials:** Charles Schwab is showing financial strength in its price to earnings ratio (P/E), future earnings per share (EPS) growth, and manageable debt to equity levels. First, Schwab's earnings growth will be less than that of its competitors and the industry. Second, SCHW will likely lean to the undervalued side. In turn, providing investors with an opportunity to snap up shares at a discount potentially.

Annotated Stock Chart

AMTD Stock Price 2017-2020



Key Events

September 18, 2017

TD Ameritrade Closes Acquisition of Scottrade Financial Services, Inc.

October 16, 2017

TD Ameritrade to Offer Largest Commission-Free ETF Program with Expanded 296 ETF Lineup

January 9, 2018

TD Ameritrade Launches New Investor Education Platform

November 25, 2019

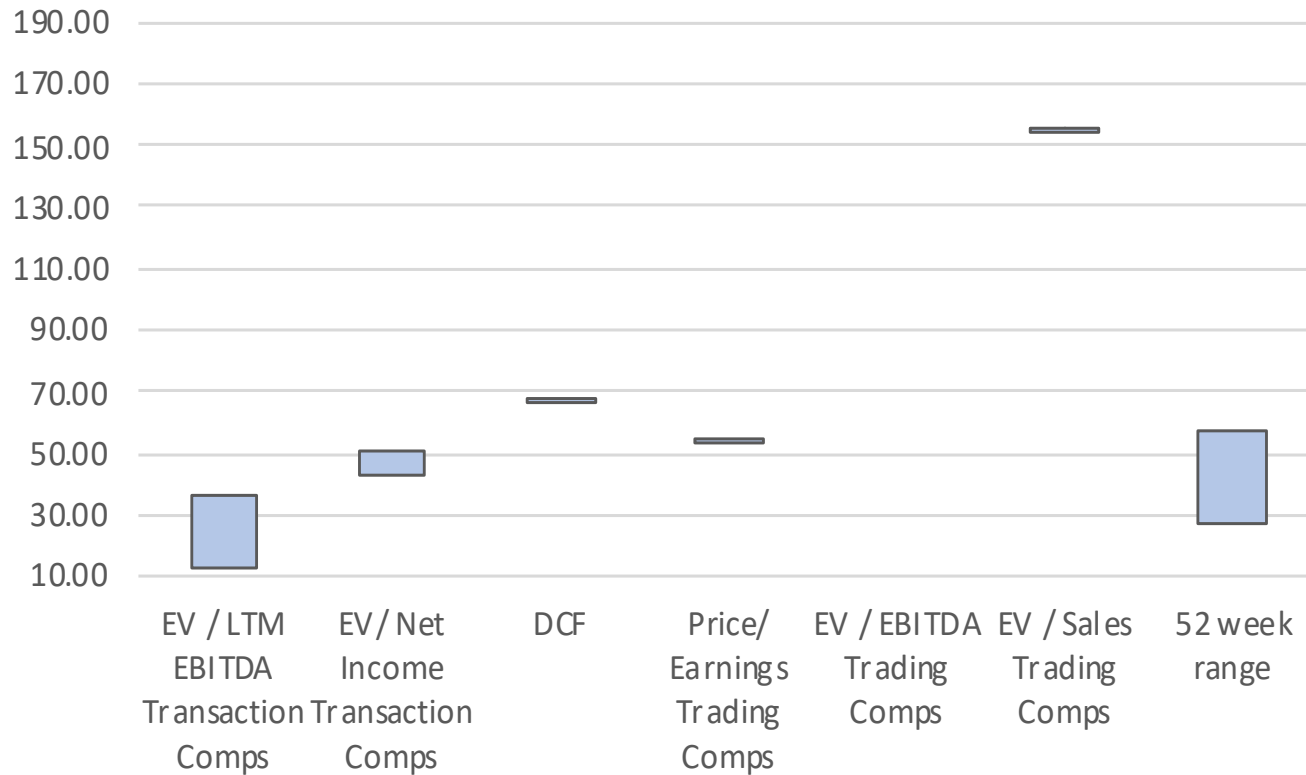
The Charles Schwab Corporation to Acquire TD Ameritrade

