The first fintechs: How early online brokers pioneered innovation through financial technology.

PERSPECTIVE 1

@investSuite | hello@investsuite.com | www.investsuite.com

InvestSuite

CONTENTS

1. Introduction 3

2. The importance of technology in the financial industry's innovation dictionary 5

3. The do-it-yourself (DIY) investor 7

4. The very first FinTechs 8

5. A short history 10

May Day, 1975 – The 'Big Bang' of discount brokerage 10

The first online trade 11

The Europeans 13

Non-stop innovation and adaptation machines 16

6. Low prices and the internet behind the rise of the DIY investor 18

7. Embracing new technology – The internet further driving the rise of the DIY investor 21

8. Entrepreneurial inspiration and innovation lessons 22

An innovation-driven, entrepreneurial CEO 22

Culture 23

People 24

Seize opportunities 25

Dealing with 'no' 26

Adapt and reinvent 26

Small is beautiful 27

Takeaways 30

1. INTRODUCTION

Bart Vanhaeren
CEO & Co-founder InvestSuite

Radical innovation is about realising an X-fold improvement in something beneficial to a client. That 'something' may be a major price reduction, a mind-blowing quality improvement, a much better service, a new business line or model, or any combination of these elements. Whether your definition of 'X-fold' is five, ten or a hundred times, this is clearly not about incremental improvements. Although those are also important, radical innovation is different. Acknowledging this difference is important, because a different approach is required.

In this **Perspective,** I argue that some of first real 'fintech disruptors' – the (online) discount brokers – as 'entrepreneur-innovators', offer valuable lessons for small and large incumbents in the financial industry. They brought direct investing to the mass market, taking advantage of the abolition of fixed commissions in 1975, and were among the first to embrace the internet. The result was to enable Main Street investors to trade online at a (very) low cost.

The online brokers have shown remarkable resilience in fending off their own would-be disruptors, like B2C roboadvisors, but they now face a final challenge: the introduction of zero-cost transactions by the new kids on the disruptor block, such as the US online zero-commission trader, Robinhood.

Fintech companies bring tech to the table, as well as a renewed focus on the end customer. That end-customer focus, alongside the use of tech, was a clear hallmark of the first (online) discount brokers, and is a key ingredient of innovation and disruption.

To grow, or even keep up with, today's and tomorrow's challenges, companies need to innovate. But how do you do that when you are big and have lost the entrepreneurial drive of your early days? Both start-ups and incumbents have things the others need. The challenge for start-ups is to grow, become scale-ups, and further develop into mature companies. Start-ups need clients to do this. Incumbents were, by definition, once start-ups themselves. They are now 'big' and have (many) clients, mature operations, and distribution power. But with their size comes, inevitably, bureaucracy, long(er) decision times, and a perceived lack of innovation.

'So many companies talk about innovation, and try to put processes in place,' says Daniel Elk, the co-founder of Spotify, in 'Non-Bullshit Innovation', a book by Wired UK founding editor David Rowan. 'I don't think that works. I don't think that innovation happens at a desk – by someone structuring a creative brainstorm,' he continues.

Charles Schwab re-invented retail brokerage and grew from being a start-up in the 1970s into a behemoth. In his book, 'Invested', the founder recalls how big the company became, and his desire to go back to its origins: 'We had built our bureaucracy to a shocking extent. It was way too complex. We also had two corporate jets, swollen management ranks and a bloated bureaucracy. I was reminded of nothing so much as the old Bank of America. Back in the early '80s, we were the lean, profit-making machine and they were the dinosaur. Now we looked like a dinosaur too.'

2. THE IMPORTANCE OF TECHNOLOGY IN THE FINANCIAL INDUSTRY'S INNOVATION DICTIONARY

Innovation in the financial sector is undoubtedly linked to technology and 'digital'. Paul Clark, COO of Tandem, argues that big data, AI, and open banking will disrupt the banking industry.

'Banking Disruption Index: 0%' was the provocative title of a presentation by Tandem's COO, Paul Clark, at a GDS event in the Netherlands at the end of November. Clark made an intriguing case by comparing disruption in banking with what companies like Airbnb, Uber, and others have achieved in other industries. Neo-banks, for instance, have far better user experience and many customers, but no profits. Have they truly disrupted banking? Switching and marketplaces aren't disruption. Better tech isn't disruption. Is disruption doing old things in new ways? Clark further argued that making money from banking hasn't fundamentally changed, and that the mental models of banking haven't changed in centuries.

If we exclude the creation of exotic products in, for instance, the dealing room environment, innovation is not so much about a new product, but rather about (a) the way a new product is presented to and consumed by the customer, (b) new business models, and (c) automation focused on reducing costs and errors.

The customer is at the centre. Chris Crespo, Chief Futurist of Nordea, offers an interesting perspective on how to view customers: 'Forget knowing your customers. Do they know you?'

‘The average daily time spent consuming content by Gen Z, for instance, exploded to 360 minutes in 2019, compared to 181 minutes in 2016. And the generational average attention span (in seconds) dropped from 14 for Gen X to 8 seconds for Gen Z. Even goldfish have a longer attention span (9 seconds). Overall, 80% of companies are seeing a change in how their customers want to access and pay for goods and services.’

Chris Crespo, Chief Futurist of Nordea

From the above, it is clear that tech and changing customer expectations will make banking tomorrow different from banking today, let alone yesterday.

The technologies playing a key role are much the same as in any other industry; they include blockchain, AI/machine learning, mobile/digital, cloud computing, AR/VR (to a much lesser extent) and, in all likelihood one day, quantum computing.

At the Sibos 2019 event in London, design and creative agency, 11:FS, presented a clear view of the difference between digitisation and ‘becoming digital’. Their claim is that we have covered only 1% of the journey. These days, when innovation is discussed in most financial institutions, the conversation is about ‘digital’, often translated as ‘digitalisation’: offering online services, that previously took place in the branch, and involved massive amounts of paperwork. However, digitalising a service is only a very small part of the picture. 11:FS suggest taking a completely different view, urging a shift from product thinking to thinking in terms of end-to-end journeys – hence their claim that we have only covered 1% of the digitalisation journey.

3. THE DO-IT-YOURSELF (DIY) INVESTOR

Before we continue, let's define a self-directed, or 'DIY' investor. May Day in 1975 saw the birth of the discount broker. A new opportunity emerged, to serve an entirely new type of client: the independent investor. The founder of Charles Schwab defines independent investors as people who:

a. Are passionate about the markets;
b. Want/love to control their own financial destinies;
c. Love to do their own research;
d. Pick their own stocks; and
e. Do not need or want a broker's advice.

In 1970, this class of independent investors in the US comprised less than 10% of the market. In 1980, 13% of US households owned stocks, versus only 6% who owned mutual funds. By 2000, however, 50% of households owned mutual funds, with many self-directed investors choosing these funds as their preferred asset class.

The DIY investor invests directly in financial instruments, like stocks, derivatives, or bonds, without getting advice. As soon as advice is offered by a private banker, relationship manager, or independent financial advisor, investment is no longer self-directed. This is a crucial feature.

