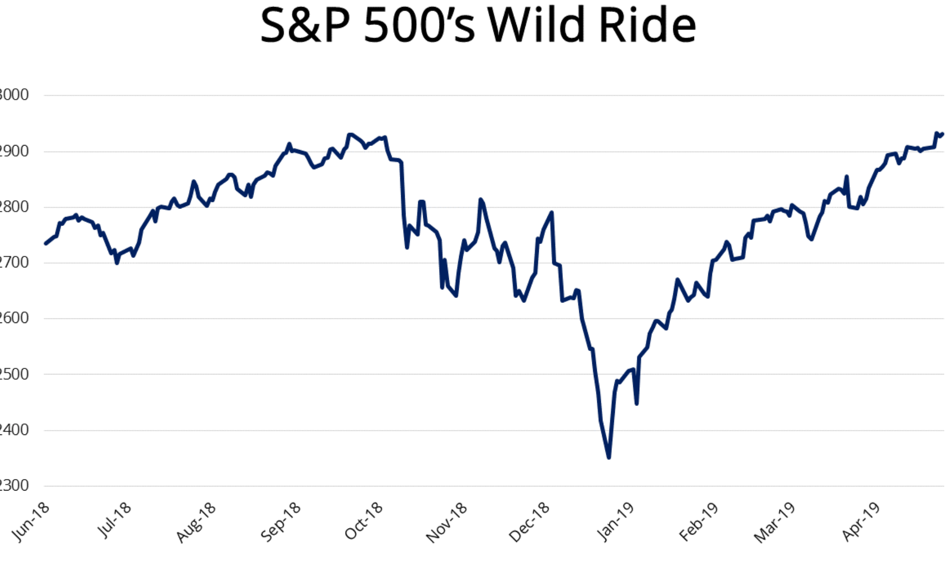
AMERICAN MONEY MANAGEMENT, LLC
SEC Registered Investment Advisor

# The Emoji Guide to Investing

The stock market (S&P 500) has been on a wild ride over the last 7 months.

On September 20, 2018, the S&P 500 reached 2930.75. A new all-time high. By Christmas Eve the S&P 500 was trading at 2,351. A 20% decline.

Now at the end of April, the S&P 500 is trading at new all-time highs again!



With how the S&P 500 has traded over the last 7-8 months, it gives us the chance to share our new favorite image.

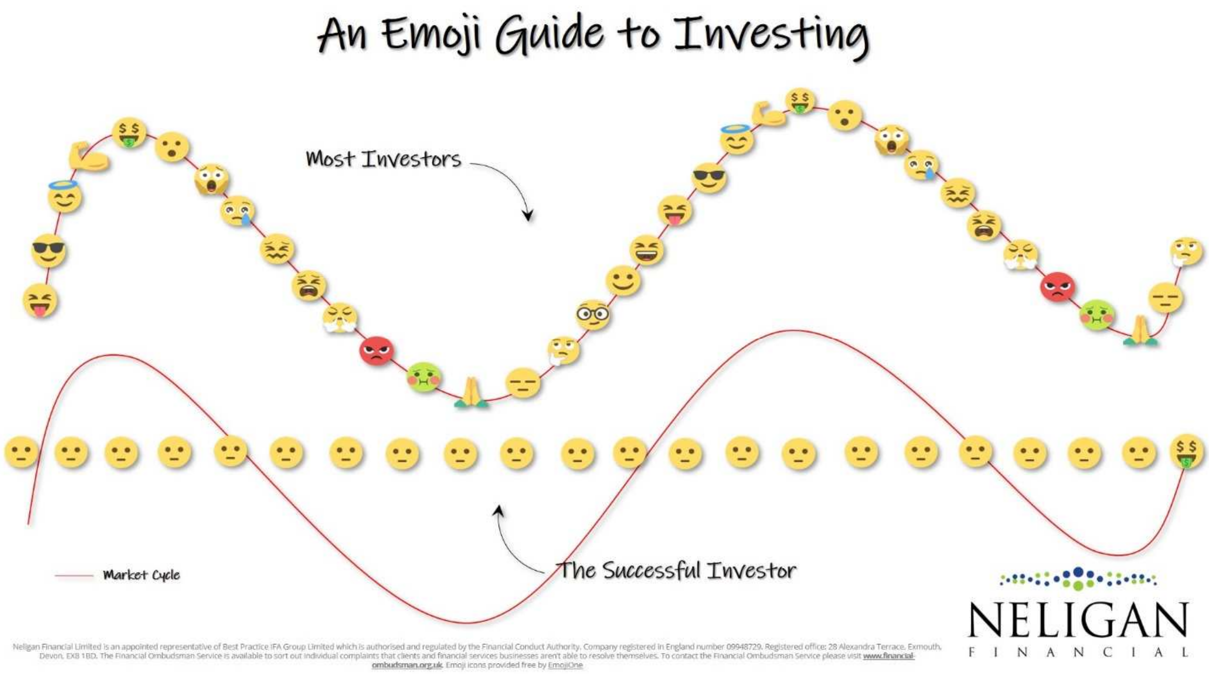



*Image from [Neligan Financial]*

The ideal stoic emoji face is the goal. But let's be honest, **it's not going to happen**.

Emotion, good or bad, plays an important part in our lives. We can't tune it out completely and we wouldn't want to. Life wouldn't be as fun. But we have to be cognizant of the fact that making important financial decisions when we're emotionally charged is usually bad for our portfolio.

We can take several steps to help ourselves make better, less emotional decisions.

## Develop a plan

For your portfolio it is determining the right asset allocation that should generate the necessary long-term returns you need to reach your investment and retirement goals.

## Establish Rules

For a plan to work you also need to stick to the plan. Creating rules helps.

The most basic rule when investing is consistent periodic rebalancing. This keeps your portfolio in line with its asset allocation strategy and it reduces the chance of making an emotional decision. The more you can automate the rebalancing decision the better.

For individual stocks, the basic rules are to develop an estimate of fair value. Then when a stock trades below that estimate and assuming no material change in the business you buy. Other rules include size limitations. If a position reaches a certain percentage of your portfolio it triggers selling to bring the position back to its target size.

## Slow Down Our Thinking

When we're emotionally charged our brain is thinking really fast. It is relying on mental shortcuts and pattern recognition to make quick decisions. Important financial decisions should be anything but quick.

If we recognize that we are emotionally charged, both positively and negatively, we need to find ways to slow down our thinking. Sleep on the decision. Talk it out. Review the pros and cons of the decision with a trusted advisor.

We can't avoid emotions, but by following the above steps we should be able to better control our emotions when making investment decisions.

