

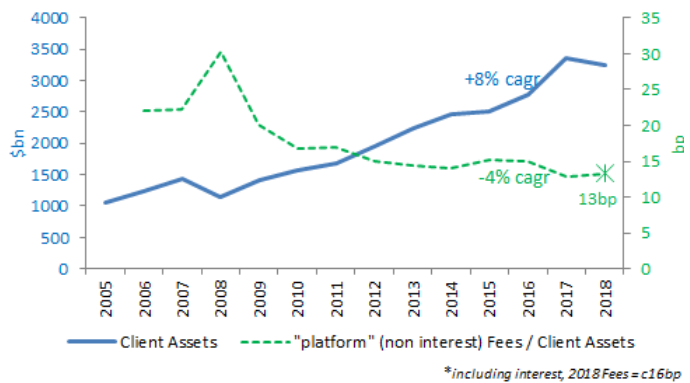
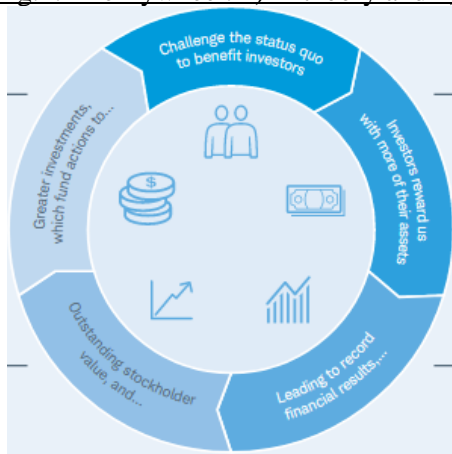


Holland Views – Schwab Inc – Price: \$45; MCap: \$62.8bn

Another Flywheel

If you liked our work on Ryanair, you’re going to love this. We’ve found another flywheel, a business also founded by a maverick who set out to completely disrupt an industry infamous for its egregious price gouging. What it has evolved into in its 47 years of existence is a consumer champion with an unarguable competitive moat driven by ultra-low costs and a clear runway of future growth. It’s a 47 year old broker, a Fintech (before that was a word), it’s now a bank and, crucially, a highly trusted brand named after its founder – Charles Schwab.

Fig.1: The flywheel: 1) in theory and 2) in practice



Source: Schwab 2017 annual report, Holland Advisors

1. Schwab is a **quintessential flywheel business** and is, we think, a ‘Franchise’ stock...
 - ...enjoying a classic EDLP model
 - based upon a “customer obsessed” service culture
 - that constantly reinvests in its customer offering via lower pricing and enhanced services
 - using technological innovation to lower costs and enhance services
 - Its founder, the eponymous Charles Schwab, is still immersed in the business
2. With a unique **hybrid monetisation** business model [i.e. Fees + Net interest margin]
 - Asset-light platform business (a ‘fund supermarket’ ala Hargreaves Lansdowne)
 - plus, an FDIC-insured Bank (with cheap and very sticky deposits swept from clients!)
3. With **ample growth opportunity**:

“The company now handles more than 7 percent of the \$45 trillion that people in the U.S. have available to invest. In the next five or so years, I would be disappointed if that weren’t doubled” – Bloomberg interview with Charles Schwab, founder, Chairman and 11% shareholder, Oct 2018¹ (emphasis ours)

Given all these attributes we find Schwab shares reasonably priced at 16x December ‘19 earnings. What’s more, it has a cushion to market corrections as such events see client risk aversion and

¹ <https://www.bloomberg.com/news/features/2018-10-02/charles-schwab-on-his-3-6-trillion-edge-on-the-fintechs>

thus rising cash balances which in turn provide better interest income to the company (Q4 2018 being an example).

Schwab is a hard stock to find fault in. This is a founder-run, dream business with a compounding bank bolted on with a demonstrable growth runway.

Thinking differently

Our perspective as generalists, albeit ones with experience in US banks, Amex, PayPal, Hargreaves Lansdown and Ryanair etc., we hope, brings a fresh approach to Schwab. As generalists we actively seek these flywheel businesses across all sectors. The reason being that they are a proven way to secure future growth. Those closer to the sector might underestimate the importance of this flywheel driver having perhaps seen it only rarely before.

We have three angles on this business that we think are under appreciated by Mr Market currently:

1. A period of exceptional Schwab Bank deposit growth (+30% cagr since 2006) has required significant capital to be retained by the company. As deposit growth now normalises, Schwab's **marginal ROEs** will be much higher from here on. Schwab can/will likely still grow (8-10% revenue growth is our best guess) but now will be able to maintain a structurally higher pay-out ratio (c.70% we suggest). This means the group more closely resembles a capital light 'Dream' business going forward as opposed to more recently looking like a capital heavy bank model. Dream business (should and do) trade on higher PE's due to their more powerful per share compounding characteristics. The groups 16x multiple does not reflect this fact.
2. Looking over a long-time horizon, Schwab's Dec 2019 PE multiple of 16x should be taken in context. We accept that it has been a beneficiary of the rising interest income it has made on captive deposits as rates rose, but it is far from overearning. Its **2018 Net Interest Margin (NIM), at 229bp, is closer to its trough than its peak.**
3. The growth in Schwab's client assets and the associated bank deposit base (both, being very sticky) cycle-to-cycle ought to have a meaningful impact on **reducing the cyclicity of the business.**

In Summary

We have worked hard to condense the many aspects of the Schwab investment case before putting pen to paper. As a result, we conclude that Schwab's business can actually be assessed reasonably straightforwardly.

We have said in the past that the best businesses articulate their purpose, strategy and culture with the utmost clarity. Next plc in the UK is a great example of this. Next explains its corporate purpose and thinking with such clarity and openness, that the need for subjective external analysis is limited. We think Schwab conducts itself similarly.

We strongly suggest as a starting point, therefore, investors read at least the first 15 pages of the most recent Schwab annual report (2018 out any day now). Few annual reports read with such clarity of purpose as Schwab's does. An important early conclusion from which is that this is a company that *demonstrably* puts the customer first in everything it does and all its financial success, past and future, is derived from this point. The analogies with Amazon in this regard are many though Schwab has a track record twice as long. Schwab, like Amazon enjoys a 'flywheel' business model.