4. THE VERY FIRST FINTECHS

Over the last few years, ‘disruption by fintechs’ has been a major topic of discussion. Astonishingly, the first disruptors in the wealth management space, the online discount brokers, are seldom listed in the disruptors’ hall of fame. Charles Schwab, E*Trade, Ameritrade, etc., effectively disrupted a large part of the financial sector almost four decades ago.

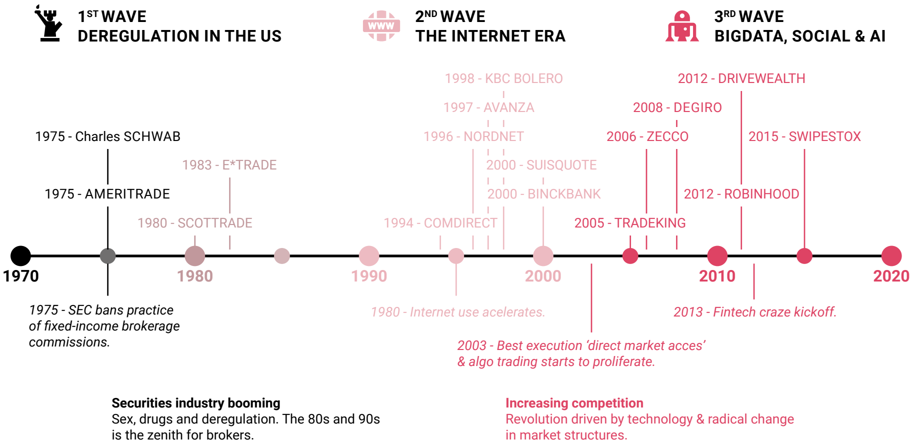
A wise man once said that we can learn a lot about the future by looking at the past. Online brokerage offers an intriguing insight into how disruptive forces can truly alter, or even completely disrupt, an industry. The first wave of disruption of retail brokerage occurred over a 20-year period, starting with a regulatory change on May Day, 1975, and continuing with the arrival of the internet in the 1990s, a technological change.

Sustainable disruption by pure B2C fintechs is still remarkably low. Although some well-known names (e.g. Oak North, N26, Betterment, Transferwise, Klarna, Nubank) have realised impressive results, most still struggle with profitability, and their incumbent competitors are still well afloat. B2C players face disproportionate customer-acquisition costs, and most B2C lenders and B2C roboadvisors operate at a loss – and will do so for the foreseeable future.

Whereas the likes of Alipay and M-Pesa have truly disrupted mobile payments, the same Western banks (barring M&A and name changes) still lead the dance, as they did decades or even centuries ago: Stroeve, a Dutch private bank founded in the nineteenth century, is still around, as are the likes of KBC in Belgium, Wells Fargo in the US, Commerzbank in Germany, and Nordea in Scandinavia.

The timeline below illustrates the appearance of the first discount and online brokers.

Online platforms disrupted the world many years ago.


1ST WAVE
DEREGULATION IN THE US
2ND WAVE
THE INTERNET ERA
3RD WAVE
BIGDATA, SOCIAL & AI
1998 - KBC BOLERO
1997 - AVANZA
1996 - NORDNET
2000 - SUISQUOTE
2000 - BINCKBANK
1994 - COMDIRECT
2012 - DRIVEWEALTH
2008 - DEGIRO
2006 - ZECCO
2015 - SWIPESTOX
2012 - ROBINHOOD
2005 - TRADEKING
1975 - Charles SCHWAB
1983 - E*TRADE
1975 - AMERITRADE
1980 - SCOTTRADE
1970
1980
1990
2000
2010
2020
1975 - SEC bans practice of fixed-income brokerage commissions.
1980 - Internet use acelerates.
2013 - Fintech craze kickoff.
2003 - Best execution 'direct market acces' & algo trading starts to proliferate.
Securities industry booming
Sex, drugs and deregulation. The 80s and 90s is the zenith for brokers.
Increasing competition
Revolution driven by technology & radical change in market structures.

Source: Beringer Finance; InvestSuite research.

5. A SHORT HISTORY

MAY DAY, 1975 – THE 'BIG BANG' OF DISCOUNT BROKERAGE

How did this army of millions of self-directed online investors become a reality? To understand this, we need to go back a few decades. Not unlike other paradigm shifts, a technological breakthrough and/or a massive regulatory change offers opportunities for radical innovation and may result in entirely new business models.

The abolition of the fixed-commissions rate scheme in the United States in 1975 resulted in the lasting setup of the discount brokerage market. It brought Wall Street to Main Street.

Before May, 1975, individual transactions could cost as much $500 per trade and were reserved for the happy few. After the change, pioneering discount broker Charles Schwab entered the fray and began aggressively amassing market share. The established brokerage houses were caught off guard.

> **'The best swordsman in the world doesn't need to fear the second-best swordsman in the world. The person he needs to fear is some ignorant antagonist who has never had a sword in his hands before, who does the thing he "is not supposed to do", catching the expert out and ending him on the spot.'**
>
> *Mark Twain*

Until May, 1975, brokerage inhabited a cosy world in a way that would be unthinkable today. Price fixing was basically legal and, regardless of the service or quality, every broker had a more-or-less guaranteed income. May Day, 1975 signalled the end of price fixing and resulted in an enormous drop in transaction costs.

THE FIRST ONLINE TRADE

A number of scholars and industry participants, including Charles Schwab's eponymous founder himself, view August, 1994 as the moment when the very first online (retail) transaction took place, on the WealthWeb platform of **K. Aufhauser & Co.** This itself is quite remarkable. One would be excused for thinking that **Charles Schwab** or **E*Trade** might have facilitated this transaction. It was, in fact, an old-style brokerage that became a digital pioneer and *avant-la-lettre* disruptor.

K. Aufhauser & Co.'s owners were a Jewish family who had fled Europe for the United States during the Great War. The company was later bought by a player with which we are much more familiar: **TD Ameritrade.** In a twist of fortune, two giants came together at the end of 2019, when Charles Schwab bought out its rival to create the biggest brokerage in the world.

And the rest is history? Well, not quite... Some still give credit to E*Trade as the first online broker. In 1982, **Bill Porter,** an innovator and entrepreneur, had already developed a VAX-based backend technology that would later be used to set up ETrade.com. He called his company TradePlus and set it up with an initial investment of $15,000. It originally provided automated trading solutions for brokers via America Online and Compuserve. Porter's company executed the first online trade via a network provided by CompuServe. According to E*Trade, the first online trade was processed by Porter in 1983. TradePlus enabled its customers to access market information and conduct trades during market hours, while offering 24-hour portfolio-management capabilities.

Charles Schwab was, therefore, not the first to launch an online transaction platform. However, it soon followed and quickly became the largest. Charles Schwab called its offering e.Schwab, and the online transaction commission was $29.95 (as opposed to $70 offline). Charles Schwab had launched its corporate website only a few months earlier; however, the company was no stranger to online transactions, having pioneered a service called Equalize, which allowed retail clients to issue transactions from their home computers. Though groundbreaking at that time, this was a cumbersome undertaking, which involved special technology and huge data downloads via telephone lines.