## Dividend Stock in Focus

### Charles Schwab (SCHW): $45.59

*Price as of the close May 8, 2019*

The first flat screen TVs cost several thousand dollars and were out of reach for most U.S. consumers. Then the manufacturing process improved, the cost of supplies declined, and increased competition drove the price of a flat screen TV down.

Lower flat screen prices led to increased demand and a larger total market for flat screens. What was once a novelty only the rich could afford is now the TV everyone has.

This is the natural progression of competitive markets with indistinguishable products. This is true for brokerages too. But it wasn’t always this way.

Before May 1975 all brokerages charged an agreed upon fixed commission for stock trades. Then regulators abolished the fixed rates. This opened the brokerage business up to new discount brokers like Charles Schwab ("Schwab").

Schwab focused on providing the best customer service while maintaining the lowest prices, utilizing technology as a key tool to achieve these goals.

Schwab was the first discount broker to use an automated order entry system. This led to the development of real-time stock quotes and a News system for the touch-tone phone. They were also one of the early pioneers of online trading in the 1990s.

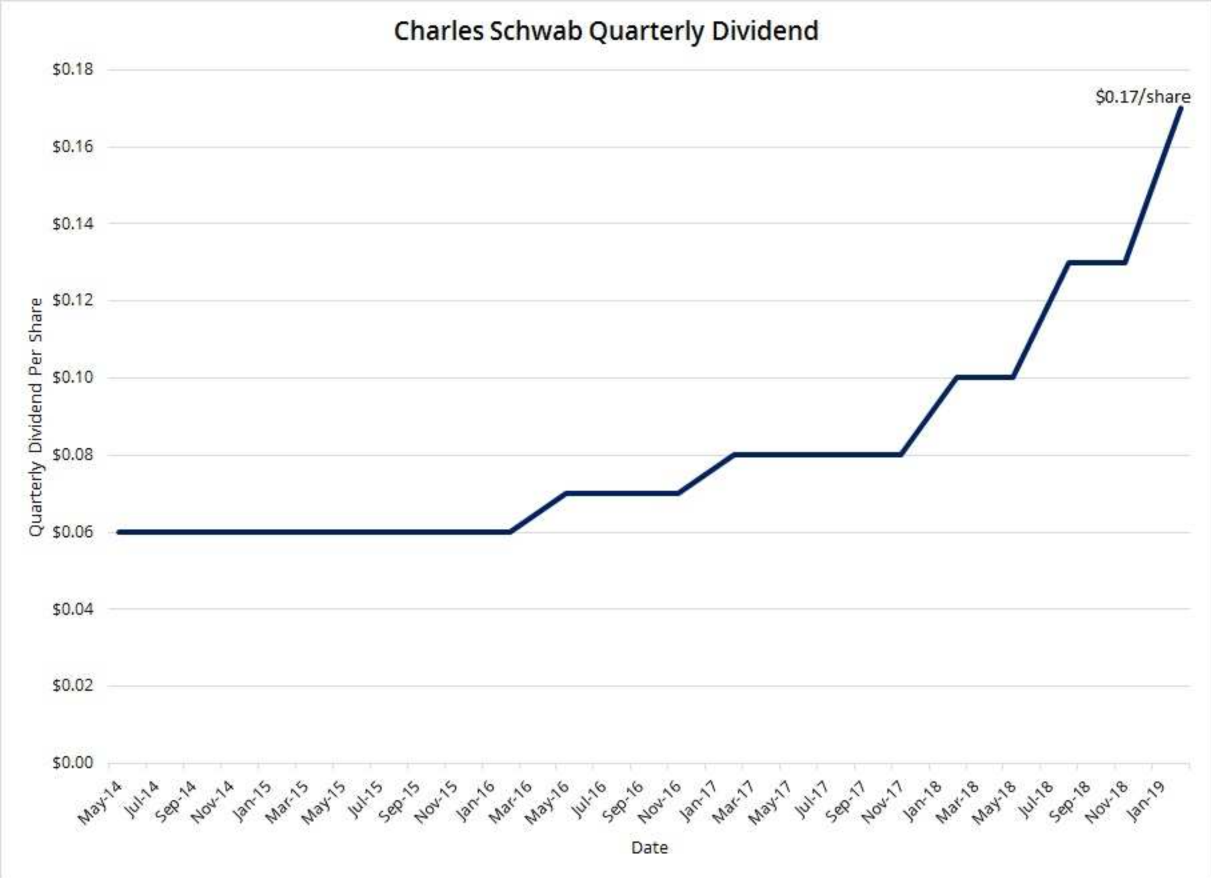
Schwab’s focus on high-quality customer service and low costs helped to drive down trading commissions industry-wide. Declining commissions increased the total addressable market for Schwab's services by making it cheap enough for the average person to start investing.

## Dividend History

Even though Schwab has paid a dividend since 2002, we are classifying the company as a new dividend payer.

Between 2008 and 2016 Schwab did not increase its dividend. They held on to their excess capital to meet the Federal Reserve's requirements for banks. Schwab now meets the requirement and they are returning excess capital back to shareholders

Since 2016, Schwab has increased its quarterly dividend from $0.06 to $0.17. A **183% increase**.




# Dividend Safety

| | | |
|---|---|---|
| Dividend Payout Ratio < 60%? | 27.53% | ✓ |
| Cash Dividend Payout Ratio < 60%? | 6.62% | ✓ |
| Debt to Equity < 100% | 33% | ✓ |

Schwab's low payout ratio is what we want to see in a New Dividend Payer. A low payout ratio means Schwab can raise their dividend faster than by earnings growth alone. Schwab raised their dividend again at the beginning of this year by 30%.

# Catalysts for Price Appreciation & Dividend Growth

## Charles Schwab the Bank

Schwab is primarily thought of as an online discount brokerage but Schwab doesn't generate a lot of revenue from trade commissions.

