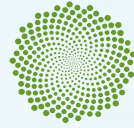




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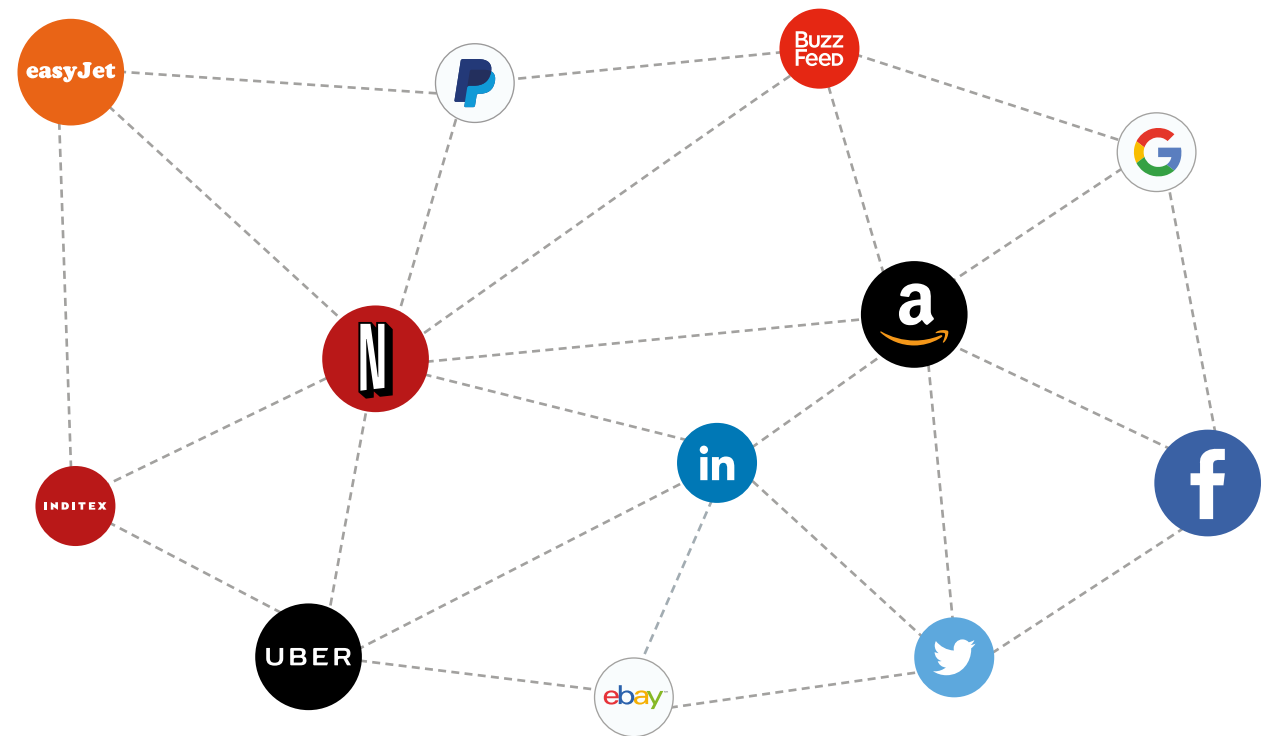
The Digital Era Business Landscape

Debunking the Low Balance Sheet Myth



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In the Digital Era, It's The Route to Customer, Not the Balance Sheet, That Matters

You may have read Tom Goodwin's popular TechCrunch article¹. But almost certainly you've heard the famous quote from it that starts: "Uber, the world's largest taxi company, owns no vehicles. Facebook, the world's most popular media owner, creates no content...". The quote has become the accepted metaphor for disruption in the internet age – so much so that it was cited by more than 80% of the speakers at a conference we attended in London last November.

What started as an interesting observation – that the internet has shaken up the supply chain and allowed for the emergence of balance-sheet-light, distribution-only platforms - has morphed into orthodoxy. In the information age, the theory goes, one set of companies does the hard work of producing goods and services, while another set – internet platforms – distributes them, earning super-normal profits on account of having few assets and negligible costs.

This is an interesting and intuitively appealing theory, but it doesn't hold when you examine it in detail. It turns out that these internet platforms are not as balance-sheet light as we might think and are, in fact, becoming much more operationally geared and vertically integrated as they seek to cement leadership and deliver better customer experience.

But, more importantly, it looks at digitization through the wrong lens. The fact is the internet era is not producing an overall trend to smaller balance sheets – just different routes to customers (with varying delivery models). And when we look at the fintech sector, we see no reason why this won't be the case, either.

Hierarchical models have given way to ecosystems. Within an ecosystem, some things are controlled while others are not; some assets are owned, others are not. What matters is the route to customer, not the size of the balance sheet.



Small balance sheet: if Google employed as many people as a car company, per dollar of its value, it would employ 2m people instead of 50,000. (Google 53,000 employees, market cap \$520bn; GM 216,000 employees, market cap \$56bn)

Part 1

Is the Asset-light Theory Right?

Why the Asset-light Thesis Is Appealing?