The company that Porter first founded – as a service for brokers – would now be called a B2B fintech and would probably be able to raise large amounts of venture capital (VC) funding. TradePlus offered solutions to brokers like Fidelity Brokerage Services, Quick & Reilly, and Texas Securities. All were served through the Compuserve Information Network.

In 1991, having noticed the huge popularity of online trading, Porter set up a new company, E*Trade (owned by TradePlus), which was purely a B2C player: the first pure online retail broker was thus created. By the end of 1995, the World Wide Web (graphical) interface had made its mark, and the next generation of user interfaces would make online trading much easier.

Charles Schwab dropped a bombshell in late 2019 by announcing zero-commission trades, and then stunned the financial world with its acquisition of TD Ameritrade. Morgan Stanley followed by acquiring E*Trade end February 2020, for $13 billion. Nearly 60% of Morgan Stanley's revenues will come from its wealth and fund management business after the deal. E*Trade will bring more than five million customers and $360 billion assets under management (AUM) to the investment banking giant, which itself manages $2.7 trillion for three million clients.

E*Trade now has five million retail accounts and close to $330 billion retail AUM. It reached almost €3 billion in revenues in 2019, and it has a sizeable institutional business as well. Its return on equity (ROE) of 17% well reflects its profitability.

Digging deeper, things become even more interesting. Charles Schwab – in true entrepreneurial spirit – set up Schwab Technologies, as a stand-alone unit to explore a variety of technological opportunities. In another twist of fortune, Charles Schwab developed the first systems allowing online trading, and Bill Porter, who founded E*Trade, directly licensed Schwab Technologies' systems.

Other contenders claim their share of the glory. BlackCrown was formed in 2009; its history dates back to 1994 and the founding of digiTRADE. BlackCrown claims that it was the online brokerage platform that brought online stock trading to the world. It was set up by the Tsung family, who sold digiTRADE to Thomson Financial in 1998.

In summary, by 1994, the internet had accelerated online trading, and the number of DIY investors had grown exponentially.

In the United States, according to E*Trade, the retail market share of direct trading now accounts for 21% of the total market, representing an annual growth of 15% since 2008, versus the traditional market's annual growth of 8% over the same period.

The drivers behind this ever-increasing growth can be explained by the following:

1. Digital experiences increasingly permeating our lives to become a new social norm;
2. Customers increasingly engaging with their banks via digital, if not mobile, channels;
3. Investors seeking digitally supported/AI-supported tools alongside/ as support for humans;
4. Direct brokerages outpacing others in digital innovation;
5. An increasing demand for transparency;
6. The arrival of zero-cost trading; and
7. The rise of ETFs.

Will retail investors still buy mutual funds in brick-and-mortar branches in five years' time? Will mass affluent clients go to branches to get financial advice?

THE EUROPEANS

Not long after the first online trades occurred in the United States, several online brokers were set up in Europe. Arriving later in the game than the Americans, a number of European companies jumped on the online trading possibilities offered by the internet.

Those European pioneers were founded by inspiring entrepreneurs, who created a true culture of innovation, which continues today to permeate those organisations. They all embraced 'tech', in particular the possibilities offered by the internet.

Comdirect was among the very first. It was set up as a direct bank/broker by its parent company, Commerzbank, back in 1994, with 50 employees and 50 million Deutsche Marks in capital. This was a remarkable entrepreneurial feat for the German lender.

Boursorama, the leading French internet bank/broker, has a slightly more complex history, because it is the result of several mergers and acquisitions. Boursorama was created in 1998, in the city of Nancy, by the two French entrepreneurs who had founded the parent company, Finance Net, in 1996. Boursorama was set up to create and become the leading online stock market information portal. In 2002, the same entrepreneurs founded a new entity, BoursoTrading, allowing online stock market transactions. Boursorama bought CaixaBank France in 2006 (and Caixa remains a 20% equity holder in the new entity).

In 1995, SocGen founded Fimatex as one of the first online banks, with online trading capabilities added in the late 1990s. In 2002, Finance Net was acquired by Fimatex. Another French online brokerage was created in 1997: Selftrade, later acquired by Fimatex. SocGen obtained ownership of Boursorama in 2015. Boursorama went on to become an innovative player in its own right: In 2018, it was the first bank in France to offer customers autonomous, simple, rapid and secure day-to-day management of their bank accounts via Google Assistant on all compatible devices, including Google Home smart speakers. It is also the only French bank to offer customers the top three international mobile wallets: Samsung Pay, Apple Pay, and Google Pay.

The Nordics did not stay far behind. For instance, Nordnet, from Norway, founded in 1996, was one of the first online brokers (and digital banks) in the region. During the next few years, there were many more firsts. Nordnet was a pioneer in offering real-time share prices, real-time trading in options and mini-futures, trading in American shares, and trading in mutual funds with no trading fees. Other innovations included a marketplace for hedge funds, a trading application (Wintrade) and a low-price investment platform (Aktiedirekt). In 2010, Nordnet launched the first Nordic mobile app to offer the possibility to trade in shares and funds. It acquired and launched the social investment network Shareville, where customers can share their investments in real time and look at other savers' portfolios. A number of innovative product and service launches have been introduced in recent years, for example allowing customers direct deposits via Swish, a new app, a stock lending programme and digital advisory services. Nordnet has won awards for its innovation drive, including 'Bank of the Year 2017' and 'Savings Innovation of the Year 2018'.

The Swedish company Avanza cannot go unmentioned. It was set up in 1999 and later acquired by HQ.se, Aktiespar Fondkommission. The merged entity was re-branded as Avanza. It launched the first internet-based individual pension savings product in Sweden in 2003, and – in particular- the former Avanza was and is known as a very innovative player. Multiple awards have been received in almost any given year. Other innovations and firsts include the first zero-fee fund in Sweden (2006), the first to offer retail deposits from other banks, the first to offer streaming of real-time quotes, and the launch of the Stock Generator (making it easy to select stocks) and Avanza Auto (automatically managed funds) in 2017. Living up to the Nordic reputation, with its sustainability drive and frontrunner role, Avanza allowed customers to filter instruments for low-carbon-risk score in 2018. Its focus on innovation and customer centricity resulted in Avanza receiving the Swedish Quality Index's award for Sweden's most satisfied customers in the savings category, for the eighth consecutive year. Its customer base now exceeds one million.

Another example of a Charles Schwab-like entrepreneur is Andrew Bell, who founded his UK DIY investing firm AJ Bell 'in a broom cupboard'. In two decades, he grew the company into one of the leading UK players; it floated on the London Stock Exchange end 2018. Bell had studied maths and worked as a trainee actuary at Royal Insurance. In 1995, as the internet took off, he decided, with his co-founder Nicholas Littlefair, to ride the innovation wave. They started offering self-invested personal pensions (Sipps), and bought a stockbroking firm. AJ Bell today has more than 240,000 customers and over £54 billion AUM. AJ Bell's platform has received several awards, including the Best Direct Platform in 2018.