The Table below is from Schwab's 2018 10-K.

| Year Ended December 31, | | 2018 | | 2017 | | 2016 | |
|---|---|---|---|---|---|---|---|
| | Growth Rate 2017-2018 | Amount | % of Total Net Revenues | Amount | % of Total Net Revenues | Amount | % of Total Net Revenues |
| **Net interest revenue** | | | | | | | |
| Interest revenue | 44% | $ 6,680 | 66% | $ 4,624 | 54% | $ 3,493 | 46% |
| Interest expense | 151% | (857) | (9)% | (342) | (4)% | (171) | (2)% |
| Net interest revenue | 36% | 5,823 | 57% | 4,282 | 50% | 3,322 | 44% |
| **Asset management and administration fees** | | | | | | | |
| Mutual fund and ETF service fees | (12)% | 1,793 | 18% | 2,045 | 24% | 1,853 | 25% |
| Advice solutions | 9% | 1,139 | 11% | 1,043 | 12% | 915 | 12% |
| Other | (2)% | 297 | 3% | 304 | 3% | 287 | 4% |
| Asset management and administration fees | (5)% | 3,229 | 32% | 3,392 | 39% | 3,055 | 41% |
| **Trading revenue** | | | | | | | |
| Commissions | 14% | 685 | 7% | 600 | 7% | 779 | 10% |
| Principal transactions | 44% | 78 | 1% | 54 | 1% | 46 | 1% |
| Trading revenue | 17% | 763 | 8% | 654 | 8% | 825 | 11% |
| Other | 9% | 317 | 3% | 290 | 3% | 276 | 4% |
| Total net revenues | 18% | $ 10,132 | 100% | $ 8,618 | 100% | $ 7,478 | 100% |

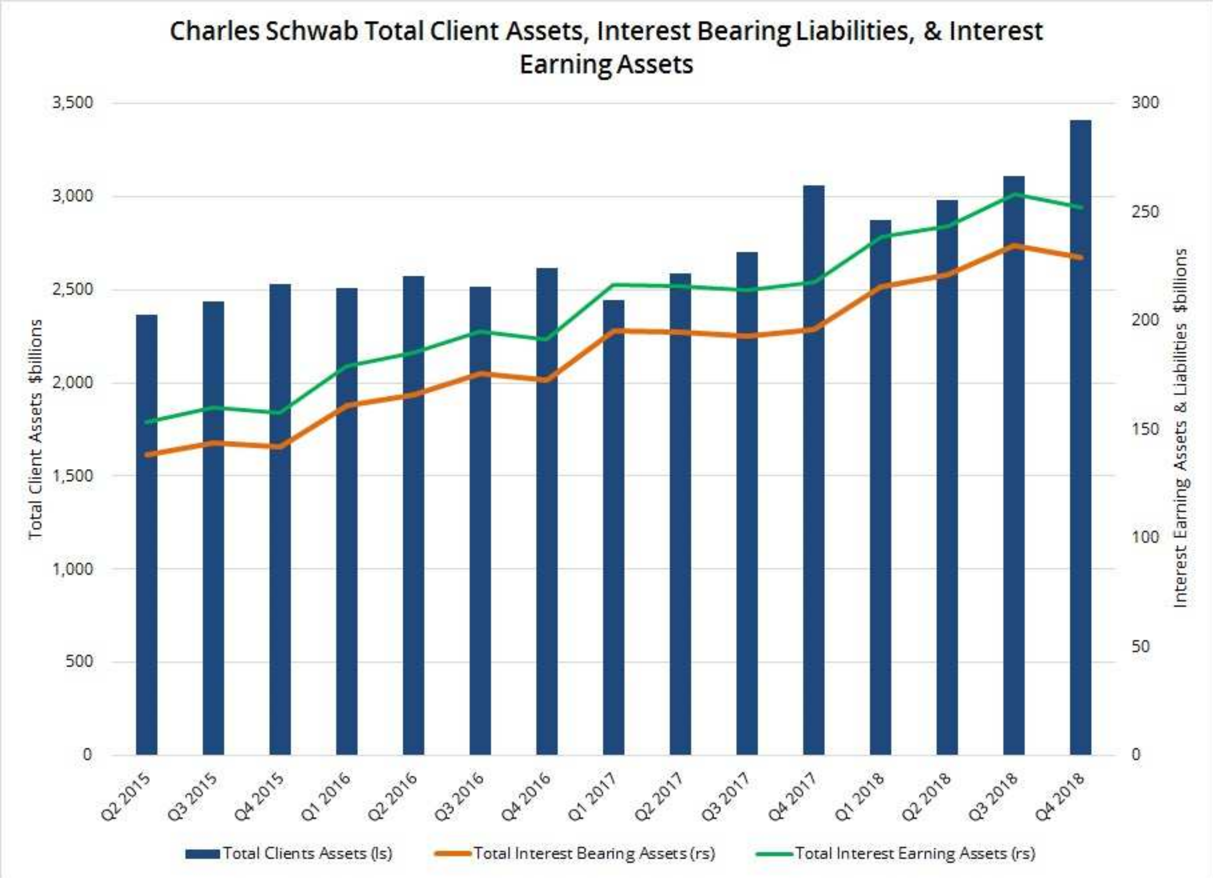
Total trading revenue in 2018 (outlined in green) was only 8% of revenue.

Schwab is more a bank than a discount broker now. The majority of Schwab's revenue comes from the interest it receives on interest-bearing assets (outlined in red).