As technology fundamentally changes commerce, it alters consumption patterns, opens up industries to new competition and challenges existing business models. We see very different types of organisation springing up (in August last year, Snapchat had 330 employees and a valuation of USD 15bn² compared to 127,500 employees at the Marriott Group, a company with roughly the same market capitalisation). And there is increasing churn: the average lifespan of an S&P company has dropped from 67 years in the 1920s to 15 years today³.

Infrastructure services like AWS have reduced start-up costs, lowered running expenses and made business operations simpler, resulting in a proliferation of lean new enterprises. Advances in data science and processing capabilities allow businesses to collect masses of information and use it to target us with tailored products and services, delivering customer intimacy at scale. The internet has provided a platform for distributing goods and services without any physical outlets, inventory or manufacturing capacity. And mobile has extended internet usage while simultaneously extending the amount of time we spend online, dramatically increasing the addressable market opportunity.

Put the whole thing together and it is entirely possible to operate just at the top of the value chain: as a cloud-based, distribution-

only platform using algorithms to match consumers with the right products - and, crucially, without needing to engage in any other layer of the value chain. Hence the emergence of the meme about Alibaba, the most valuable retailer having no inventory; and Airbnb, the world's largest accommodation provider, owning no real estate.

The logical extension of the theory says that once these internet platforms have sliced off the distribution layer of the value chain, it follows that they can also appropriate the lion's share of the profits. Technology both democratises and commoditises the manufacture of services, and competition for profit shifts from achieving economies of scale to achieving economies of access. The companies that control the customer interface control the brand, the pricing and have the ability to up-sell and cross-sell. As such, not only do these companies have an asset-light model, but they also generate high revenues and by extension massive profit margins.

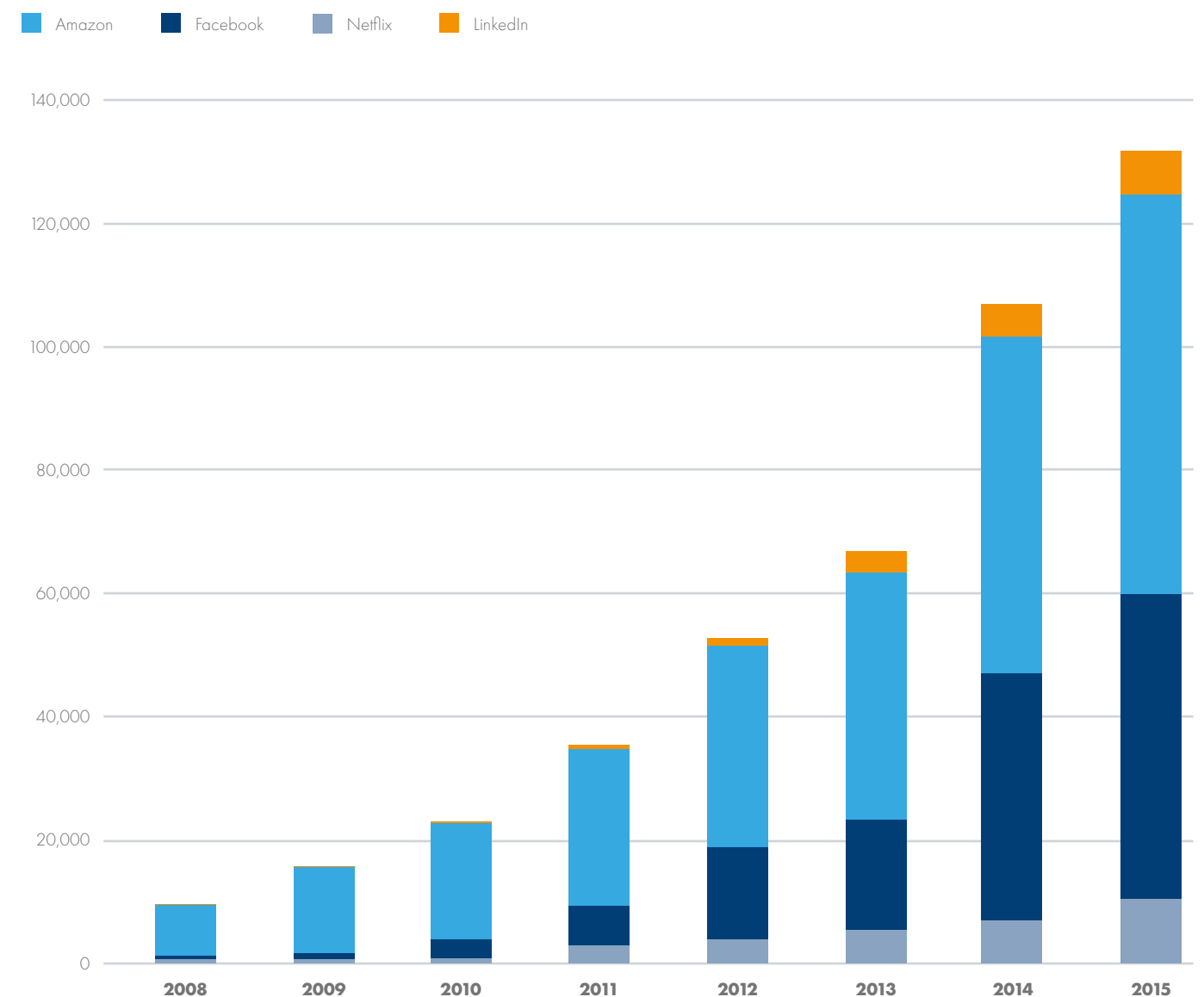
As the previously cited TechCrunch article puts it: "The interface layer is where all the value and profit is.... The value is in the software interface, not the products". And if we look at the return on capital of internet platform companies such as Facebook, Google, Netflix and Amazon, they have all exceeded 20 per cent - Netflix had a ROCE of 48 per cent in 2010.