"the flywheel principle was embedded in Good to Great, it's a fundamental principle of how great companies get built over time, ones that last...A flywheel is an underlying, compelling logic of momentum. It's not a list of steps drawn as a circle, called the flywheel.

Rather, there's an inevitability built in. If you do A, you almost can't help but do B. And if you do B, you almost can't help but do C. And if you do C, you almost can't help but do D and around and around. And it's driven around because there's an underlying connection. There's a logical sequence that builds dynamic momentum, because A drives B drives C drives D and around back to the top of the loop." – Jim Collins (Good to Great author) who coined the usage of Flywheel as a business phenomenon

We have framed this note around three key facets of Schwab's business:

1. Its inherent Franchise qualities as a business
2. How it monetises its *increasing* market dominance in a win-win for clients and shareholders
3. A look at growth and returns of the business

1. Schwab as a *near-perfect* Holland Franchise business

"scale is the most durable competitive advantage" - Bruce Greenwald, Competition Demystified

Schwab is a classic Holland Franchise business. Here's why:

1. A 47 year track record as a disruptor of the Financial Services industry with its founder still at the helm.
2. Strong trusted brand known across all demographics in the US.
3. Its "client obsession". Schwab preceded Amazon's now well-known customer centricity.
4. A volume driven, lowest cost business model ala Amazon, Ryanair, Costco etc. that has culminated in c.8% market share of investable assets in the US.

Fig.1 shows the deflationary fee trend clearly for which Schwab is a price setter.

5. Innovation-led: the company embraces technology and has moved up the value chain considerably in its custodian, advisory and banking services.
6. At its core, the Schwab business is asset light and thus enjoys very high returns. Of the \$15.7bn in group common equity, only c.\$2.2bn of equity relates to the 'platform' business. This has not been obvious of late as group returns have been diluted by the rapid growth in Schwab Bank and the capital that had to be retained in the business to support this growth. As deposit growth rates now normalise, Schwab will structurally generate significant excess capital.
7. As the business has scaled and shifted to a recurring revenue base, the cyclicality of the business has reduced considerably as trading type revenue have been replaced by service/custody income streams.
8. **The key driver for us in defining Schwab a Franchise is the extent to which it consistently reinvests back into the customer offering – both in price, but also in service. This is reflected in its aim to double market share from here. Our admiration and respect of those in other industries that have executed this flywheel model successfully suggests that this is arguably a realisable target.**

We show later what Schwab is in effect, an asset light Dream business (the platform) coupled with a decent return utility-like compounder (Schwab Bank).

The Flywheel

The aforementioned Schwab flywheel goes something like this: ever increasing scale begets 1) lower costs and ability to offer better services 2) which attracts more customers and their assets, 3) more customers attracts more 3rd party funds, 4) more fund choice at lower prices retains customers, 5) customer retention means more scale, 6) sufficient scale affords the means to setup an FDIC bank and invest in technology, 7) new bank services aid retention and offer new monetisation routes to drive scale...and on and on.

Readers will rightly ask why we have not mentioned the company’s Returns (last reported ROE of 20%) as part of our Franchise checklist above. A key component of any Franchise and its future compounding power being a good return on capital. This is where a greater understanding of Schwab’s hybrid business model is important. Schwab’s core business model is an inherently high-margin but asset-light platform (ala Hargreaves Lansdown who incidentally makes a 63% operating margin). However, in Schwab’s case this is diluted by its Bank and the exceptional recent capital needs of that Bank’s deposit growth in recent years. We address this specific point in due course.

The moat – seen through its peer’s eye

Bruce Greenwald’s point on scale made earlier is the absolute key to appraising this business. The client value afforded by Schwab’s scale is incredible as can be seen below:

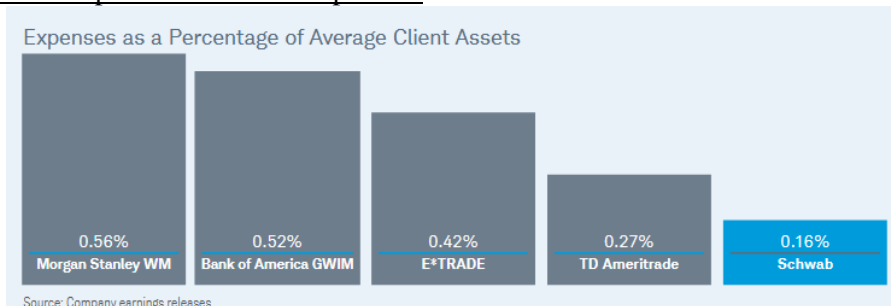
Schwab platform revenue/Assets	c13bp (and falling -4% per year!)
Hargreaves Lansdowne revenue/assets	c50bp
AJ Bell revenue/assets	c20bp

It is also notable that although Schwab clients have \$3.4tn of assets, less than a third of these assets are generating what we might term ‘balance-derived’ revenues². The remaining assets (individual equities etc.) most probably generated small trading revenues for Schwab in the past but in effect are now held in custody for free! Schwab still bears the custodian cost of doing this. This is a superb deal for the client as any UK investor holding capital with a wealth manager will tell you! The c.\$2bn of assets which do not generate ‘balance-derived’ recurring revenues have of course the potential to do so in the future of course.

“... one of our key structural advantages is our scale and our operating efficiency. Our cost structure is about half, in some case less than half of a number of our online competitors and less than third that of the warehouse firms.” – Walt Bettinger, Winter update 2018

Fig.2 below shows a cross section of the US investment and the dramatic cost advantage that Schwab has achieved vs. its peers. It does, we note, exclude a couple of other heavyweights Vanguard (a not-for-profit ‘Mutual’ corporation) and Fidelity (also a private business).

Fig.2: Low cost operation vs. the competition



Source: Schwab report and accounts

² In 2018, Schwab’s entire Asset Mgmt and Admin Fees (i.e. Platform fees) were derived from just c\$886bn of fund assets and its ‘Advice’ revenues were based upon c\$227bn of assets. That compares with \$3,409bn average assets in total.