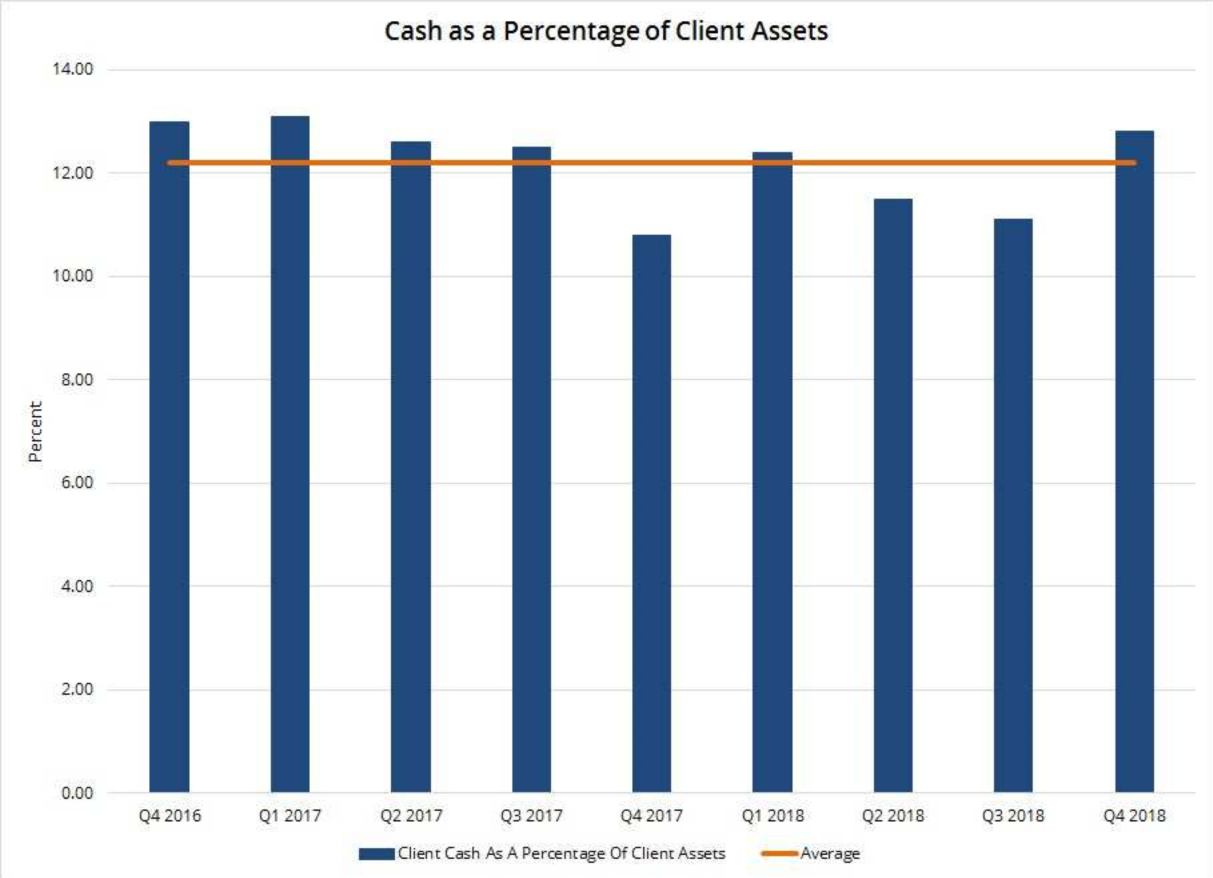
Schwab's cost of funds is very low. Cost of funds is the cost a bank pays to use your cash for their own investment purposes. This is the interest a bank pays you in your savings accounts and on CDs. They are paying you for the use of your cash for their own investment purposes. Schwab's fiscal 2018 cost of funds were 0.27%. For comparison, JP Morgan's 2018 cost of funds on customers deposits were 0.56%.

When selecting a savings account or CD you likely shop around for the highest interest rates. The cash in a Schwab brokerage account is strategic cash. An investor lets dividends, interest, and deposits buildup as they wait for an investment opportunity. Schwab can pay less for the use of customers' cash because this cash is immobile. Paying less on customer cash widens Schwab's net interest margin.

Schwab's focus on low costs and high service is designed to attract more assets to its platform. The more assets Schwab holds, the more cash they can sweep onto their balance sheet. More cash means more investments by Schwab in interest-earning assets. The chart below highlights this relationship.




It also helps that investors at Schwab keep on average 10+% of their account in cash.




## Higher Interest Rates

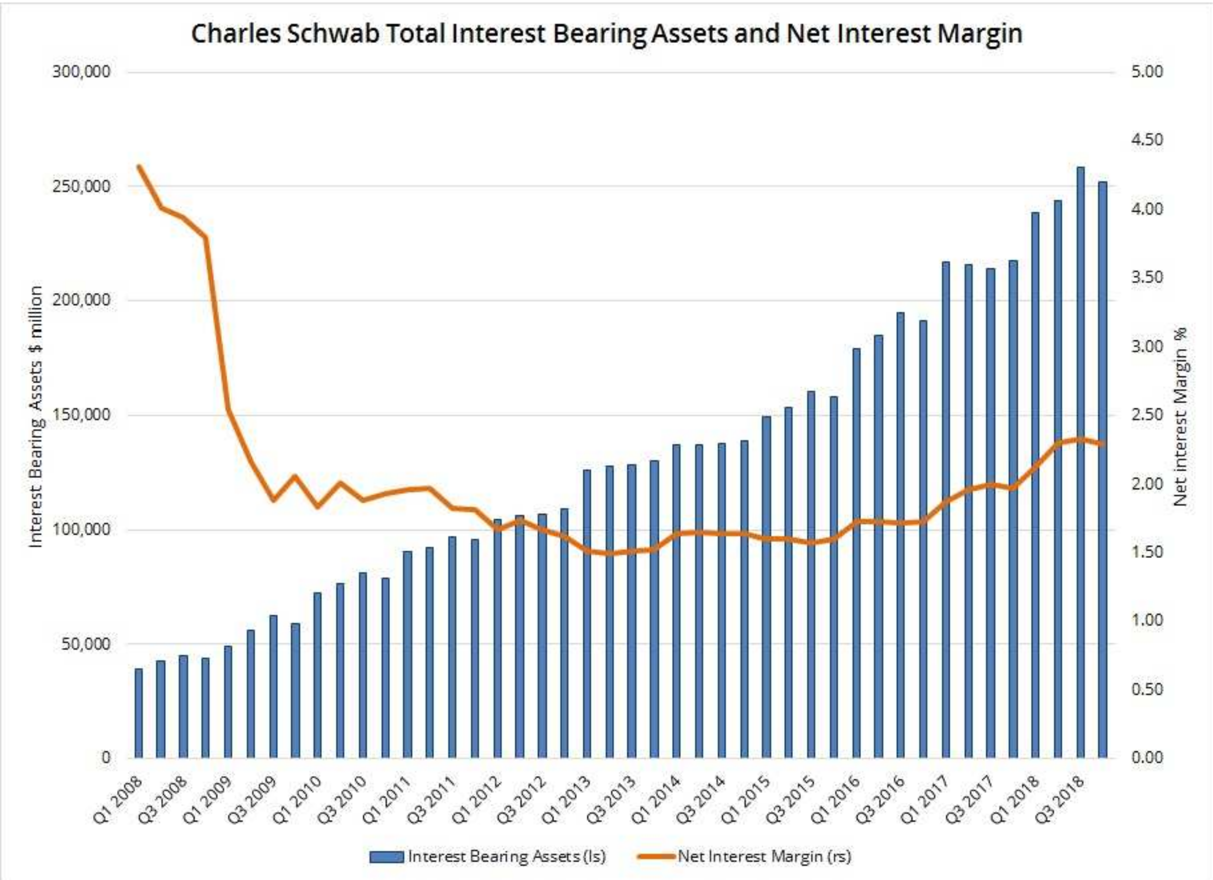
Higher interest rates should increase Schwab's net interest margin.

The net interest margin is the interest Schwab earns less the interest it pays on customers' cash.