A Moment in Time vs a Movement

So why do we say the balance-sheet-light theory is a false maxim? Well, our contention is that while it is indeed conceptually possible to run a highly-profitable, asset-light platform and while this is how many companies start out, they rarely stay that way. The balance-sheet-light thesis observes a situation at a point in time - both at a macro level, looking at industry value chains disrupted by the internet, and at a micro level, picking specific company examples - and assumes this to be a sustainable trend.

However, whenever there is a major shift in technology, new business models emerge quickly and then need to mature. High profits attract strong competition, forcing incumbents to adapt their value proposition to stay ahead. And firms' desire to maximise profits means that they tend to broaden and deepen their offering as they become established. Changing technology is changing routes to market, not necessarily creating a broad trend towards asset-light businesses. And as these platforms expand their balance sheets, their return on capital falls to levels which are more in line with historical norms.

Total Assets of Some Selected Internet Platform Companies (in \$m)



Source: Company annual reports

2) <http://www.forbes.com/sites/liyanchen/2015/08/11/the-most-valuable-employees-snapchat-doubles-facebook/>
 3) <http://www.bbc.com/news/business-16611040>

The Case of Amazon

It's obvious that a company like WhatsApp, acquired by Facebook for \$19bn when it had just 55 employees, is a low balance sheet company. But what about Amazon, the one Internet platform that has lots of physical assets like warehouses and inventory?

Amazon, founded in 1994, set out to “build a place where people can come to find and discover anything they might want to buy online”. Its vision was to be a distribution platform for a wide variety of goods and services. Amazon started with books - at least anecdotally - because a book has a unique global identifier (ISBN) which meant that it could be easily sourced from a third party (that is, leveraging third party inventory). Amazon now sells more than 35 different categories of products from jewellery to groceries. In fact, according to ScrapeHero, Amazon sells more than 356m products – 90 times more than Walmart, the world’s largest bricks and mortar retailer.

However, it is highly doubtful that the company’s founders imagined back then that Amazon would eventually control one of the largest logistics networks in the world, comprising its own IT infrastructure, more than 150 warehouses, last-mile delivery services and a growing proprietary transportation fleet (see infographic on next page).

Revenue per Unique Visitor, Amazon Compared With Selected Internet Companies, 2015



Source: Company annual reports, eBizMBA Guide

The fact is that Amazon started life as an asset-light internet platform but has become ever more vertically integrated. It has done so to achieve the second part of its mission statement: to be the “earth’s most customer-centric company”. What Amazon realised is that it could only deliver ever-increasing rates of customer success and fulfilment by controlling more and more of the value chain. Its Prime service, for example, which guarantees free same-day delivery to most customers and two days to the rest, is only made possible by controlling the different elements of the logistics chain. But it works: Amazon continually tops customer satisfaction surveys, building a level of fulfilment that others would struggle to match and thus reinforcing its market dominance.

Amazon capitalises on customer loyalty to sell a growing array of products and services and so generate ever higher levels of revenue per unique user (see below). However, while the vast majority of these products are provided by third parties, Amazon has been ready to invest in extending its product range to lock in higher revenues – the Kindle being a great example. And while the vast majority of customers have come from organic acquisition, Amazon has also deployed its balance sheet to reach a new audience, buying platforms such as Zappos.com and shopbop.com.