So what is the secret sauce? Putting the client first. It sounds easy, and is something 90% of companies these days pay lip service to, but, few companies really consistently operate with this mindset. Fig.3 shows the company’s principles which, in studying its past, we are prepared to state they have broadly executed upon.

Fig.3: Through Clients’ Eyes

Through Clients’ Eyes

Principles that will guide our actions for growth

1. **Trust is everything. Earned over time. Lost in an instant.** We will focus on anything we do or don’t do that builds or undermines trust and our relationship with clients.
2. **Price matters. More than ever. And in our industry more than most.** We will leverage our scale to deliver industry-leading pricing without prospects or clients having to ask or negotiate.
3. **Clients deserve efficient experiences. Every time.** We will respect our clients’ time by ensuring that every interaction a client has with us is simple and easy.
4. **Every prospective or existing client is critical to our future growth. No matter how large or small.** We will value and delight them at each possible opportunity.
5. **Actions matter more than words. Clients, press, influencers, and employees will give credit to what we do vs. what we say.** We will challenge everything we do to ensure it is consistent with what we believe and say about ourselves.

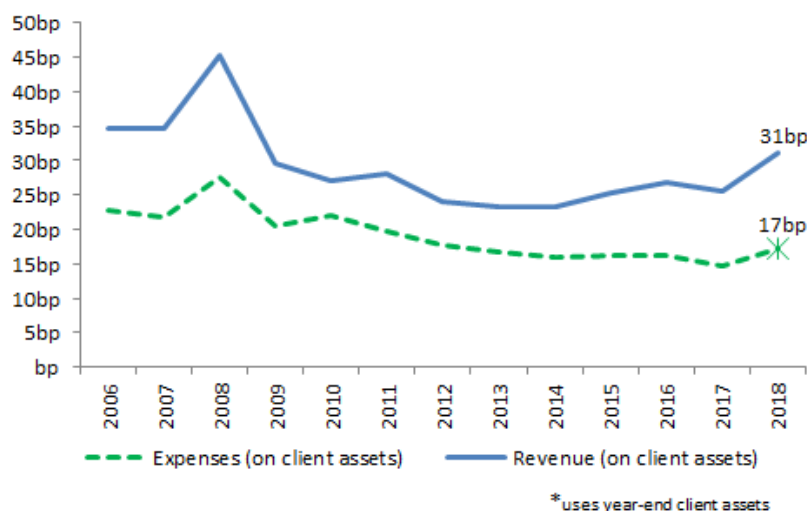
Source: Schwab 2017 AR

In our experience, companies that have followed these types of approaches for long periods have outputs (volume growth, market share gains) that can either prove or disprove such lofty statements. That is why a long publicly quoted and visible track record of financial and operating metrics is so key. Not just to judge say accounting quality or the like but more importantly whether the business model has actually delivered the outputs that would logically result from past re-investment activities. The data we have studied for Schwab and the quote below support such a view.

It really continues to show up in one of our simplest, most direct metrics. If you look at our TOA, or transfer of assets or accounts, we continue to win more than \$2 from competitors for every dollar they win from us. That’s a metric that we’ve not seen documented, at least in any kind of publicly reviewed forum, achieved by any competitor.”

– Walt Bettinger, Winter update 2018

Fig.4: what Schwab looks like “Through shareholders’ eyes”!



Source: Schwab

Those data points are, to us, reminiscent of our work on JD Weatherspoon (an analogy we doubt few Schwab observers have made before!). As the company is achieving ever-greater scale and efficiency it is passing much (or all) of it on to customers in the form of a lower price offering. In doing so it is further building the moat around its existing business while creating more long-term value versus its competitors to drive yet more growth.

2. Monetising its customer base in a win-win fashion

“I’d like to think that we’re a blend of Amazon and Nordstrom. You can get extraordinary value. You can get tremendous technology. You can have a breadth of choices. But you also have that person there to help you.” – Walt Bettinger, CEO

Monetisation opportunities increase significantly with scale because it requires an ever smaller marginal profit per customer/client. Take Ryanair. The company now has over 120m annual passengers. In the context of say €1,000m annual net profit run-rate, its ability to generate even just €4 of profit in ancillary revenue per passenger (hotel bookings, car rental, in-flight vodka – whatever) can very meaningfully move the profit dial. **This is the beauty of lowest-cost, volume-led businesses when they realise a critical mass.**

Schwab started life in the early 1970s as a discount broker, making its money largely on flat-rate trade commissions. For example, twenty three years ago when one of your authors was a client of Schwab, the company was generating c.50% of its then \$2.3bn group revenues from trading commission. Today, trading commissions are just 10% of a much larger c.\$10bn revenue base. A clear indication of the extent to which the overall business has evolved and how it now monetises its customer base in a better, more sustainable manner.

Trading prices are today very low and maybe will soon be zero. We are fine with that. Ryanair’s Michael O’Leary said he expects air fares might trend towards zero also (with the profits being generated via alternative revenue streams). Buffett once observed that a great business needs to be a win-win situation for the entire eco-system. In many of the most successful modern day business customers receive wonderful value for money and the monetisation of the company customer relationship is almost invisible to them.

Fig.5: Various EDLP companies and how they make their money

	The service	How its monetised
Google	Free search	Ad revenues
Costco	Products at wholesale EDLP	Membership
Ryanair	Lowest cost fares	Fares + ancillaries
Schwab	EDLP trading + services	AM + Bank spreads
Amazon	EDLP	Prime + AWS

Source: Holland Advisors

Again, the low cost winners which we seek are the ones benefitting-from and, importantly, actually driving these deflationary trends. When you have massive scale, you only need a small profit per client (or indeed per passenger) for the aggregate profit to be meaningful. This is not a new concept by any means... which brings us neatly to Schwab Bank.

Schwab Bank

Whilst Schwab continues to offer market leading prices and services in its asset management, custody and advisory services, an in-house Bank lets it also offer (FDIC-insured) banking services. Schwab sweeps unused cash balances from client accounts into the bank which are very low cost and sticky deposits. The margin it can then make of these deposits are it’s to keep (a type of float).