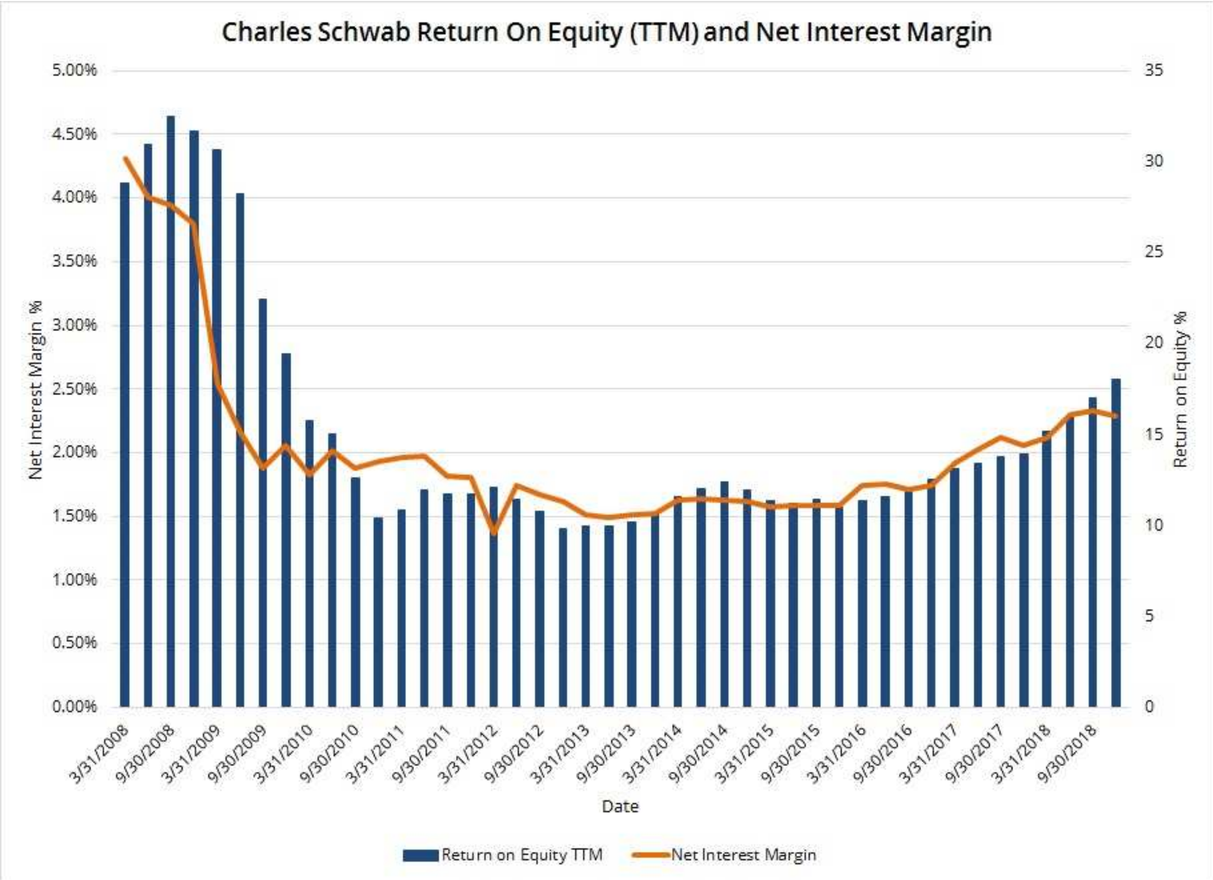
Schwab primarily invests swept cash into 2 year Treasury Notes. After the Great Financial Crisis, the yield on the 2-year Treasury fell below 0.5%. Total client assets and interest-bearing assets at Schwab grew during this period. The low-interest rates dampened

Schwab's net interest income growth. Net interest income growth did not keep pace with total client asset growth.

In the last year, the Federal Reserve raised interest rates. As we write this, the 2-year U.S. Treasury yields 2.40%. At the end of 2018, Schwab's net interest margin was 2.30%. If interest rates continue to rise then Schwab should earn more on its interest-bearing assets. This will increase Schwab's net interest income growth rate too.




Higher interest rates and a higher net interest margin will drive Schwab's Return on Equity higher too. Higher returns on equity lead to excess capital that Schwab can use to increase its dividend.



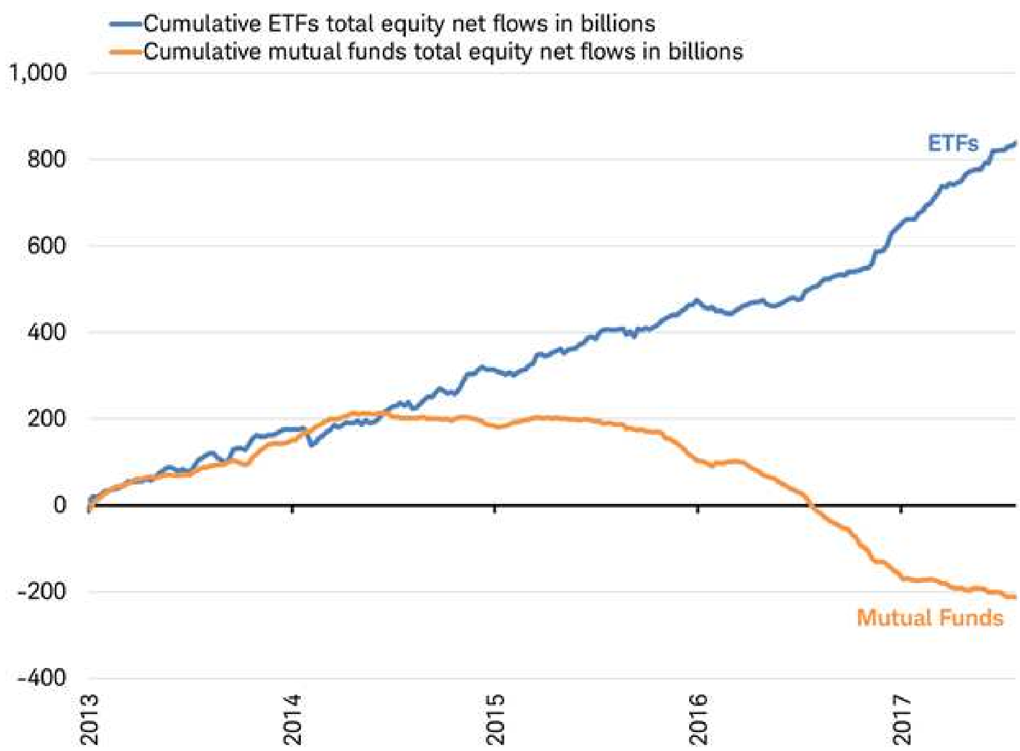

## ETFs

Schwab is riding two long-term secular growth trends.