Belgium proved an early adopter in fintech with the setting up in 1998 of **VMS Keytrade,** one of the leading Belgian brokers, as well as the founding of Bolero, KBC Securities' inhouse online broker, which was among the first established in the Benelux region and which celebrated its twentieth anniversary in 2019. Bolero was the first broker worldwide to launch a crowdfunding platform and the first with an app based on blockchain.

The Danish worldplayer **Saxo Bank** was founded in 1992. It now offers its services worldwide, and was acquired by Geely Holding Group. Saxo was set up under the name Midas, after its two founders met in London and saw a business opportunity. In 1997 it launched its first trading platform for currencies (Saxo Trader) and changed its name to Saxo Bank. It quickly embarked on a B2B expansion. Its first B2B client was a Portuguese securities dealer. Many smaller and bigger acquisitions followed, and Saxo expanded into asset management and private banking as well. In March 2010, Saxo Bank launched a new equity platform allowing trading in more than 20 worldwide markets. Apart from M&A and expanding into new businesses, Saxo also launched a number of innovations like TradingFloor.com, SaxoTraderGo, SaxoSelect, and Open API,: 'Saxo Bank announced that it would open access to its trading infrastructure with the launch of OpenAPI, allowing partners, clients and external developers to access the bank's trading infrastructure and enable them to customise their trading experience.'

The leading player in the United Kingdom, **Hargraves Lansdown,** now with more than 1.2 million customers, was set up in 1981 as a company that provided its clients with information on unit trusts and tax planning. Its online brokerage service was launched in 1999.

SwissQuote, the leading Swiss brokerage house, was founded in 1999 and now has more than 500 employees. Its frontrunner was Marvel Communications:, a company set up in 1990. Not unlike other online brokers, it specialised in financial software applications. The financial platform – www.swissquote.ch – was launched in 1996 and enabled individual investors to consult prices of stocks on the SIX Swiss Exchange for no charge.

It had its IPO in 2000. In 2010, SwissQuote acquired Tradejet AG, an online broker, as well as Advanced Currency Markets, allowing online trading in stocks and FX. Its acquisition spree did not end there. In 2013, it merged with MIG Bank, another player specialising in FX trading; this secured SwissQuote a place in the top ten online currency trading platforms.

In southern Europe, Fineco was set up in 1999 as a bank. It quickly launched advisory services through its own network of advisors. By 2001 already, it grew to 250,000 customers, and claims to became the leading online broker in Europe. It expanded to the UK in 2017, and set up Fineco Asset Management in 2018.

NON-STOP INNOVATION AND ADAPTATION MACHINES

In his book, 'Talent is overrated', Geoffrey Colvin highlights the importance of creativity and innovation. He observes that innovation does not do much good if you cannot keep up: 'In the good old days, Wrigley produced the same three flavours of gum for 59 years. Those days are over.'

Charles Schwab (the company's founder) has many industry firsts to his name. Sometimes these have been improvements over existing services or solutions, but often they could be considered game changers.

'Recognizing an opportunity is only part of being an entrepreneur. The key is acting on your business insight and following through. How many times have you slapped yourself on the forehead and asked, "Why did I not think of that?" Entrepreneurs are compelled to act. Otherwise, it is just talk,' says Schwab in his book, 'Invested'.

'The bigger your company and the more people involved, it's axiomatic that it is going to take longer to get there,' says Abigail Johnson, Chairman of Fidelity Investments and granddaughter of its founder. 'So, you need to get that foresight to try to get in front of it, and that is what led me to become very comfortable taking some chances on stuff.'

FTfm, 4 November 2019

The setup of the discount brokerage model, which cut transaction costs for retail investors by more than 50%, was, in itself, arguably, a business model innovation. The steep drop in prices for Main Street investors was made possible by offering no advice, no research, and relatively high levels of automation.

Charles Schwab innovations

1.	The discount brokerage business model	2.	B2B fintech solutions
3.	MutualFund Supermarket	4.	OneSource
5.	Telebroker	6.	No fee IRA
7.	StreetSmart software package	8.	SchwabLine
9.	Pocketbroker	10.	E-Schwab
11.	Equalizer	12.	Cash Account
13.	24-hour Service	14.	Schwab Equity Ratings (based upon acquisition of Chicago Investment Analytics)

Charles Schwab created the first mutual fund supermarket, but the gamechanger – an industry first – was the development and launch of **OneSource,** a ‘PSD’ *avant la lettre,* as it allowed retail investors to invest in a diversified portfolio of no-load funds via one single account for the first time. This is much more impressive than it sounds. Previously, this was difficult (or near impossible), required separate accounts, involved masses of manual paperwork, and included no consolidated overview or reporting. OneSource made investing in mutual funds as easy as picking items from a supermarket shelf. Other inventions included **Telebroker,** which allowed investors to give orders via telephone; **Pocketbroker,** which was one of the first wireless trading platforms at a time when iPhones did not yet exist, and wireless-enabled mobile phones were required; **StreetSmart,** which offered an online package before the internet; and **Cash Account,** which may not sound very sexy, but which provided investors with a normal banking account rather than a limited investment account. Charles Schwab was the first to install **a 24-hour service** for order intaking, and **SchwabLine** is an example of how the company’s tech-oriented, risk-taking approach sometimes led to failure – the idea was to bring market news to your computer, but the service was too expensive, and the news reports were too slow.

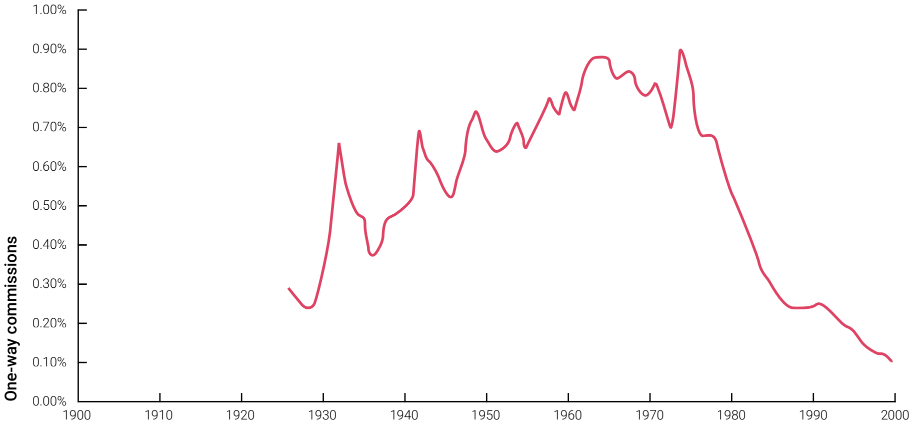
Online brokers were among the first in the financial world to embrace not only the internet, but also mobile technology.