October 6, 2020

Deal Closed

Valuation

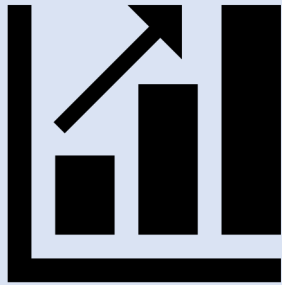
Football Field Analysis



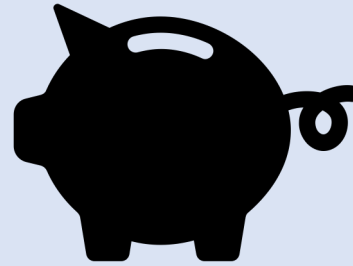
EV / LTM EBITDA Transaction Comps	12.45	36.61
EV/ Net Income Transaction Comps	42.43	51.16
DCF	67.50	
Price/ Earnings Trading Comps	55.00	
EV / EBITDA Trading Comps	200.03	
EV / Sales Trading Comps	155.62	
52 week range	27.70	57.28

Strategic Rationale

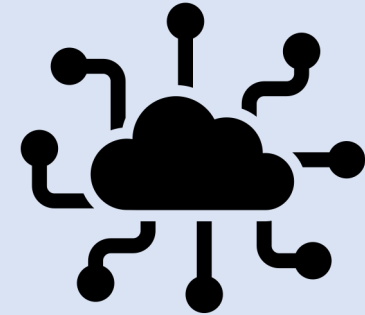
Strategic Advantages of the Deal



Increasing choices of
products and services



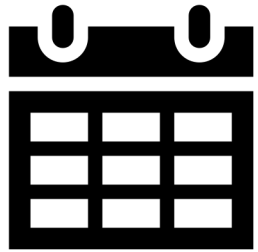
Lowering costs



Modern approach to
the new age of
investing

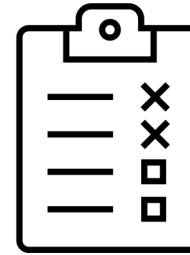
Risk

Potential Future Risks



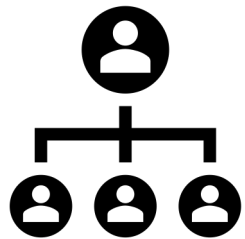
Integration will take 18-36 months

Long
Integration



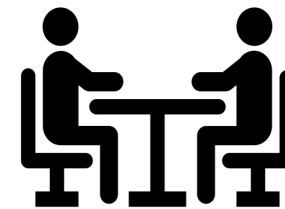
New features and differentiated experience could lead to customer dissatisfaction and other integration problems

Too Many
New Features



Lay off over 1,000 employees, which hurts the brand as well

Employee
Loss



Still must realize how to effectively combine parts of TD-Ameritrade

Integration
Issues

Discounted Cash Flow

TD Ameritrade

Discounted Cash Flow Analysis

(\$ in millions)

Valuation Date:

Share Price on Valuation Date:

Diluted Shares Outstanding (Millions):

Valuation Date:	1/1/2020
Share Price on Valuation Date:	\$47.00
Diluted Shares Outstanding (Millions):	317.1

Select Operating Data

	Historical Period				Projected Annual Forecast				
	2017A	2018A	2019A	2020E	2021E	2022E	2023E	2024E	2025E
Revenue		\$3,676.00	\$5,452.00	\$6,016.00	\$6,617.60	\$7,279.36	\$8,007.30	\$8,808.03	\$9,688.83
Revenue Growth Rate (%)			48.3%	10.3%	10%	10%	10%	10%	10%
EBITDA		1,646	2,269	3,346	3,133	3,446	3,790	4,170	4,586
EBITDA Margin (%)		44.8%	41.6%	55.6%	47.3%	47.3%	47.3%	47.3%	47.3%
EBIT		1,544	2,127	3,198	2,960	3,256	3,581	3,939	4,333
EBIT Margin (%)		42.0%	39.0%	53.2%	44.7%	44.7%	44.7%	44.7%	44.7%
Depreciation & Amortization		102	142	148	173	190	209	230	253
Depr&A as a % of revenue		2.8%	2.6%	2.5%	2.6%	2.6%	2.6%	2.6%	2.6%

Select Balance Sheet And Other Data

	Historical Period				Projected Annual Forecast				
	2017A	2018A	2019A	2020E	2021E	2022E	2023E	2024E	2025E
Cash		\$1,472	\$2,690	\$2,852	\$3,023	\$3,205	\$3,397	\$3,567	\$3,745
Accounts Receivable		17,151	22,616	20,618	21,443	22,300	23,192	23,888	24,366
Inventories		-	-	-	-	-	-	-	-
Accounts Payable		815	896	884	922	936	963	984	1,009
Accrued Expenses		-	-	-	-	-	-	-	-
Debt			2,439	3,595	3,595	3,595	3,595	3,595	3,595
Capital Expenditures		(\$197)	(\$229)	(\$199)	(\$201)	(\$203)	(\$205)	(\$207)	(\$209)
Cash Growth (%)	N/A		83%	6%	6%	6%	6%	5%	5%
Accounts Receivable Growth (%)	N/A		32%	-9%	4%	4%	4%	3%	2%
Inventories Growth (%)	N/A		0%	0%	0%	0%	0%	0%	0%
Accounts Payable Growth (%)	N/A		10%	-1%	4%	1%	3%	2%	3%
Accrued Expenses Growth (%)	N/A		0%	0%	0%	0%	0%	0%	0%
Capital Expenditures Growth (%)	N/A		16%	-13%	1%	1%	1%	1%	1%