Fig.6: Context on how Schwab makes money in 2018

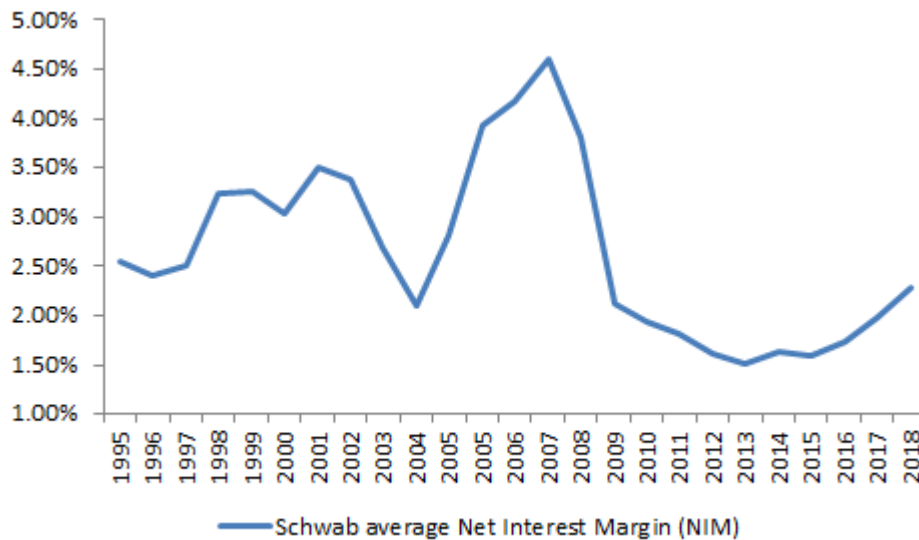
	2018	
Platform	3229	32%
Trading	1080	11%
Bank (NIM)	5823	57%
Total Revenue	10132	
Expenses	5570	
Income before taxes	4562	

Source: Holland Advisors

Crucially for Schwab bank (and Schwab shareholders), we believe that cash held in an investment account is not ‘managed’ by its owner with the same mindset as cash in a regular bank deposit or savings account given that the customer has parked this cash to invest at a later date. That is, it is much ‘stickier’ than a normal bank deposit balance.

Schwab currently makes a spread of c.230bp (vs. a peak of c420bp in 2006) on these tactical cash balances that fluctuate in customer accounts. By comparison, Schwab makes c.20bp on managed assets and c.50bp on advised assets. The Bank arm is thus a superbly complimentary business for customers and shareholders alike and is now a key element of the Schwab flywheel. The scale of this opportunity that was afforded to Schwab due to the size of the business it had built shows why the company chose to do something that is quite unusual in business model studies. They took an asset light business that made great returns (and did not need significant capital to be retained on its balance sheet) and they made it asset heavy!

Fig.7: Schwab’s Net Interest Margin (spread)



Source: Schwab 10k filings

Some smaller discount brokers tout ‘cash management’ offers but the reality can be far less impressive³. Crucially, Schwab’s scale is a major advantage here: this is an FDIC-insured bank which comes with onerous Federal oversight, transparency and more capital than smaller competitors are capable of providing. An important point for investors is the fact that Schwab Bank is in a key competitive position but one that was built from scratch as a function of the scale

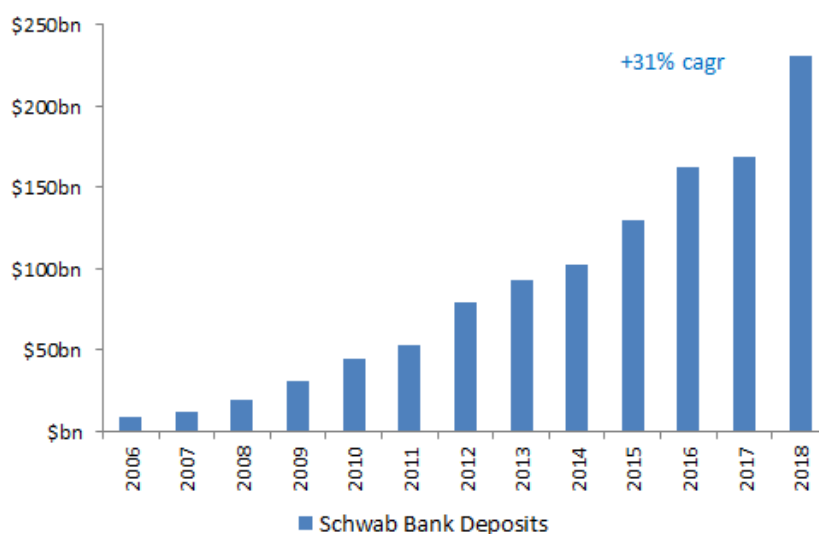
³ Fintech start-up Robinhood is in regulatory trouble recently for advertising a quasi-money market fund as being insured. Regulators have deemed this to be misleading. None of Schwab’s major competitors offer the security of an FDIC-insured bank. Even Vanguard has just shuttered its cash management services (WSJ: March 4th 2019)

of its core business (which in turn was also built from scratch!). Whilst unorthodox it is a powerful example the strength that well-built scale can result in.

“there are no monthly account service fees and no minimum balance requirements for the Schwab One account when it is linked to your Schwab Bank Invest First card.” – Schwab website

Returning to the decision by Schwab to develop the bank. The accounts of the company show clearly the scale of capital that has been needed to have a suitable capital base to support it. This was not a trivial commitment either in terms of time or scale. We showed earlier that the deposit base of the bank has grown at a cagr of c.30% pa since 2006 as shown here in Fig.8a.

Fig.8a: Schwab Bank deposits



Source: Schwab 10k filings

Additionally we note that the capital retained to build the bank division’s required capital base equated to 80% of total profits in the last five years. The future capital retention requirements of the Bank however, as we will demonstrate shortly, are far lower. It should be noted that perhaps without the presence of an owner/founder/manager who returned to this business in 2004, such a scale and long term commitment to develop the banking arm might not have been undertaken.