The Amazon Journey - Beyond Book Retailing



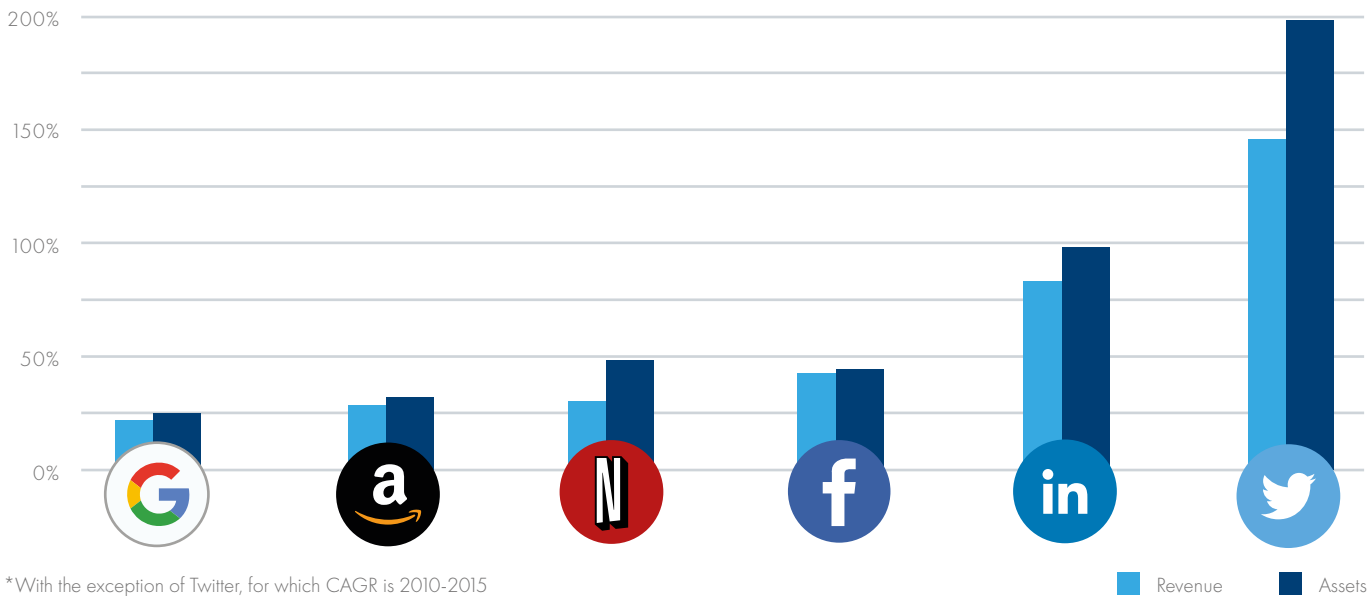
What About Newer Platforms?

It's tempting to see Amazon as an outlier – an inconvenient exception, and perhaps why the TechCrunch article references Alibaba not Amazon – but everywhere you look, internet platforms are becoming asset heavier.

Amazon invested in its logistics network because it could not depend on third parties alone to deliver services that are so integral to its user experience. But this is a general phenomenon experienced by most internet platforms. At its most basic level, it starts with the challenge of finding sufficient consumers with access to the internet in the first place. This is why firms such as Facebook (with its internet.org initiative) and Alibaba (with Rural Taobao) are trying to extend internet provision.

But there are many more such examples. Take Uber. It is building its own mapping service so as not to have to depend on third parties. But it is also taking steps to ensure that it can recruit and retain enough drivers to meet its service levels. These include leasing cars to drivers – which not only locks them in, but also guarantees a fleet of new and minimum category vehicles – offering banking services to drivers and, ultimately, augmenting and/or replacing its drivers with the automated vehicles it is developing. The last is an expensive R&D-intensive exercise which other supposedly asset-light platforms such as Lyft and Google are also undertaking.