The first is the rise of the Registered Investment Advisors or RIAs (more on this below).

The second is the growth of Exchange Traded Funds (ETFs).

Since 2014 there has been a steady flow of money out of mutual funds. In 2016 the money leaving mutual funds outpaced the money coming in. The money leaving equity mutual funds is not leaving the stock market. The money is flowing into ETFs (Exchange Traded Funds).




Source: Charles Schwab, Bloomberg and Investment Company Institute data as of 8/5/2017.

*From [Advisor Analyst]*

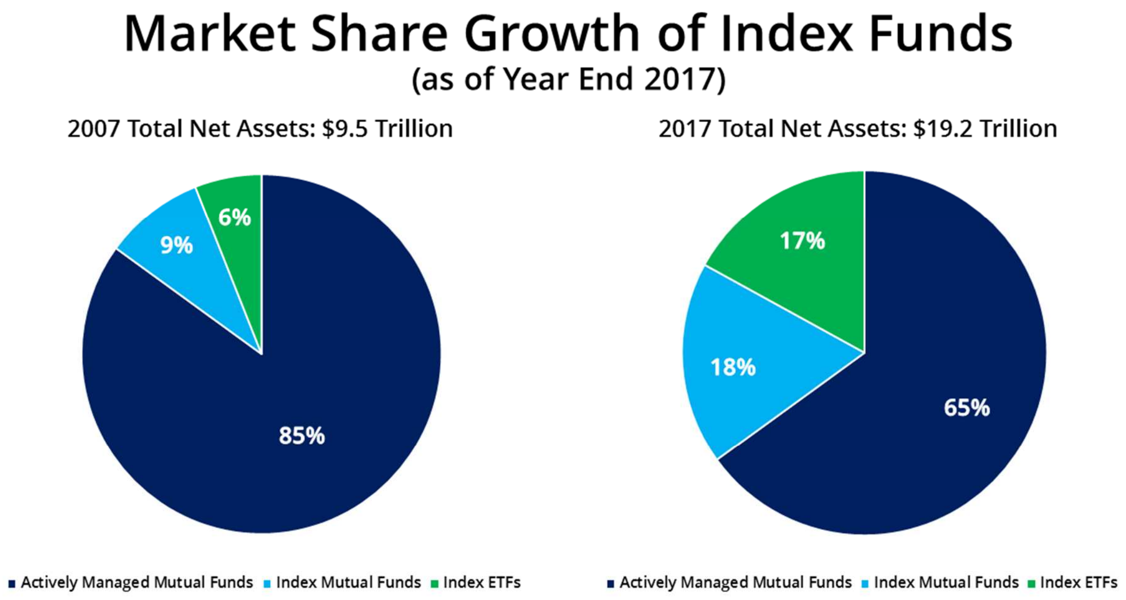
While Schwab wasn't an early pioneer in the ETF space, they are now one of the leading ETF providers based on assets under management.

## ETF Leaders by Assets Under Management
(as of September 2018)

| Issuer | AUM ($mm) |
|---|---:|
| BlackRock | 1,426,714 |
| Vanguard | 926,154 |
| State Street Global Advisors | 633,275 |
| Invesco | 194,056 |
| Charles Schwab | 123,189 |
| First Trust | 71,992 |
| Wisdom Tree | 40,854 |
| VanEck | 33,009 |
| ProShares | 32,100 |
| PIMCO | 17,321 |

*Data from ETF.com*

ETFs are still in the early stages of their growth. According to the 2018 Investment Company Fact Book, at the end of 2017 ETFs had a 17% market share in the U.S. for all assets invested in open ended funds.




*Data from [2018 Investment Company Fact Book]*

We expect the percentage of assets in ETFs to continue to grow as assets move out of mutual funds and into ETFs. We expect the current ETF leaders listed above to attract most of these assets.

The appeal of ETFs to investors is their low costs. Instead of the typical 1% management fee in a mutual fund, you can invest in an ETF with a similar strategy for far less. Schwab's U.S. broad market index ETF has a management fee of 0.03%.

Low management fees do not mean ETFs are not profitable. Most ETFs are based on an index like the S&P 500. Managing the ETF requires a few computers and a handful of people. As compared to a mutual fund and their teams of people. The fixed costs for

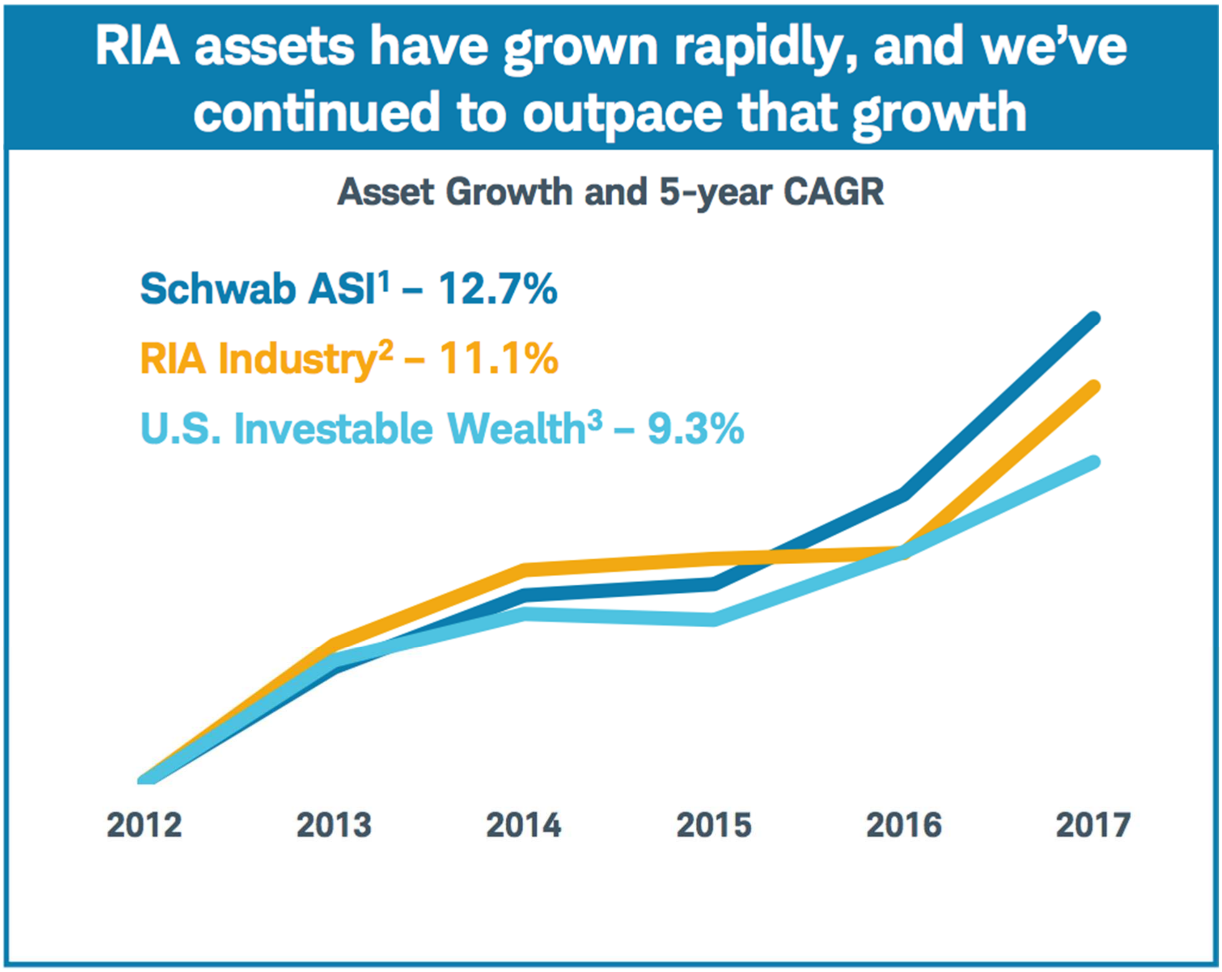
ETFs are very low and the scalability of an ETF is very high. The more assets in an ETF the more profitable they become.