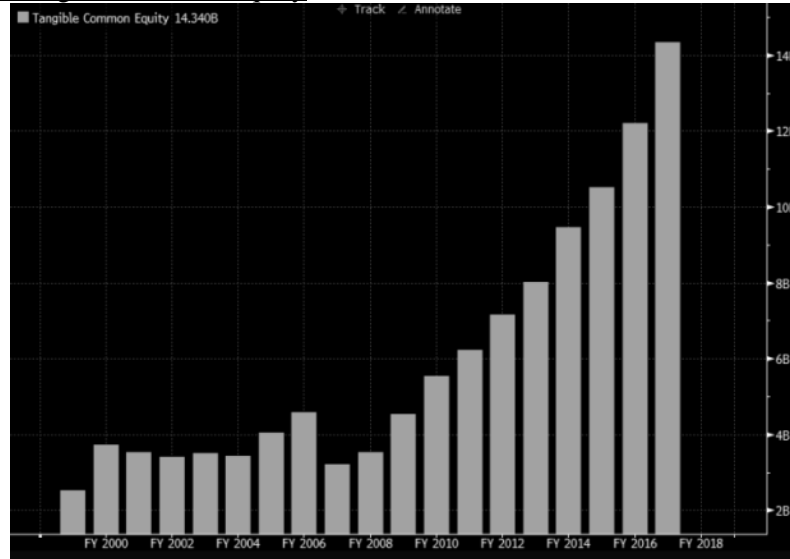
3. Thinking about Capital, Returns and Growth

We see Schwab as an inherently high return business. But this is not immediately apparent from recent years’ ROE.15-20% at the group level. That said, group ROE has jumped to c.20% in recent quarters. When we think about Schwab’s capital intensity and return on capital, we need to think about it as two distinct businesses: 1) an asset light platform business making ultra-high margins with essentially no capital retention needs and 2) a capital compounding Bank with regulatory capital requirements.

Fig.8b below shows the change in retained group earnings post-2009 when the Schwab Bank began to rapidly ramp up its operations. Or more precisely, bank deposits grew dramatically as customers were offered the sweep facility to have their cash assets secured by a FDIC-backed bank. As Schwab began to increase the rate of sweep client cash into the bank, it was obliged by regulators to build its own balance sheet commensurately. The exceptionally rapid growth in deposits therefore soaked up the vast majority of annual profits being generated in the wider business.

Notably, this phase of exceptional deposit growth is coming to an end as the group only has limited client cash left to sweep. This means, we that Schwab will soon return to being far more cash generative corporation.

Fig.8b Schwab tangible common equity



Source: Bloomberg, Holland Advisors

Although Schwab does not disclose the *operating* costs for the bank, the company’s 10k provides some useful insight into quantifying the *capital* retained by the banking operations. (See the 10K extract that we have put in the Appendix) Fig.9 below shows the history of how this capital by division has moved for the last six years when bank deposits compounded at a whopping 18%. It also then shows our estimate as to what level of capital will be required in the future as bank deposits grow at a likely slower rate (we use 8%). In such a scenario, retained capital (as a % of Net Income) would fall from a range of 70-100% down to c.30-35%. In other words, Schwab’s pay-out ratio could and ought to rise considerably towards c.70% of net income despite still growing assets at a healthy future rate.

Fig.9: Schwab Bank Capital

Bank Capital	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Schwab Bank Deposits	79.3	93	102	130	163	169	231	249	271	294
						2012-18 cagr %		18%		
						Deposit grow		8%	8%	8%
Equity Capital										
CSB (Schwab Bank)		6550	7700	9314	11726	13224	15615	17022	18447	19991
CSC (Platform business)					1912	2508	2262			
TOTAL (excl prefs)					13638	15732	17877			
retained Bank Capital			1150	1614	2412	1498	2391	1407	1424	1544
as % of net income			91%	118%	138%	69%	72%	38%	34%	34%
equity aS % bank deposits		7.1%	7.5%	7.2%	7.2%	7.8%	6.8%	6.8%	6.8%	6.8%

Source: Schwab 10k, Holland Advisors

Schwab’s cash sweep in recent years has been exceptional and is now tapering off (there is just c.\$30bn of cash sweep remaining in H1 2019). Schwab calls this its “*new chapter*”. As the sweep slows, so too will Schwab’s capital needs. It is for this reason that, perhaps counterintuitively, as growth slows, greater cashflow will be generated. This will also showing up in the ROE rising as future growth will be at higher marginal ROE’s.

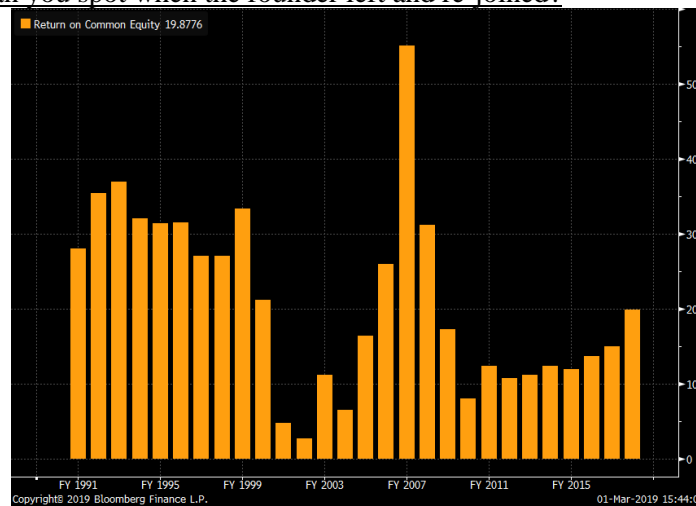
“*And that sort of takes us to, in some ways, what is a new chapter or at least a chapter we haven't seen at Schwab for quite a number of years in terms of our ability to reward our owners. Right now, we're right on the cusp of being in a position to begin returning capital to our stockholders in a quite meaningful way” – Walt Bettinger, Oct 2018 (emphasis ours)*

“We think the opportunity exists in the next decade to continue the type of trajectory that you’ve seen 7% market share, our position is strong, our opportunity to continue to take share is there, and we believe we’ll be able to combine that with both again organic growth as well as the return of capital to you during that period” – Walt Bettinger, Feb 2019

Founders, risk and Value

The chart many readers might have expect us to show in the earlier section when we labelled this business a Franchise is below. As we have started elsewhere is this note a more detailed study of the business is required in assessing current and future likely Returns on Equity. However, with just a cursory glance see if you can spot when the founder left the business and when he re-joined. In case you are struggling the Chart of Tangible Book value per share shown earlier makes it easier still.