6. LOW PRICES AND THE INTERNET BEHIND THE RISE OF THE DIY INVESTOR

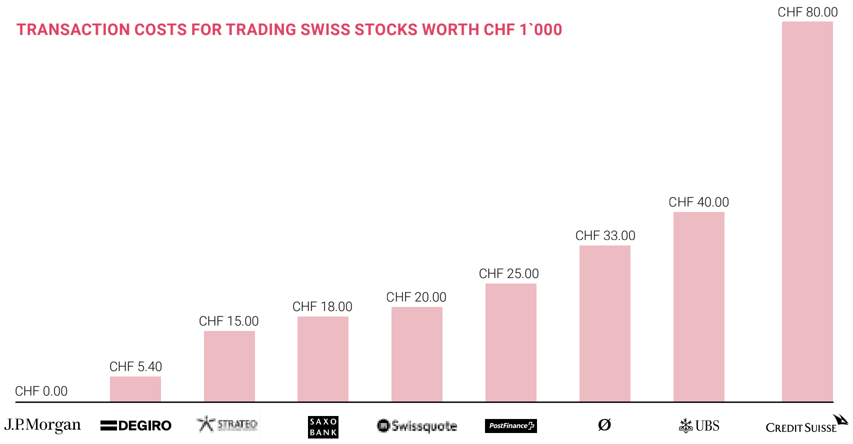
Innovations in the financial industry often involve a radically lower cost for the (end) customer and, indeed, the ‘Big Bang’ caused transaction costs to drop dramatically. Whereas costs could previously be hundreds of dollars per trade, after the abolition of the fixed brokerage regime, transaction costs dropped to $30–100. This is still high compared to the zero-cost trading experienced since 2018, but it was nevertheless a strong factor in the meteoric rise of DIY investors.

Innovation affects many customers’ needs and wants, and often – in financial services – significantly lowered costs are a key factor. A stock market transaction is, in essence, an order executed on the stock market.

Needless to say, after May Day, 1975, prices dropped significantly; they have never stopped dropping.



Below is an example of the costs associated with trading in Swiss stocks:



Source: Redesign for Financial Services, Zurich

The online business magazine, Raconteur (23/07/2019), reports that Vanguard looked at the effect on individuals who made a £250 monthly investment. For them, a 1.5% cost would reduce the value of their investments by £24,000 over 20 years, and this reduction would grow to a painful £274,000 over 50 years.

When E*Trade was set up in 1991, it charged $40 per transaction. In 1995, because of competition, it dropped its transaction cost to $19.95.

In early October 2019, Charles Schwab announced that it would no longer charge clients to trade US shares or ETFs. The introduction of zero-commission trading, by fintech unicorn Robinhood, seemed to have changed the price of online investing for good. The announcement by Charles Schwab was matched by other US giants, such as TD Ameritrade. Their shares fell immediately (TD Ameritrade's stock by 28% and E*Trade's by 19%). Schwab itself lost more than 10%; although this would (permanently) hurt, the fact that trading commissions made up only 7.5% of Charles Schwab's revenues (as FT/Lex reported on 3/10/2019) shows how innovation and new business streams made it more resilient. How many companies or industries could have survived this? TD Ameritrade and E*Trade faced a more difficult time, because in 2018 commissions made up 30% and 17% of their revenues, respectively. Nevertheless, FT/Lex calculated that dropping commissions would shave off $400 million (4%) of Charles Schwab's revenues per year. Almost 60% of its revenues came from net interest in 2018.

Some players are contemplating and exploring subscription services, inspired by the likes of Spotify and Netflix. When Netflix was close to going bust, around 2000, Kate Arnold, its Product Manager, tried something new: a subscription service. This is a classic example of the launch of an innovation that was driven by a new pricing model (arguably business model), but that proved to be much better than what was available at the time (through online sales and video stores). The subscription service allowed unlimited usage and was loved by customers. The changes did not stop there, because this innovation caused another problem: namely, customers preferred new movie releases, which were expensive and required expensive inventories. One innovation led to another, and Netflix came up with its infamous queue/rating/recommendation system. This system, combined with the subscription model, proved to be an immense success. In this way, Netflix came up with a greatly improved service, as judged by customers all over the world.

Subscription would not be an innovation, however, in the brokerage world: it was used at the very start of online trading by TradePlus. According to FundingUniverse, 'Customers paid a sign-up fee, ranging up to $195, and monthly subscription fees of $15, which gave them one hour of connect time per month. Use of the service beyond that cost $24 per hour during market hours and $6 per hour when the markets closed. For the premium, real-time service, nonprofessional customers paid $75 per month and professional investors paid $135 per month, fees established by the National Association of Securities Dealers.'

De Giro is an example of a very low-cost player making significant inroads in the European online-brokerage landscape. In particular, millennials appreciate the very low cost and the ability to trade in multiple markets. They often use other brokers that offer more content and service, but they place their orders via players like De Giro. De Giro was acquired by Flatex, a large German broker.

7. EMBRACING NEW TECHNOLOGY – THE INTERNET FURTHER DRIVING THE RISE OF THE DIY INVESTOR

By the mid-1990s, more than 20% of the adult US population invested in stocks, compared to less than 5% in Europe. This was made possible thanks to (a) a massive increase of information at large, (b) a drastic cost reduction, and (c) internet access.

A key factor was the growth of the internet. Earlier, we discussed online pioneers such as K. Aufhauser & Co./Ameritrade, Charles Schwab, and E*Trade, and how the growth of the internet contributed to their success.

Insight: The internet was a major force behind the rise of retail brokerage. We are now experiencing a similar situation with the unstoppable penetration of mobile phones. This will lead – in combination with other factors – to a further increase in online retail trading.

May Day and the internet caused the establishment of online trading giants and ensured that ‘the Middle Class join[ed] the Money [C]lass’. The direct investment space in the United States now occupies 21% of the total brokerage industry, up from 0% in 1995 and 15% in 2008. Berenberg argues that we are now in the third wave, made possible thanks to the mobile revolution, big data, AI, etc. New players, like Robinhood, are emerging which are hailed as the new fintech disruptors. Questions about profitability remain, however.

8. ENTREPRENEURIAL INSPIRATION AND INNOVATION LESSONS

AN INNOVATION-DRIVEN, ENTREPRENEURIAL CEO

'If you look at the CEOs of most of the big pharma companies, they are not scientists, they come from finance, or the marketing department. What does that say about the organisation? It means that what they are going to do is to try and squeeze more and more out of what has already been invented, cut costs or market better, not really invent new things – which is much more risky. That is not the nature of blue sky thinking… that is not how you do it if you are trying to land the rocket on the moon,' *says Demis Hassabis, co-founder and CEO of Deepmind, the Alphabet company best known for its AlphaGo algorithm that beat Lee Sodol, the world champion of Go. Hassabis is firm in his assessment of large companies' radical innovation potential, and relates it directly to the top management.*

'In order for a bank, or any organisation, to change, it is absolutely vital that senior management is on board,' *says ING's Chief Innovation Officer, Benoit Legrand, in an interview with PLUM. 'We have innovation boot camps and so on, but the reality of life is that unless innovation is a top priority of the CEO, it will not be a priority for the senior leaders, and it won't trickle down.' An interesting and very actionable question (for CEOs and senior managers) is asked by ING's CEO to its senior team: 'What actions have you undertaken to make ING the best bank in the next five to ten years?'*

Charles Schwab belongs in the category of visionary founders/CEOs. He was a leader, but not a manager; he needed other people – a team – to do that part. But Schwab embodied the visionary: a driven and innovation-obsessed founder. He was obsessed with the end customer, in particular the DIY investor, and with offering them a much better deal.