Discounted Cash Flow

Free Cash Flow Buildup									
<i>\$mm</i>									
Period	Historical Period				Projected Annual Forecast				
	2017A	2018A	2019A	2020E	2021E	2022E	2023E	2024E	5
Total Revenues		\$3,676.00	\$5,452.00	\$6,016.00	\$6,617.60	\$7,279.36	\$8,007.30	\$8,808.03	\$9,688.83
EBITDA		1,646	2,269	3,346	3,133	3,446	3,790	4,170	4,586
EBIT		1,544	2,127	3,198	2,960	3,256	3,581	3,939	4,333
Tax rate		37.4%	21.9%	24.6%	28.0%	28.0%	28.0%	28.0%	28.0%
EBIAT		967	1,661	2,411	2,131	2,344	2,578	2,836	3,120
Depreciation & Amortization		102	142	148	173	190	209	230	253
Accounts receivable		5,210	5,465	(1,998)	825	858	892	696	478
Inventories		-	-	-	-	-	-	-	-
(Accounts payable)		(815)	(896)	(884)	(922)	(936)	(963)	(984)	(1,009)
(Accrued expenses)		-	-	-	-	-	-	-	-
(Capital expenditures)		(197)	(229)	(199)	(201)	(203)	(205)	(207)	(209)
Unlevered free cash flows		872	1,574	2,360	2,006	2,253	2,512	2,571	2,633
Discount Rate (<i>WACC</i>)		8.2%	8.2%	8.2%	8.2%	8.2%	8.2%	8.2%	8.2%
Present value of free cash flows					\$1,928	\$2,002	\$2,062	\$1,951	\$1,846
Sum of present values of FCFs									\$9,790
Terminal Value									
<i>Growth in perpetuity method:</i>									
Long term growth rate		1.3%							
WACC		8.2%							
Free cash flow (t+1)		2,633							
Terminal Value		\$38,612.64							
Present Value of Terminal Value		\$27,074.81							
WACC									
Share Price		\$49.0							
Diluted Shares Outstanding (Millions)		557							
Cost of Debt		4.3%							
Tax Rate		21.0%							
After-tax Cost of Debt		3.4%							
Cost of Equity		8.8%							
Total Market Value of Debt (\$)		3,595							
Total Market Value Equity (\$)		27,293							
Total Capital		30,888							
Debt Weighting		11.6%							
Equity Weighting		88.4%							
WACC		8.2%							
Enterprise Value to Equity Value									
Enterprise Value			\$36,865						
Less: Net debt			(\$743)						
Equity Value			\$37,608						
Diluted Shares Outstanding (Millions)			557						
Equity Value Per Share			\$67.5						

Cost of Debt

Total Debt	3,595
Annual Interest	\$154.00
Effective Interest Rate	4.3%
Marginal Tax Rate*	21.0%
Cost of Debt	4.3%

Cost of Equity

Risk-free rate	2.8% (Usually 10-year treasury)	Noted on 10K
Levered Beta	$\text{Levered Beta} = \text{Unlevered Beta} \times [1 + (1 - \text{Tax Rate}) \times \frac{\text{Debt}}{\text{Equity}}]$	
Market Rate	10.0% risk, levered is financial risk (Careful with differences in 0.76 unlevered beta)	
Unlevered Beta	$\text{Unlevered Beta} = \frac{\text{Levered Beta}}{[1 + (1 - \text{Tax Rate}) \times \frac{\text{Debt}}{\text{Equity}}]}$	