## RIA Growth

The second major secular trend for Charles Schwab is the rise of the independent investment advisor.

25 years ago Schwab made a key decision to support independent financial advisors. Schwab provided custodial, trading, banking, and technical support to help the nascent Independent Investment Advisory business. Today Schwab is the largest custodian for RIAs.

That early decision to help independent investment advisors is paying off handsomely for Charles Schwab. Independent advisory firms are the fastest growing segment as measured by assets in the investment industry.




*From Charles Schwab's Winter Business Update February 2018*

You can think of Schwab as a platform company when it comes to RIAs.

If Schwab can offer the best RIA custodial experience at the lowest cost it will continue to attract more RIA business. The more RIAs on its platform the more assets held at Schwab. The more Schwab will make with its ETFs, mutual funds, trading commissions, and cash sweeps.

A true platform company means the sum total value of the companies built on it will exceed its own value. The RIA business as a whole will surpass Charles Schwab. But Schwab will keep earning increasing economic "rent" as the RIA business grows.

# Risks

## Race to Zero

Schwab is dedicated to being the low price leader in the brokerage business. But Schwab is not the lowest cost provider right now.

Robinhood is the lowest cost brokerage company with $0 commissions. Robinhood is an app based mobile trading platform. They only offer taxable accounts.

JP Morgan recently announced their own commission-free mobile brokerage platform.

New accounts will get 100 free trades in their first year. If a customer maintains a balance greater than $15,000 they will continue to get 100 free trades per year. If you are a Chase Private Client with an account balance of at least $250,000 you will have unlimited commission-free trades.

JP Morgan can offer commission-free trades because they can make more money selling their other services to an account holder. JP Morgan can also use customer cash to invest in interest-bearing assets too.

Robinhood is not a bank. Their plan to make money is twofold. They will sell their order flow to wholesalers. The image below outlines how this works.

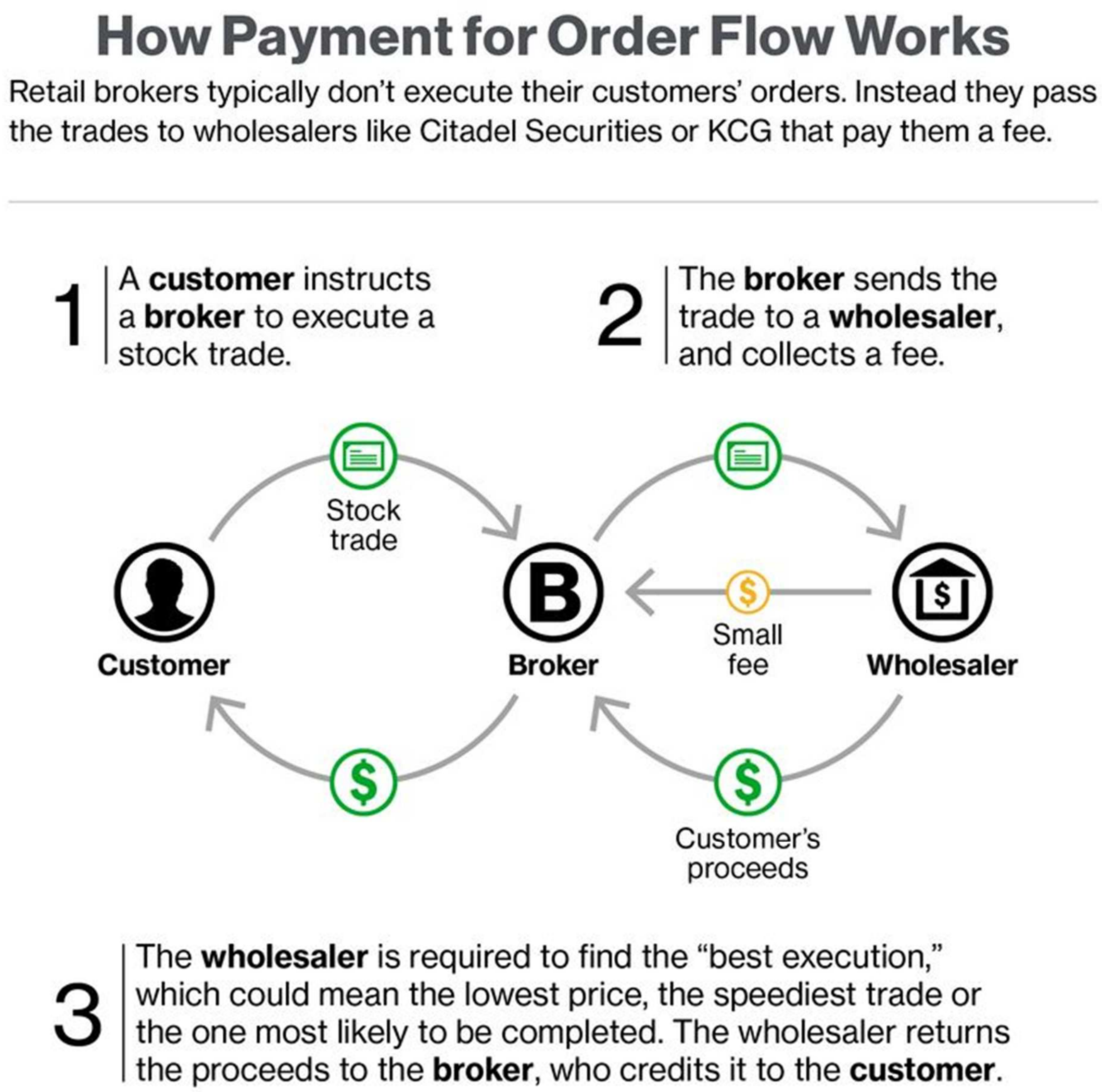



*Image from [Bloomberg]*

Robinhood's second way to make money is through securities lending and margin loans. This is why all Robinhood accounts are taxable. Only taxable accounts are marginable.