Compound Annual Growth Rate in Revenues and Assets (2008-2015)*



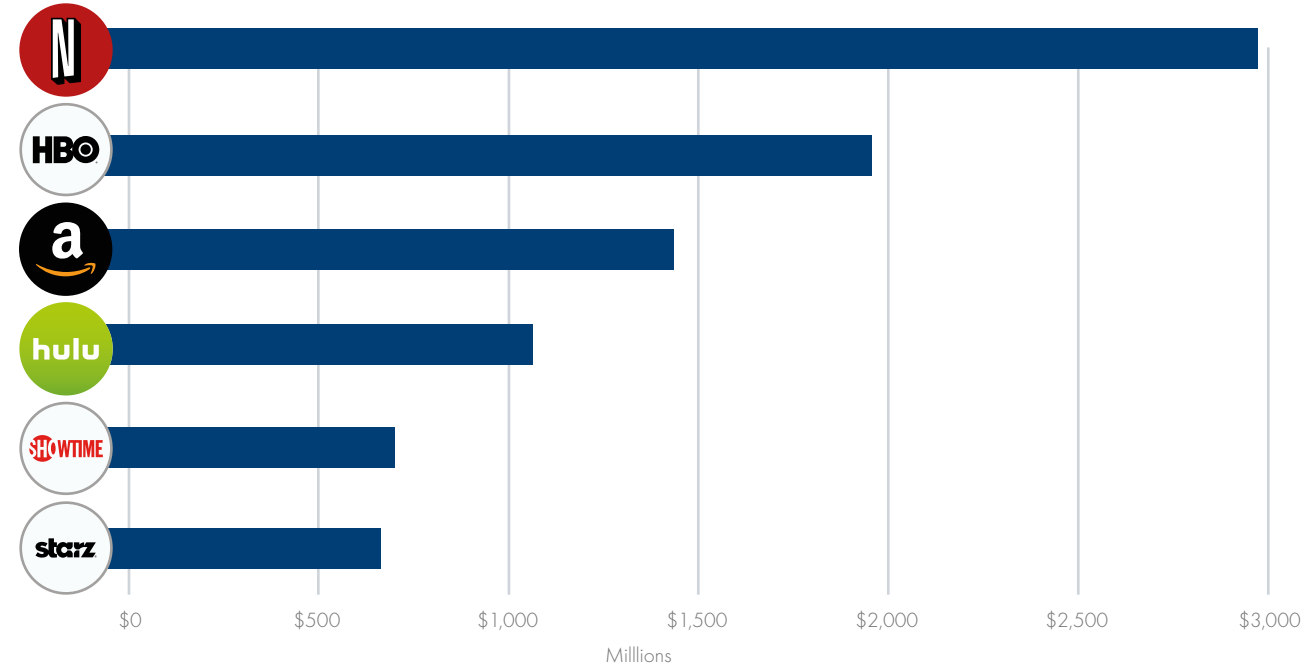
Source: Company annual reports

In the same way that Amazon is investing in original content – producing movies and TV series for Prime Video, for example – so too are numerous other internet platforms. In 2016, Netflix is to spend over \$5bn on original content, compared to \$2bn in 2013 – more than cable TV companies such as HBO and FX (see below). Netflix's goal is to differentiate its streaming service from those of rivals such as Hulu and Amazon Prime and gain exclusivity over the content – ratcheting up the stakes in the battle to retain and grow subscriber numbers.

Similar examples abound: Alibaba, whose total assets increased by 127 per cent between 2014 and 2015, is investing in original video content through Alibaba Pictures, a movie

content firm, and by acquiring media companies such as Wasu Media, ChinaVision and Chinese video site Youku Tudou. LinkedIn last year acquired online learning website Lynda.com as part of a move into content production. With Lynda.com, LinkedIn not only lists the skills necessary to embark on a particular career, but also provides courses to help jobseekers acquire them. Spotify, BitTorrent, Vimeo and Reddit have all recently announced that they are producing video content in response to rising competition. We believe Facebook will soon have to join them – in its case to support a push into artificial intelligence, which cannot rely on user-generated content alone.

Programming Expenses Compared: Netflix vs Peers



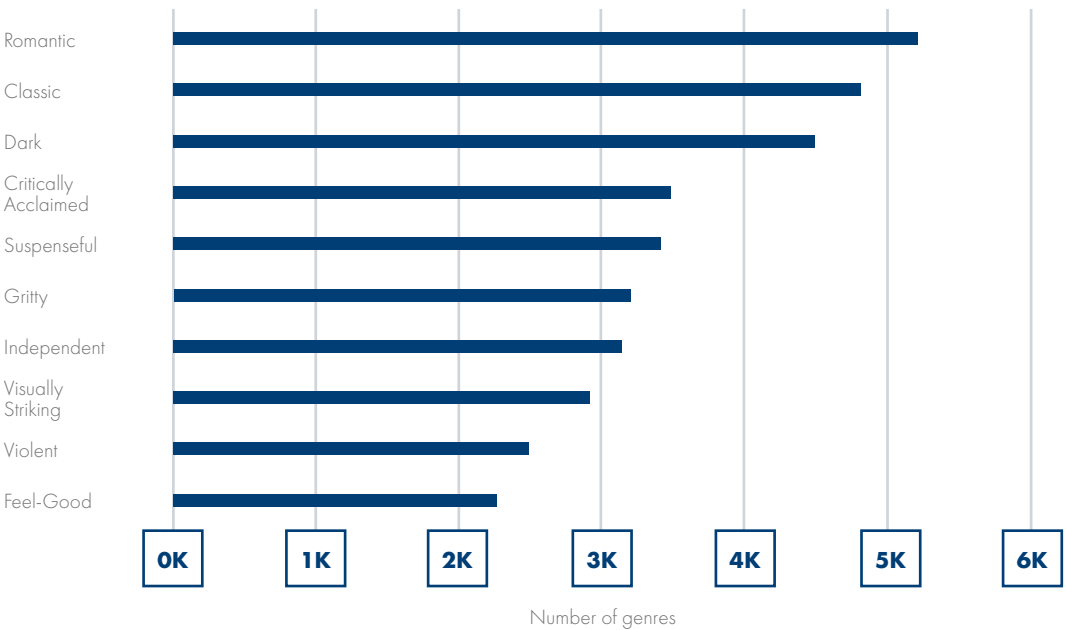
Source: Company Reports, Jonney Capital Markets

Another often overlooked area of asset accumulation is the technology platforms themselves. When scrutinising the Amazon timeline above, it is interesting to note how many software acquisitions the company has made as it seeks to enhance its recommendation algorithms, the level of automation and the speed of fulfilment.

All platforms must constantly do the same to stay competitive. More than 75 per cent of Netflix's viewership comes from

recommendations, which is why it invests millions in the underlying algorithm which categorises movies into 76,897⁴ genres. The majority of the money that Uber has raised so far has gone into its technology platform (see box-out). As another example, LinkedIn recently announced the acquisition of Connectifier, a start-up with technology to help recruiters find talent. As LinkedIn states in its earnings announcement, the acquisition will leverage "powerful machine learning-based searching and matching technology to help recruiters and hiring managers find the perfect talent fit."