Fidelity was one of the first big finance houses to embrace tech. Its founder, Ned Johnson, was reportedly a tech geek, and Fidelity was one of the first asset managers to install a mainframe computer, in 1965. In 1974, it was one of the first players to start selling mutual funds over the phone, and it installed the first voice-activated computer response system for price and yield quotes 24 hours a day in 1979. The first public website by a fund manager was created by Fidelity in 1995. The famous Fidelity Center for Applied Technology first saw daylight in 1999, followed by Fidelity Labs in

2005. In 2010, Fidelity launched mobile apps enabling customers to access their brokerage accounts. It was also one of the first to develop similar apps for smartwatches. In 2018, Fidelity Institutional launched Wealthscape Integration Xchange, a digital store that wealth managers can use to build their own platforms, using Fidelity and more than 100 third-party providers. 'The fintech explosion is changing almost every aspect of our business,' says Michael Durbin, head of Fidelity Institutional, in an interview with the Financial Times (FT).

An impressive list of firsts, which can be clearly attributed to Fidelity's founder's commitment to tech and to early investments in tech centres/labs. In another telling move, Fidelity promoted its Technology Officer, **Steve Neff,** to lead the $2.8 trillion asset management division. Neff says, 'What I bring to the table is how the technology, and digital transformation of the company is going through, applies to the asset management business.' (FT, 21/10/2019).

Today, Fidelity spends $3 billion annually on tech; this behemoth of fund management has put its weight fully behind it. 'If you don't change, you are by definition on your way to atrophy or you are atrophying', says **Abigail Johnson,** the granddaughter of the founder, in an interview with the FT (21/10/2019). 'You have to ask, where are things going?'

Fidelity's advanced Fidelity Center for Applied Technology is experimenting with virtual reality, allowing customers to plan their financial future. It is an example of how serious one of the world's largest fund managers is about experimenting with cutting-edge tech and how it may be relevant for the company.

CULTURE

Not everything is easy as it seems. Johnson admits that – like so many others – Fidelity started developing and adding apps on top of legacy IT systems, and 'that may not have been the best way of doing things'. And, while its tech team powers ahead, Fidelity's culture is deeply geared towards older ways of doing business. A challenge many larger institutions face is how to have their employees buy into the digital transformation process.

Often, these type of tech- and innovation-driven companies have CEOs that are either (a) tech-savvy themselves and set the agenda, or (b) realise the potential and drive a tech and innovation culture in their companies. These companies are in a totally different ball game from those whose CEOs or leadership teams are sceptical, or only supportive because they know the politically correct thing to say to the *tone du jour*. Schwab was not a technologist. But time after time, he pushed for the use of technology, because he understood its importance from a cost perspective, as well as the benefit it could bring to his customers: online trading at very low cost at any time of the day. CEOs like Schwab instill and nurture an innovation culture.

The ethnographer John Van Maalen (in his book 'Tales of the Field'), defines 'culture' as the 'knowledge members of a given group are thought to more or less share; knowledge of the sort that is said to inform, embed, shape, and account for the routine and not so routine activities of the members'. Importantly, 'a culture is expressed only by the actions and words of its members'.

> **'We are drunk on entrepreneurialism. Entrepreneurs give us the feeling that we too can do anything we set our minds on. They symbolize vision, agility, hustle... values that society holds dear. They challenge the status quo. They are inspiring. That is the reason so many big businesses try to emulate that start-up feel, either through office design or company culture,'** *says Alain Sylvain, founder and CEO of Sylvain Labs, in Monocle's series 'The Entrepreneurs'. 'With big companies comes red tape. Rapid growth means that responsiveness and agility diminish. Big business becomes safer and the much-wanted qualities of entrepreneurs vanish. But it is possible to restore that mindset and it is crucial to do so.' He suggests (a) funding unusual partners like start-ups or customers or even competitors; (b) prioritising invention from the inside out via incubators, inhouse labs, entrepreneurs in residence, and corporate VCs; and (c) not resting on past successes.*

PEOPLE

Netflix is a much-lauded game-changer of HR approaches and culture. Its Culture Manifesto is widely shared on the internet, and Facebook's COO, **Sheryl Sandberg,** reportedly says, 'It may well be the most important document ever to come out of Silicon Valley. Its content is closer to a high-powered approach to achieving stratospheric growth.'

'The top priorities at Netflix are the procedures and processes of selecting and hiring people. That reduces the amount of energy spent regulating and managing unsuitable people later,' says **Tawni Cranz,** Netflix's Chief Talent Officer, in Magazine B, issue 49.

At the outset of this Perspective, I highlighted the inevitable path that every successful start-up ironically faces: when it is successful, it grows (scales) and becomes bigger, and as part of that process, willingly or not, introduces bureaucratic systems (good and bad). The billion-dollar question is how to keep that drive, that entrepreneurial spirit, that desire and ability to innovate. Netflix has an interesting view on this paramount dilemma, as Cranz explains in an interview with Magazine B: 'As companies grow, policies and structures grow more complex and talent density drops. Without strong rules in place, chaos is sure to follow. Netflix has a firm position on this: **too much of a focus on rules could cost the company great talent.** Instead, it focuses on creating an environment where talent density growth outpaces company complexity. The solution lies in giving **responsible people more and more room to exercise freedom.** It is a matter of favouring flexibility over efficiency from a long-term perspective.'

Part of this solution is the need to embrace the mavericks in an organisation. Almost by definition, founders/CEOs are mavericks themselves. The setting up of a start-up or business unit seldom follows established paths. Larry Bossidy, the one-time boss of Allied Signal, said that there is a very fine line between subordination and entrepreneurship. Mavericks fight against the status quo. They cannot break any laws, but search for the acceptable edges. A former CEO of KBC Securities once told me, 'Imagine a soccer field. Now imagine the employees of a (large) company being asked to go and find a position on that field. Most people in a (large) company will choose to stand in the middle. However, some folks will go to the corner and bend the corner flag. These are the mavericks. Not everyone needs to be one. But we need some.'

SEIZE OPPORTUNITIES

Bringing new things to the marketplace often involves jumping on the train when it passes. Sometimes these trains of change are visible from far, but at other times they are gone before you have even noticed them. They often approach at a gentle speed, but few people pay attention to them, or if they do, they are convinced they still have plenty of time to jump on, or they prefer another bigger and more comfortable train.

This 'train', or trigger, moment can take the following forms:

- A **technological breakthrough** or significantly new technology (internet, mobile, blockchain, etc.);
- Radically new/more stringent **regulatory requirements/ regulations;**
- A **crisis** (internet bubble, stock market crashes, etc.); and
- An unshakeable **personal conviction:** 'I/we can do this better'.

Charles Schwab is a keen advocate of the end customer, with a strong conviction **(personal conviction)** about doing things in the customer's best interests. Charging hundreds of dollars back in the 1970s was not a part of his vision. Hence, in 1975, Schwab jumped on the May Day train **(Radical New Regulation),** which marked the end of price fixing in the brokerage industry. Although Charles Schwab (the company) was not the first to embrace the internet, it was a very close follower of it and launched many other innovations **(technological breakthrough).**

'Patience is no virtue; when opportunities arise take them. Sometimes the trick lies in making the most of necessity and not missing opportunities when they slap you in the face,' Schwab tells us.