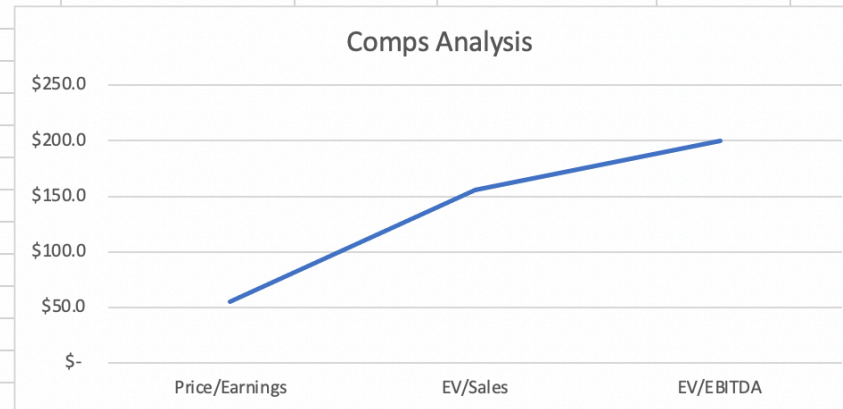
General Rule: If 20% more than current share-price -> under-valued

Company Comparable Analysis

	Market Data			Financial Data			Valuation		
	Stock Price (\$/share)	Market Cap	Enterprise Value	Revenue	EBITDA	Net Income	EV/Sales	EV/EBITDA	Price/Earnings
Interactive Brokers	\$ 46.62	\$ 21,228.00	\$ 25,447.00	\$ 1,997.00	\$ 1,253.00	\$ 161.00	12.74X	20.31X	131.85X
Charles Schwab	\$ 47.56	\$ 53,275.00	\$ 256,975.00	\$ 10,721.00	\$ 6,026.00	\$ 3,704.00	23.97X	42.64X	14.38X
Morgan Stanley	\$ 51.12	\$ 72,623.00	\$ 683,228.00	\$ 41,419.00	\$ 13,944.00	\$ 9,042.00	16.50X	49.00X	8.03X
Median							16.50X	42.64X	14.38X

Target Company	Stock Price	Common shares outstanding	EBITDA	Revenue	Net Income	Cash & Cash Equivalents	Total Debt	Preferred Equity	Minority Interest
TD Ameritrade	\$ 49.70	577.0	\$ 2,928.00	\$ 6,016.00	\$ 2,208.00	\$ 2,852.00	\$ 3,597.00	\$ 8,700.00	\$ -

Implied Share Price: Target Company	Undervalued/(Overvalued)	
Price/Earnings	\$ 55.0	0.107437811
EV/Sales	\$ 155.62	2.131163292
EV/EBITDA	\$ 200.03	3.024763073



Precedent Transaction Analysis

Precedents Transactions Analysis											
Announcement Date	Acquirer Name	Target Name	Equity Value	Net Debt	Enterprise Value	Sales	EBITDA	Net Income	EV to Sales	EV to EBITDA	Price to Earnings
10/2/2020	Morgan Stanley	E*Trade	\$6,820.0	\$(3,819.0)	\$3,001.0	\$2,895.0	\$1,308.0	\$823.0	0.96x	2.29x	8.29x
9/18/2017	TD Ameritrade	Scotttrade	\$1,778.6	\$287.0	\$2,065.6	\$1,108.0	\$327.0	\$178.0	0.54x	6.32x	9.99x
9/1/2011	Charles Schwab	optionsXpress	\$129.3	\$(1,067.2)	\$(937.9)	\$232.0	\$73.6	\$47.5	-0.25x	-12.74x	2.72x

in millions in millions in millions in millions in millions in millions

Min	-0.25x	-12.74x	2.72x
1st Quartile	-0.25x	-12.74x	2.72x
Median	0.54x	2.29x	8.29x
3rd Quartile	0.96x	6.32x	9.99x
Max	0.96x	6.32x	9.99x

Company Being Valued:		TD Ameritrade		Last Price		\$49.00	
Equity Value Multiples		Metric	Shares Outstanding	EPS	Implied Price Range		
Net Income		\$2,852.0	557	\$5.12	1st Quartile	Median	3rd Quartile
					\$13.94	\$42.43	\$51.16

Enterprise Value Multiples	Metric	Shares Outstanding	Total Debt	Cash & Equivalents	Net Debt	Implied Enterprise Value Range			Implied Price Range		
						1st Quartile	Median	3rd Quartile	1st Quartile	Median	3rd Quartile
Sales	\$6,016.0	557	\$3,595.0	\$2,852.0	\$743.0	\$(1,488.20)	\$3,227.02	\$5,803.51	\$(4.01)	\$4.46	\$9.09
EBITDA	\$3,346.0	557	\$3,595.0	\$2,852.0	\$743.0	\$(42,636.50)	\$7,676.87	\$21,136.08	\$(77.88)	\$12.45	\$36.61

Notes:

Difficult to find precedent transactions due to the large nature of this deal

These are two of the largest brokerage firms

MS E*Trade acquisition is of similar size

Strategic Acquisitions

Similar target client group