Netflix Genre Categories



Source: The Atlantic

4) <http://www.theatlantic.com/technology/archive/2014/01/how-netflix-reverse-engineered-hollywood/282679>



Case Study: Uber

From its birth in San Francisco just five years ago, Uber, the car service app, has traveled to Shanghai, via London, Moscow and Melbourne. In fact, Uber today can be found in more than 350 cities in more than 60 countries, changing the way people think about getting places. Its aim is to make hiring an Uber car for a journey so cheap that no one will want to own their own car.

Fulfilling such an ambition rests on its platform, which has eaten up much of the funding and debt the company has secured. This includes \$5.6bn in equity funding and \$1.6bn convertible debt. Uber’s ability to develop and innovate with its platform is key to its future and central to its ability to grow. Uber Rush, Uber Commute, Uber Eat and Uber Pool are all new services either being trialed or rolled out and are based on the original platform.

Uber Rush, for example, allow shops and small businesses to deliver goods such as flowers or groceries via Uber drivers, and required changes to the original interface to provide tracking of the delivery’s progress. Uber Eat, which offers takeaway food delivery, was more complex, with menu display added to the

interface along with tracking. It has also demanded an investment in company processes to accommodate good hygiene and regulations. Uber Commute and Pool are both extensions that need to match different passengers with the same routes and timings.

Kieran Harte, general manager for Ireland and Northern Ireland, says IP and talent represent the two biggest investments for Uber. “We invest not just in our interface but in safety for our passengers and our drivers. For example, our platform can track documents such as MOTs, licence and insurance details, alert a driver about expiry dates and then lock them out of the system should they not produce the renewed documents,” he adds.

The company is also investing in driverless technology research with its Uber Advanced Technologies Center along with partner Carnegie Mellon University.

According to Harte, Uber’s mission is to be bolder in its ambitions and deliver cheaper, safer, more convenient transport to everyone. This informs its investment decisions today and in the future.

Uber

Is an Asset-light Model Necessary to Scale?

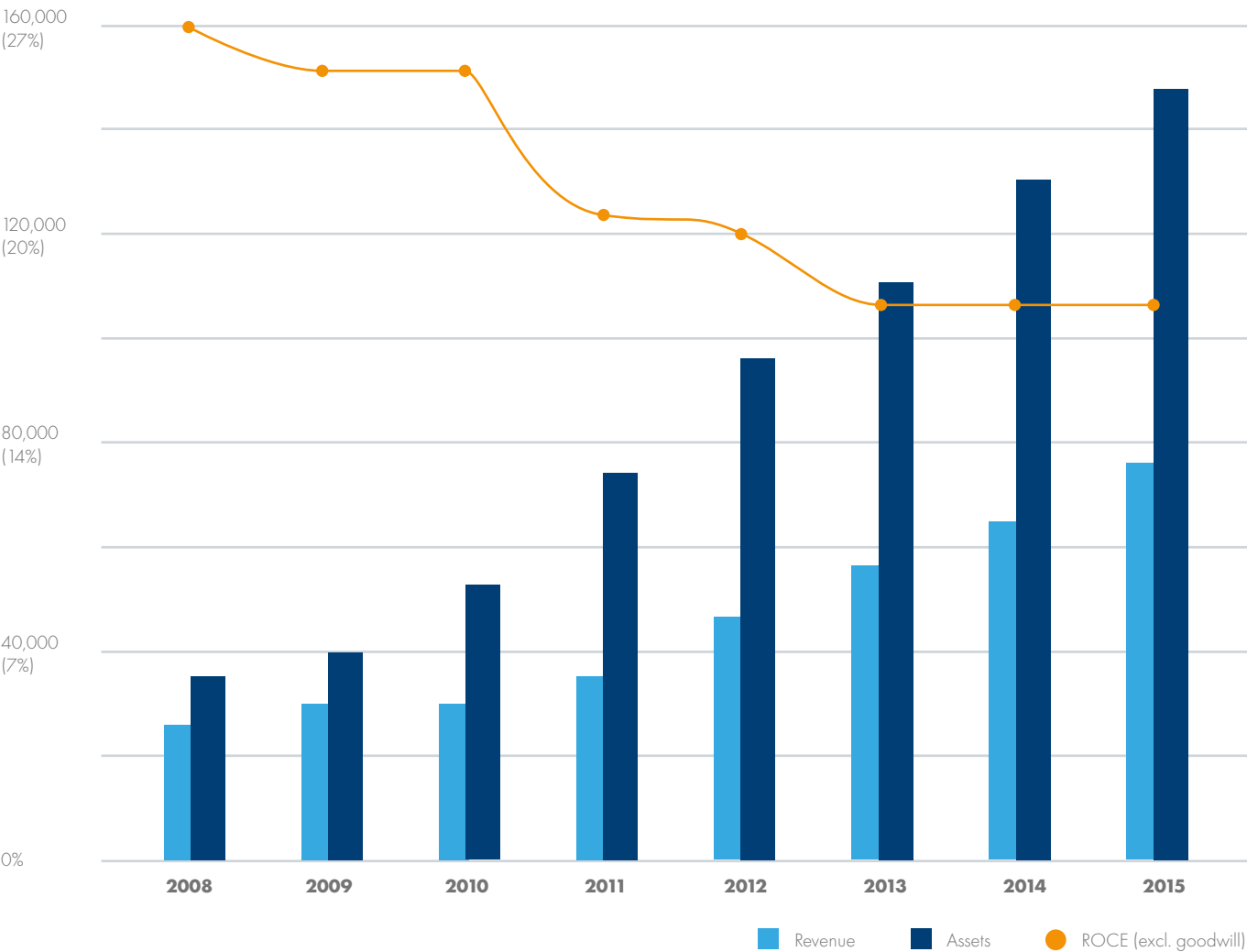
In their excellent book Exponential Organizations, Salim Ismail et al define leveraged assets as one of the 10 attributes of an “exponential organisation” (one whose impact is disproportionately large – at least 10 times so – compared to its peers).