Fig.10: ROE – Can you spot when the founder left and re-joined?



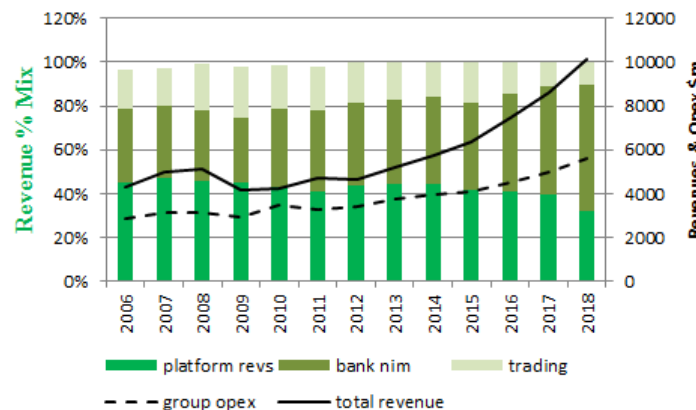
Source: Bloomberg

Charles Schwab – the man – and his very long term orientation, we like. We also like his desire to take risks with the business yet whilst always remaining completely aligned with us as shareholders.

Cyclicality and real Risk

As we have observed earlier and the chart below shows, Schwab is not the business it once was. Today, a very small % of its sales are generated out of trading commissions. The bulk of income is now derived from either platform revenue (either flat fees or % of AUM) or from Net Interest Income.

Fig.11: Schwab profit pools



Source: Holland Advisors

As this mix has developed so too has Schwab’s market sensitivity. Whilst a falling market of course can bring lower platform revenues due to lower balances some mitigation now takes place due to the importance of banking cash balances and the sizable profits the group now earns from these.

Studying this company as we have been over the winter of 2018/19 has been informative. This being due to the fact that we saw a significant equity market decline that conveniently (for this exercise) happened during a single quarter (i.e. calendar Q4 2018).

- The S&P500 index fell 14% QoQ in Q4
- Client assets at Schwab fell 3% QoQ and client revenue from platform fees fell 7%, Trading revenue fell 2%
- Client cash rose from 10.3% of assets at end Q3 2018 to 12.8% at end of Q4, i.e. a 25% uplift (as per the monthly schedule in the Appendix)
- Client deposits rose from \$208bn to \$231bn, but we do not know for certain how much of this related to increased sweep function or was down to customers more cautiously moving to cash
- The groups Net Interest Income rose 6%
- ...and, finally, PBT was flat QoQ

Fig.12: Q4 was interesting quarter

		Q3 18	Q4 18
S&P500		2913	2500
	QoQ		-14%
av client assets		3508	3409
	QoQ		-3%
schwab bank deposits		208	231
	QoQ		11%
Platform Fees		809	755
	QoQ		-7%
Trading		176	206
	QoQ		-2%
NIM		1527	1626
	QoQ		6%
Income before Tax		1219	1210

Source: Holland Advisors

“the equity market weakness late in the year cause a lot of our clients to retreat from the markets and to move more heavily into cash” – Walt Bettinger, Feb 2019 analyst call

As a result of this exercise and from studying longer-term periods historically when markets have fallen, we will observe a factor about the risks that present themselves to Charles Schwab:

1. The potential impact to the group’s profitability caused by stock market falls, we think, is less than might be ordinarily expected. This is a notable change from its long-term history and arises mostly as a function of group revenues now being fee-based (on client assets) as opposed to trade orientated. Also, importantly, customers also move to higher cash balances during market falls and these bring much better margins to Schwab.
 - a. Simplistically, \$1m of client *deposits* earning a NIM of 250 basis points generates the same income as does \$12m of client capital under management/advisory being charged at 20 basis points.

2. In more prolonged market falls, a second factor comes into play – that being the likely accelerated market share gains on offer as weaker competitors fail. This was arguably a driving force of this business during the post crisis years of 2009-2012.
 - a. During 2009 Client assets fell 21% from their 2008 peak to \$1.1 trillion. All of these losses were recovered in 2009 and by the end of 2010 client assets were 9% above their starting 2008 level. These number should be considered vs todays client asset level of c.\$3trillion.

Interest Rate Cycle risk

The move to drive bank deposits and to benefit from the profits they produce has arguably made the company far more exposed to the interest rate cycle now than the stock market cycle. In that sense there is greater correlation with US domestic consumer banks. Post a recent year rise in US rates it is easy to thus assume, as we think some market commentators do, that the groups recent profitability has been boosted by this interest rate recovery and therefore in some way profits may be inflated.

The table below (and Fig.7 earlier) puts this assumption into context. Whilst clearly the group NIM would suffer in the event interest rates returned to ultra-low levels they would also keep benefiting were a continued normalisation of policy to past averages take place. As we write few investors seemingly believe the latter case to be likely, as such we like the free optionality it brings. Lastly it is worth pointing out that whichever way the interest rate cycle moves, the capital associated with divisional bank deposits would not change. So were interest rates to rise further, this would see higher Net interest income but without a requirement for any further retained capital.

In short, the only macro reason not to own this share is if you are US deflationist, believing rates will revert to being low and staying low for a considerable period. For the record we are not of that view. Aside from that scenario the likely future compounded returns this company ought to generate look very appealing.

Valuation and Conclusion

Earlier in this note we noted the aspirations of Mr Schwab himself:

“The company now handles more than 7 percent of the \$45 trillion that people in the U.S. have available to invest. In the next five or so years, Schwab says, “I would be disappointed if that weren’t doubled.” – Bloomberg interview with Charles Schwab, founder, Chairman and 11% shareholder, Oct 2018⁴

Separately we observed that were the bank deposits of this company to grow at c.8% per annum this would allow for a 70% pay-out ratio of Net Income to shareholders. In addition to the traits outlined in this piece we have also noted during our study of this company that its nominal growth rates of measures such a client assets are still at high rates despite its now significant size.