DEALING WITH ‘NO’

Being told ‘no’ is common for intra- and entrepreneurs. Within a large company, there will always people who are resistant to change, and entrepreneurs receive countless ‘thumbs downs’ from would-be investors and VCs. The title of this paragraph could equally have been ‘perseverance’ or ‘grit’. There are entire books written about the immense importance of perseverance in intra- and entrepreneurship. Only a handful of (larger) companies have implemented cultures and systems that allow decision makers at various levels of the organisation to try something new (within limits). Let’s consider the example of William Pearson, the young Charles Schwab technician who understood the power of the internet early on, and built a mock-up version of an initiative, but who could not get his supervisor interested, no matter what he tried. According to John Kador, Pearson ran into a cultural element that made his job difficult: back then, 360-degree feedback favoured team players, not mavericks with ground-breaking ideas. Hence, people stopped trying to be mavericks. To cut a long story short, Pearson managed to get hold of the then Executive Vice President, Tom Seip, who was known to be anti-bureaucracy. Seip was stunned by what he saw and got the founder himself involved. From then onwards, e.Schwab received the attention it needed.

ADAPT AND REINVENT

Online brokers have embraced a variety of new(er) technologies and threats along the road:

- Mobile;
- Roboadvisory; and
- Zero-cost trading.

Before 2012, players could get by without a strong mobile offering; this would be unthinkable today. For example, Bolero, the KBC Group-owned online brokerage, did not have a mobile offering until the summer of 2014. It went from 0% mobile transactions to 35% three years later, reaching similar levels to those of some of the top US players, who had a major head start. It seems there was an opening for incumbents and others to strike back and leapfrog the incumbents (in this case, online brokers) (as M-Pesa has done in Kenya, and Alipay in China), to launch a compelling Netflix-like, mobile-first offer. But this did not happen; online brokers, like E*Trade and Fidelity, were first and solidified their lead.

Arguably the world’s first (or at least most well-known) roboadvisory was set up in 2008. Quite a few experts predicted the end of private banking, or at least a fundamental Airbnb-like threat to the world of wealth management. Although an evolution/revolution is taking place in wealth, the sector has not been disrupted as predicted. MiFID II and the unstoppable rise of passive investing are considerably more impactful. Nevertheless, online brokers like Charles Schwab and Fidelity Direct took action by acquiring or developing their own roboadvisory services. Some of them even overtook the first mover in terms of AUM. In this process, those brokers essentially set up new revenue streams based on AUM, rather than (primarily) on transaction income. Many European brokers, like (Belgian) Keytrade, (Norwegian) Nordnet (Robosave), and (Swedish) Avanza (Avanza Auto), launched similar services well before most retail banks and (some) private banks embarked on similar paths, with some notable exceptions like Danske and Nordea, and a number of German players.

Transaction income is a major part of a brokers' income, but more so decades ago than today. Pay-for-order flow (in the United States), interest income, and securities lending are major drivers. Furthermore, most players have become banks themselves, and most – if not all – now offer advisory services. As such, the percentage of revenue made up of trading commissions has declined significantly over time.

Large players, like Charles Schwab, moved into additional services a long time ago, offering full banking services. The latter is interesting from a Charles-Schwab perspective, given that, in the initial years of its existence, one of Charles Schwab's core values and principles was precisely 'never to give advice'. Still, a brokerage is about executing transactions on behalf of customers, hence the huge impact of price (per transaction) and transaction volumes. The latter is heavily dependent on the number of customers (controllable or, at least, influenceable) and the market (not controllable).

SMALL IS BEAUTIFUL

The late Clayton Christiansen described this well in his famous book, 'The Innovator's Dilemma'. It is almost impossible to truly innovate at large companies, let alone from within. Anecdotal empirical evidence is all around us: large – cost-oriented – companies, like Kraft Heinz and Interbrew, clearly struggle to innovate and realise organic growth.

The creation of e.Schwab, Charles Schwab's first online transaction platform, is informative. Its founder attributes its success to its culture of innovation. That includes having people who scan and screen 'what is out there', and who then find a way to get it to the attention of top management. It could also have gone another way. However, in Charles Schwab's case, a young developer learned about its existence and became excited. A technician called William Pearson had developed a mock-up version on his own initiative, but initially could not find a way through the bureaucracy inherent in Charles Schwab at that time. When Pearson finally had the chance to show his model to the senior management team, the CEO became very excited and gave the idea his full support. While the company quickly became the undisputed online leader, it was not the first on the scene. Interestingly, Charles Schwab could have claimed that title, since their IT Division saw the potential early on, but 'bigness and procedures' allowed smaller entities, like E*Trade, to be set up more quickly and claim bragging rights. E*Trade's online commission was set at $14.95, compared to Charles Schwab's $65.00, and its service was quicker and better. Together with Ameritrade, E*Trade presented a real threat to the other discount brokers: a much lower price and more convenience are hard to beat. John Kader phrases it tellingly in his book, 'How one company beat Wall Street and reinvented the brokerage industry': 'Schwab was about to be Schwabbed.'

The point of small teams is partly size, which logically allows a higher speed. But it is also – or even more so – about empowering people. This is closely linked to centralisation and decentralisation choices. Both organisational models have pros and cons. The former emphasises the desire to be closer to clients and empower 'local' people. The latter aims to benefit from (cost) synergies. Consider the point of view of Atlas Copco, one of the most respected manufacturing companies. It has deliberately chosen a decentralised strategy. Richard Milne, FT columnist, reports that its headquarters are lean, with most decisions taken within the divisions. Its CEO, Mats Rahmstrom, considers this decentralised structure one of its competitive edges: 'We decided for more speed and trust than for financial synergies.'

There are few online brokerages set up by incumbent banks. Bolero is an exception. Almost 20 years ago, it was among the first players in Europe, and it was set up as a dedicated service within the investment bank KBC Securities (of KBC Bank). The initiative came from the entrepreneurially oriented investment bank. The term 'start-up' hardly existed in Belgium, and corporate innovation teams and leaders were not yet around. Investment bankers thought that they could leverage their equity research and trading prowess while embracing this new technology, 'the internet'. VMS Keytrade, set up earlier than Bolero by tech entrepreneurs, was the first in Belgium. Later, the Dutch-owned BinckBank (now owned by Saxo Bank) entered the game, and these three players largely divided the market among themselves. Bolero was reborn in 2013 with the arrival of a new management team, and grew from 15,000 customers to almost 100,000 in five years. Arguably, the setup and success of Bolero would not have been possible had it been conceived within the retail bank from the outset.