We would agree that in order to scale quickly, it makes sense for firms to acquire as few non mission-critical assets as possible. Cloud services is a classic example – as is the use of staff-on-demand services such as Gigwalk.

However, asset ownership often confers significant competitive advantage, which is why the tech platforms have become

so much asset heavier over time. So, does acquiring assets necessarily mean a slowdown in the rate of sales growth? In the many examples we have studied in preparing this paper, we have found little evidence that asset-building has slowed growth. Rather, what we observe is that asset-building has reduced return on capital employed to levels that are more in line with historical norms. McKinsey estimates this to be around 10 per cent across all companies on average or around 17.5 per cent for software companies (excluding goodwill)⁵. That is to say, while super-profitable early on, we do not find that internet platforms earn super-normal profits in the medium to long run.

Google’s Revenues & Total Assets (\$m) vs. Return on Capital (%)



5) <http://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/a-long-term-look-at-roic>

Part 2

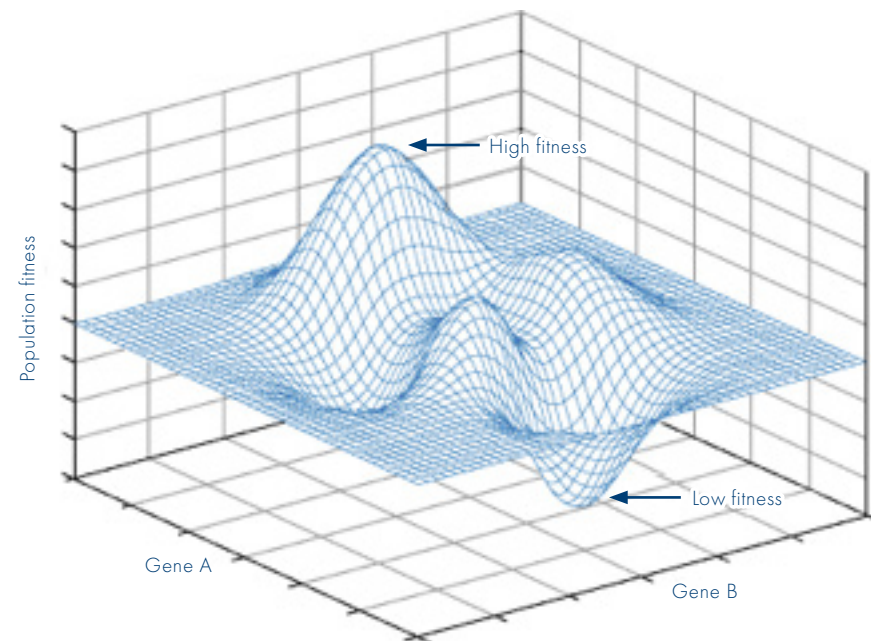
From Digital Platforms to Digital Era Companies

In part 1, we challenged the idea that internet platforms are either asset-light or generate super-normal profitability. The purpose of part 2 is to examine the balance-sheet-light theory in a wider context: from the perspective of the business landscape or ecosystem, rather than just the technology and economics. We argue that digital platforms are one manifestation of a wider trend – in which the changing landscape has afforded different routes to customers as opposed to a trend towards low asset business models per se.

The Business Fitness Landscape

The idea of mapping ecosystems as a tool to assess business opportunity is one borrowed from the study of evolutionary biology. Fitness environment diagrams such as the one shown below depict a landscape of peaks and troughs that determine where gaps exist for population by a new species of animal. In reality, these environments are multi-dimensional and so are abstract 'phase spaces' rather than three-dimensional mountain ranges.

An ecosystem view of the changing business environment could similarly reveal new hills as opportunities for corporations. But this remains a metaphor unless one knows the variables that determine the business environment.