Client v/end Assets YoY %

2018 -3%⁵
 2017 +10%
 2016 +13%
 2015 +13%

Against the context of these growth figures, and the group’s powerful flywheel model we outline what we think is a crude, but hopefully insightful model for this company’s future. It can be seen in the Appendix (see Holland Simple 10-year Model)

⁴ <https://www.bloomberg.com/news/features/2018-10-02/charles-schwab-on-his-3-6-trillion-edge-on-the-fintechs>

⁵ S&P500 was down -6%. Average Assets actually grew +11% YoY

In it, we have made far more conservative assumptions about market share growth than the founder himself. Far from considering the possibility of doubling market share in five years, we have assumed Schwab's market share rises from 8% to 12% in ten years. However, we also assume that the underlying market for client custody assets compounds at a c.5% annual rate. These two factors combined produce a rise in assets, revenues and net income of 9.8%pa. Implicit in these outcomes is the fact that the group is assumed to derive no operational gearing from its growing scale despite it having made many highly credible claims to the contrary.

However, our main objective in such basic modelling is to assess the business' compounding capacity in as simple terms as we can. Thus it seems easy to conclude that Net income could grow at a similar 9.8% rate with only asset growth of 7-8%pa, i.e. implicitly assuming quite modest market share gains.

Additionally, we have also looked at the effect of less capital required to be retained in the business as we have discussed earlier in this piece. The c.8-10% assumed client asset growth is the assumed growth rate for bank deposits as well as custody assets. As such a retained c.30% of group profits builds sufficient incremental bank capital for that to be achieved as we have demonstrated. The remaining 70% of capital is assumed paid out to shareholder in line with management's current commentary. A further 70/30 split being assumed in favour of buy backs. The final assumption we make relates to the earnings multiple of the shares. This we have left unchanged, but with a Dec 19 PE of 16x in time a re-rating to a higher multiple is a distinct possibility, especially in light of the compounding rates we demonstrate below.

The output of such modelling is interesting and maybe even enticing? These projections suggest per share Schwab shareholders could compound their investment at **14-15% pa for the next 10 years**. With all of the traits we have stated in this note and an owner manager primed to try and exceed these goals by some margin, these we think are interesting and attractive results. Upside from faster growth, more operational leverage, higher NIM's or PE's would all come for free.

All investors can model the detail of this business with a slightly different lens. Our approach is merely to demonstrate that a combination of continued good revenue growth either due to market and/or share growth if combined with good cash generation (which the management are widely flagging) and sensible allocation could lead to some very appealing shareholder returns.

We are thrilled to find what we think is another 'snowball on a long-wet hill'.

Buy Schwab

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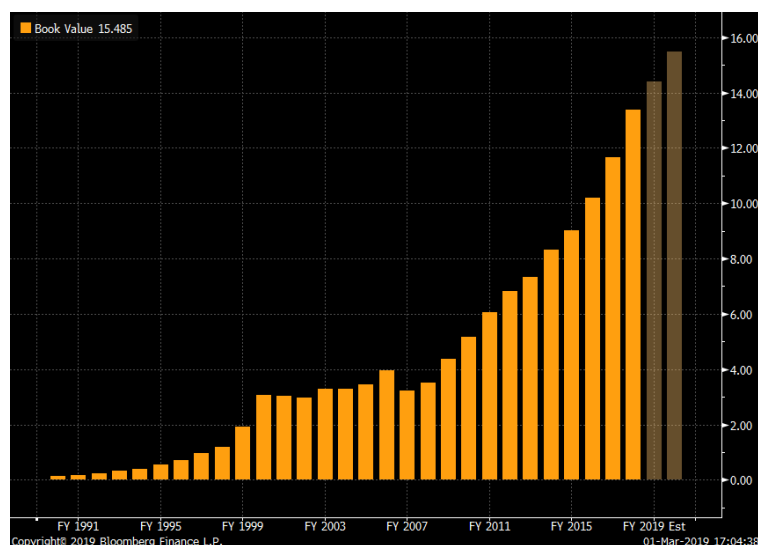
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Appendix



The following table details CSC's consolidated and Schwab Bank's capital ratios:

December 31,	2017		2016	
	CSC	Schwab Bank	CSC	Schwab Bank
Total stockholders' equity	\$ 18,525	\$ 13,224	\$ 16,421	\$ 11,726
Less:				
Preferred Stock	2,793	—	2,783	—
Common Equity Tier 1 Capital before regulatory adjustments	\$ 15,732	\$ 13,224	\$ 13,638	\$ 11,726
Less:				
Goodwill, net of associated deferred tax liabilities	\$ 1,191	\$ 13	\$ 1,175	\$ 11
Other intangible assets, net of associated deferred tax liabilities	61	—	52	—
Deferred tax assets, net of valuation allowances and deferred tax liabilities	2	—	—	—
AOCI adjustment ⁽¹⁾	(152)	(144)	(163)	(163)
Common Equity Tier 1 Capital	\$ 14,630	\$ 13,355	\$ 12,574	\$ 11,878
Tier 1 Capital	\$ 17,423	\$ 13,355	\$ 15,357	\$ 11,878
Total Capital	17,452	13,382	15,384	11,904
Risk-Weighted Assets	75,866	66,519	68,179	59,915
Common Equity Tier 1 Capital/Risk-Weighted Assets	19.3%	20.1%	18.4%	19.8%
Tier 1 Capital/Risk-Weighted Assets	23.0%	20.1%	22.5%	19.8%
Total Capital/Risk-Weighted Assets	23.0%	20.1%	22.6%	19.9%
Tier 1 Leverage Ratio	7.6%	7.1%	7.2%	7.0%

⁽¹⁾ CSC and Schwab Bank have elected to opt-out of the requirement to include most components of AOCI in CET1 Capital.