If commissions went to zero Schwab would still have trading revenue. Schwab sells its order flow to UBS and they make money with securities lending too.

Unlike Robinhood, Schwab has ETFs, mutual funds, and a banking unit to generate revenue.

Schwab's bigger risk is big banks like JP Morgan offering lower commissions to win assets. But this has always been true and it hasn't had a material effect on Schwab's asset growth. Schwab's leading position with RIAs is a bigger factor for asset growth than commissions.

## Zero Fee ETFs & Lower Asset Growth

The bigger hit to Schwab's revenues in the race to zero would be from its asset management division.

At the end of 2018, Charles Schwab had $233.4 billion of assets in its proprietary mutual funds and $115 billion of assets in its proprietary ETFs.

The launch of Zero fee ETFs did not surprise anyone paying attention. A zero fee ETF has been predicted for several years. Large ETF providers make money from their total ETF management fees and from stock lending.

An ETF provider can charge a zero fee on a core asset ETF because the goodwill it generates will attract more assets to its platform. The extra asset are then invested in their other ETFs that do have fees. As the ETF provider scales up, they make more money across their entire ETF platform.

The bigger risk of Zero Fee ETFs is competitors can chip away at Schwab's asset growth. If too many competitors eat into Schwab's ability to grow its asset base then our estimate of fair value may be too high.

## Interest Rates

A big part to our investment thesis is a widening net interest margin which is driven in part by higher short-term interest rates.

If you think predicting the future price of the S&P 500 is hard then try predicting interest rates.

Until December of last year, the market was certain that the Federal Reserve would raise rates further. Then Jay Powell signaled that the Federal Reserve would take a pause on raising rates.

If a recession occurs the Federal Reserve may even start cutting rates again taking the yield on the 2-year treasury down with it. If this occurred then Schwab would earn less on its interest-bearing assets.

# Valuation

The revenue drivers for Charles Schwab are total client asset growth, interest-bearing assets as a percentage of total assets, net interest margin, mutual fund and ETF management fees, and Schwab's Advice Solutions fees.

Charles Schwab has grown its total client assets at a compound annual growth rate of 11.5% over the last 5 years and 8.8% over the last 10 years. We'll use a 10% growth rate over the next 5 years. We'll keep interest-bearing assets as a percentage of total assets at 7%. We'll keep Schwab's net interest margin at 2.3%

The average fee for mutual fund and ETF assets is 0.25%. As more assets flow into ETFs and zero fee ETFs become common we expect this fee to contract. Our 5 year target fee rate is 0.10%. We're probably being too conservative here.

The average fee rate for Advice Solutions over the last few years is 0.39%. Schwab recently changed its pricing schedule for its robo-advisor. It switched from an AUM model to a flat fee model. Under the new pricing schedule the flat fee equates to an annual 0.35% fee on an account with $100,000. We'll use 0.35% as the fee rate going forward.

We're also keeping trading revenue flat over the next 5 years.

Using these growth assumptions, our 46% pre-tax margin assumption, and a 1% annual growth in shares outstanding our estimate for Schwab's EPS in 5 years is $3.76. Applying a 21x multiple to these earnings — this is well below Schwab's long-term average multiple — we get a per share price of $80. Then discounting this price back to today at an 11% (Schwab's cost of equity) rate we get a fair value price of $48.

We also value Schwab using a residual income model. Financial firms are hard to value using a Free Cash Flow model. Bank debt is not the same as debt for a non-financial firm. Debt for banks is a raw material. It's like steel for a car manufacturer. Capex for financial firms is almost non-existent. Financial firms invest in human capital and intellectual capital which is not well reflected on the statement of cash flows. Using our expected return on equity of 25%, a cost of equity of 11.33%, an expected 2019 book value of $23.13 billion, and a persistence factor of 0.75 we get a present value of $50.

| Residual Income Valuation | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|
| *($ billions)* | | | | | |
| Cost of Equity | 11.33% | | | | |
| Beg Book Value | 23.13 | 27.39 | 32.44 | 38.42 | 45.50 |
| Equity Cost | 2.62 | 3.10 | 3.68 | 4.35 | 5.16 |
| | | | | | |
| Return on Equity | 25.00% | 25.00% | 25.00% | 25.00% | 25.00% |
| Net Income | 5.78 | 6.85 | 8.11 | 9.60 | 11.38 |
| Dividend Payout Ratio | 26.25% | 26.25% | 26.25% | 26.25% | 26.25% |
| Dividends Paid | 1.52 | 1.80 | 2.13 | 2.52 | 2.99 |
| Retained Earnings | 4.26 | 5.05 | 5.98 | 7.08 | 8.39 |
| | | | | | |
| Net Income | 5.78 | 6.85 | 8.11 | 9.60 | 11.38 |
| - Equity Cost | 2.62 | 3.10 | 3.68 | 4.35 | 5.16 |
| Excess Equity Return | 3.16 | 3.74 | 4.43 | 5.25 | 6.22 |
| Present Value of Excess Return | 2.84 | 3.74 | 4.43 | 5.25 | 6.22 |
| | | | | Persistence Factor | 0.75 |
| | | | | Sum of PV | 33.39 |
| | | | | Initial Book Value | 23.13 |
| | | | | Yr 5 Shares Outstanding | 1.42 |
| | | | | Book Value per Share | $16.32 |
| | | | | **Value** | **$49.71** |

Both scenarios reflect our base case. With Charles Schwab trading around $45 per share we think the stock is very attractive at current levels given the long-term secular growth trends driving the company forward.

Current stock quotes are obtained at Yahoo! Finance. Prices are as of the close of the market on the date for which the price is referenced.