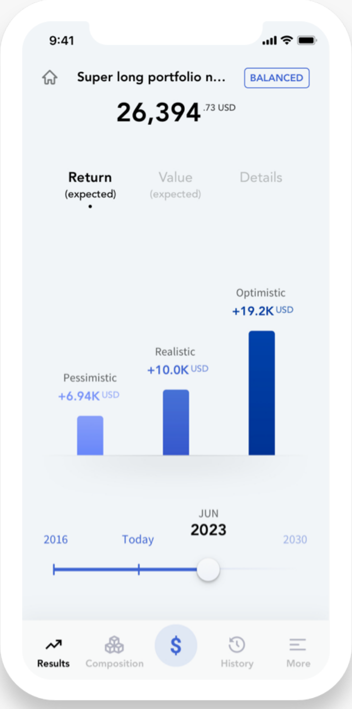
> When the new management team arrived in 2013, Bolero had an outdated online trading platform and, despite being one of the first in the Belgian market, it had long lost its number-one position. The existing team was small, but very knowledgeable and driven. There were only two ways forward that made sense: either (a) throw in the towel and cut the losses, or (b) invest significantly, building upon the inherent strengths (inhouse research team, trading capabilities, access to branch network). Bolero, being part of the largest brokerage house of Belgium, had unique selling propositions, including physically 'being' in KBC's dealing room, access to top-notch equity research, a trusted brand, and access to one of the largest branch networks in the country. Its strategy was simple and consisted of: (1) developing the best retail trading platform around, (2) going mobile, (3) significantly increasing marketing, (4) leveraging the content and services of the entire group, and (5) building a strong relationship with the branches. As a sign of the innovation culture at KBC Securities/KBC, the team got a fast go-ahead from the senior management team to develop a cutting-edge platform and launch the go-to-market plan in a 'start-up way'. Fast decision-making was built into the business. Within a certain strategic framework, the Bolero team could act as a speedboat. In less than five years, the number of clients, assets, and revenues grew by a factor of almost five. While, in 2013, Bolero still had no mobile offering, the percentage of mobile transactions grew to almost 35% by 2018.

Charles Schwab experienced what happened when a takeover goes the wrong way and 'big' acquires 'small':

> In 1983, 'it' happened… Charles Schwab was taken over by Bank of America. Charles Schwab accepted a $55 million investment and lost its independence. The strategists are always right: from a rational point of view, these types of deals always make sense. Cost and revenue synergies are easy to calculate in spreadsheets, but capturing the DNA, entrepreneurial drive, and impact of bureaucracy and committees, is, unfortunately, not so easy. Despite countless studies, deal after deal fails to deliver on its promises. As Kador writes, 'Either the synergies were straight-out fantasies or, for the handful that made sense, the glacial pace of decision-making at the bank made it impossible for them to get any traction.'
>
> Four years later, in 1987, the business was once again taken private by its founder, at a cost of $190 million, with Charles Schwab employees reportedly wearing buttons that read 'Free at Last'.

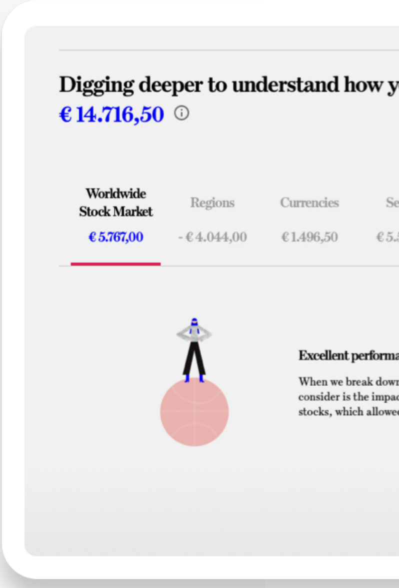
If you are serious about launching a possibly disruptive or seriously new service, set it up as a separate unit and let it function as a real start-up. Even consider setting up a legal entity, knowing that at some point in time, when the 'child' company grows into a teenager or an adult, it may well have to be taken back into the parental home.

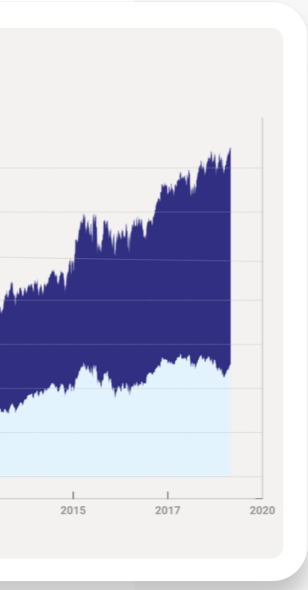
Discover our suite of products:

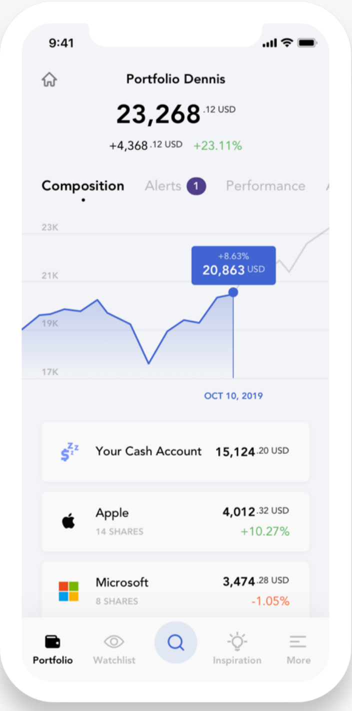

9:41
Super long portfolio n...
BALANCED
26,394 .73 USD
Return (expected)
Value (expected)
Details
Optimistic
+19.2K USD
Realistic
+10.0K USD
Pessimistic
+6.94K USD
JUN
2023
2016
Today
2030
Results
Composition
$
History
More

Robo Advisor

A low-cost, customisable digital wealth management tool that can deliver hyper personalised portfolios for Goal Based Investing


Digging deeper to understand how y
€ 14.716,50
Worldwide Stock Market
€ 5.767,00
Regions
- € 4.044,00
Currencies
€ 1.496,50
Se
€ 5.
Excellent performa
When we break dow
consider is the impac
stocks, which allowe




9:41
Portfolio Dennis
23,268 .12 USD
+4,368 .12 USD +23.11%
Composition
Alerts 1
Performance
23K
21K
19K
17K
+8.63%
20,863 USD
OCT 10, 2019
Your Cash Account 15,124 .20 USD
Apple 14 SHARES 4,012 .32 USD +10.27%
Microsoft 8 SHARES 3,474 .28 USD -1.05%
Portfolio
Watchlist
Inspiration
More

StoryTeller

A worldwide first new way to tell the story on portfolio performance

Portfolio Optimizer

The next-generation quant tools that provide cost-effective solutions for more efficient portfolio management

Self Investor

A best-in-class powerful white-label execution-only platform for easy investing

InvestSuite

TAKEAWAYS

Fintech disruption is not an invention of the start-up scene; it occurred in the 1950s when Diners' Club invented the credit card. Lasting fintech disruptors include Charles Schwab and other online brokers who arrived in full force in the 1990s; below are some food for thought and takeaways based on their journeys:

1. Top management must lead the dance and set the innovation agenda;
2. Embrace mavericks in the organisation;
3. Embrace tech early on;
4. Do something – act – try something out;
5. Mind the 'price' component;
6. Put the customer first;
7. Keep the innovation machine alive; and
8. If you really want to do something 'big', set up a separate entity and manage it as a start-up.