Holland Simple 10-year Model		input	output												
Year		0	1	2	3	4	5	6	7	8	9	10			
Market(\$bn)		37,500	39375	41344	43411	45581	47861	50254	52766	55405	58175	61084			
Market Growth	5%														
Schwab Market Share		8.0%	8.4%	8.8%	9.2%	9.6%	10.0%	10.3%	10.5%	11.0%	11.5%	12%			
AUM(\$bn)		3,000	3308	3638	3994	4376	4786	5176	5540	6095	6690	7330			
Growth implied			10%	10%	10%	10%	9%	8%	7%	10%	10%	10%			
Net Income / AUM		1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11			
Net Income(\$bn)		3329	3670	4037	4432	4856	5311	5744	6148	6763	7424	8134			
Net Income 5y CAGR	9.8%						Total return	60%						Total return	144%
							IRR	9.8%						IRR	9.3%
Payout assumptions															
Assumed Total Payout ratio	70%														
Capital paid out			2,569	2,826	3,102	3,399	3,718	4,021	4,304	4,734	5,197	5,694			
= Implied retained capital			1,101	1,211	1,330	1,457	1,593	1,723	1,844	2,029	2,227	2,440			
Of which Buy back(50%)	70%														
Divi(50%)	30%														
Starting PE	18x	18x	18x	18x	18x	18x	18x	18x	18x	18x	18x	18x			
Market value of company \$m		59,922	66,064	72,670	79,772	87,403	95,597	103,388	110,665	121,732	133,628	146,410			
SII assumed		1350	1309.5	1270.3	1232.3	1195.6	1160.0	1125.8	1093.0	1060.3	1028.6	997.9			
% of shares cancelled			3.0%	3.0%	3.0%	3.0%	3.0%	2.9%	2.9%	3.0%	3.0%	3.0%			
Value Per share \$		44.4	50.5	57.2	64.7	73.1	82.4	91.8	101.2	114.8	129.9	146.7			
Dividend \$			0.59	0.67	0.76	0.85	0.96	1.07	1.18	1.34	1.52	1.71			
DY		0.0%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%			
							Toatl Divi	3.83						Toatl Divi	10.65
Value Per share 5y CAGR	14.2%						Total return	94%						Total return	255%
							IRR	14.2%						IRR	13.5%
Return On Equity- rising over time															
Year		2018	1	2	3	4	5	6	7	8	9	10			
Shareholder Equity		17,877	18,978	20,189	21,519	22,975	24,569	26,292	28,136	30,165	32,392	34,832			
Return On Equity		19%	19%	20%	21%	21%	22%	22%	22%	22%	23%	23%			

The Charles Schwab Corporation Monthly Activity Report For December 2018

	2017	2018											Change		
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mo.	Yr.
Market Indices (at month end)															
Dow Jones Industrial Average	24,719	26,149	25,029	24,103	24,163	24,416	24,271	25,415	25,965	26,458	25,116	25,538	23,327	(9)%	(6)%
Nasdaq Composite	6,903	7,411	7,273	7,063	7,066	7,442	7,510	7,672	8,110	8,046	7,306	7,331	6,635	(9)%	(4)%
Standard & Poor's 500	2,674	2,824	2,714	2,641	2,648	2,705	2,718	2,816	2,902	2,914	2,712	2,760	2,507	(9)%	(6)%
Client Assets (in billions of dollars) ⁽¹⁾															
Beginning Client Assets	3,318.8	3,361.8	3,480.5	3,328.8	3,305.4	3,312.1	3,378.1	3,397.0	3,447.9	3,555.9	3,563.7	3,388.1	3,431.9		
Net New Assets ⁽¹⁾	27.0	11.5	(50.5)	20.2	0.4	19.4	24.1	16.3	20.8	16.4	14.9	15.6	24.8	59%	(8)%
Net Market Gains (Losses)	16.0	107.2	(101.2)	(43.6)	6.3	46.6	(5.2)	64.6	57.2	(8.6)	(190.5)	28.2	(204.5)		
Total Client Assets (at month end)	3,361.8	3,480.5	3,328.8	3,305.4	3,312.1	3,378.1	3,397.0	3,477.9	3,555.9	3,563.7	3,388.1	3,431.9	3,252.2	(5)%	(3)%
Core Net New Assets ⁽²⁾	27.0	18.7	21.3	25.6	9.9	19.4	24.1	16.3	20.8	16.4	14.9	15.6	24.8	59%	(8)%
Receiving Ongoing Advisory Services (at month end)															
Investor Services	268.7	278.6	273.0	273.2	274.7	279.1	280.0	287.0	292.0	292.7	280.3	284.7	272.4	(4)%	1%
Advisor Services ⁽³⁾	1,431.1	1,483.7	1,449.5	1,444.4	1,451.6	1,478.0	1,488.7	1,525.5	1,555.3	1,559.2	1,485.8	1,510.1	1,436.1	(5)%	—
Client Accounts (at month end, in thousands)															
Active Brokerage Accounts ⁽⁴⁾	10,755	10,858	10,936	11,005	11,081	11,145	11,202	11,243	11,310	11,423	11,479	11,529	11,593	1%	8%
Banking Accounts	1,197	1,210	1,218	1,221	1,230	1,240	1,250	1,262	1,274	1,283	1,289	1,297	1,302	—	9%
Corporate Retirement Plan Participants	1,568	1,580	1,580	1,594	1,599	1,599	1,599	1,611	1,621	1,627	1,634	1,639	1,655	1%	6%
Client Activity															
New Brokerage Accounts (in thousands)	147	165	138	140	141	122	121	118	132	119	133	115	132	15%	(10)%
Inbound Calls (in thousands)	2,046	2,303	2,005	2,145	2,034	1,852	1,814	1,849	1,964	1,715	1,976	1,681	1,839	9%	(10)%
Web Logins (in thousands)	54,486	64,488	60,830	58,906	55,980	56,234	56,491	57,137	62,797	53,923	59,261	54,654	53,920	(1)%	(1)%
Client Cash as a Percentage of Client Assets ⁽⁵⁾	10.8%	10.4%	10.9%	11.0%	10.9%	10.6%	10.7%	10.5%	10.4%	10.3%	11.1%	11.2%	12.8%	160 bp	200 bp

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