More than a metaphor: business landscapes are an extension of fitness landscapes used in the science of evolutionary biology

With the right model, routes between the hills and valleys could indicate the flow of information or goods or even incentive alignments. These would lead to the scientific mapping of new routes between businesses and customers.

For now, this is based on "grunt work" and intuition – and is an art. But one day it could become a science. But, it remains a useful tool for evaluating strategic options, to look for new routes to customers where the landscape has changed.

Beyond Technology Companies

The small-balance-sheet company does look like a trend until you extend the picture to include not just digital platforms but the newer wave of digital-era companies. In the latter, the Silicon Valley approach and culture are applied to businesses which are not strictly internet ones.

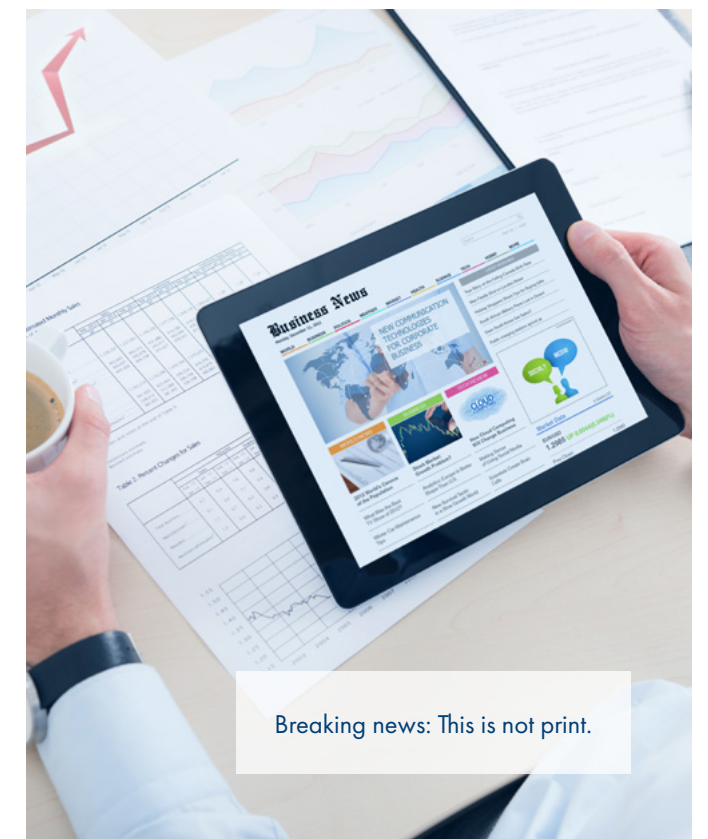
It's necessary to look at the wider picture because the notion of an internet company is becoming increasingly irrelevant. If you are going to include Airbnb, then why not Tesla? And if Tesla, why not Inditex (parent company of fashion brand Zara)?

Many so-called internet businesses (Uber, Airbnb) don't sell technology but leverage it – and operate in markets such as food or travel. Increasingly, there is no such thing as an internet or digital business, aside from firms that exclusively develop and sell technology.

A good example of how 'digital' companies are becoming the default – to the extent that soon all surviving companies will be digital-era companies – is advertising. Advertising is generally split into sectors such as print, out of home (billboards) and TV. Digital has traditionally been listed alongside, as if it were a separate medium. But when most newspapers are consumed on screen, when billboards are screens and TV, the only traditionally screen-based medium, is consumed via an internet platform on a computer display, digital is not a sector of advertising but is all advertising. 'Digital' agencies which were specialist until recently are the only viable type of agency in the longer term. They won't be called digital and the role of head of digital on the client side will prove only temporary while the rest of the business catches up.

Not an internet company but an internet era-one:
Tesla, founded by Elon Musk

When considering the financial services sector, the wider picture of how these digital-era, non-technology sector businesses operate at the structural level – such as how large their balance sheets have to be – becomes very important. Looking at how digital-era businesses are structured across sectors, there is no trend to small balance sheets.



Breaking news: This is not print.

Digital Era Company Examples

Cars

Tesla is a large-balance-sheet company. Unlike Apple, Tesla doesn't just design its cars in California, it builds them there. This increases its balance sheet. Unlike almost every other US car manufacturer, it sells directly to customers rather than wholesale through dealers. This increases its balance sheet still more. But Tesla goes even further than this by having to build its own global network of supercharging stations to fuel the vehicles it sells. This would be analogous to Ford owning its own gas stations not just throughout the US but in every global market it entered. This constitutes the mother of all large-balance-sheet businesses – over \$8bn at the end of 2015 compared with revenues of \$3.7bn.

The reason for this large-balance-sheet approach is to allow Tesla to control everything it needs to disrupt the existing status quo. The business landscape that the car industry sits in is changing away from oil to electricity, and although Tesla has to build its own electric 'gas stations' to bootstrap its own ecosystem, it is doing this in a more efficient way than it could were it trying to control the supply of oil. In other words, it is proposing to take a large-balance-sheet approach, but in the smallest possible way.



A car manufacturer that builds its own refueling stations is not a small balance sheet proposition.

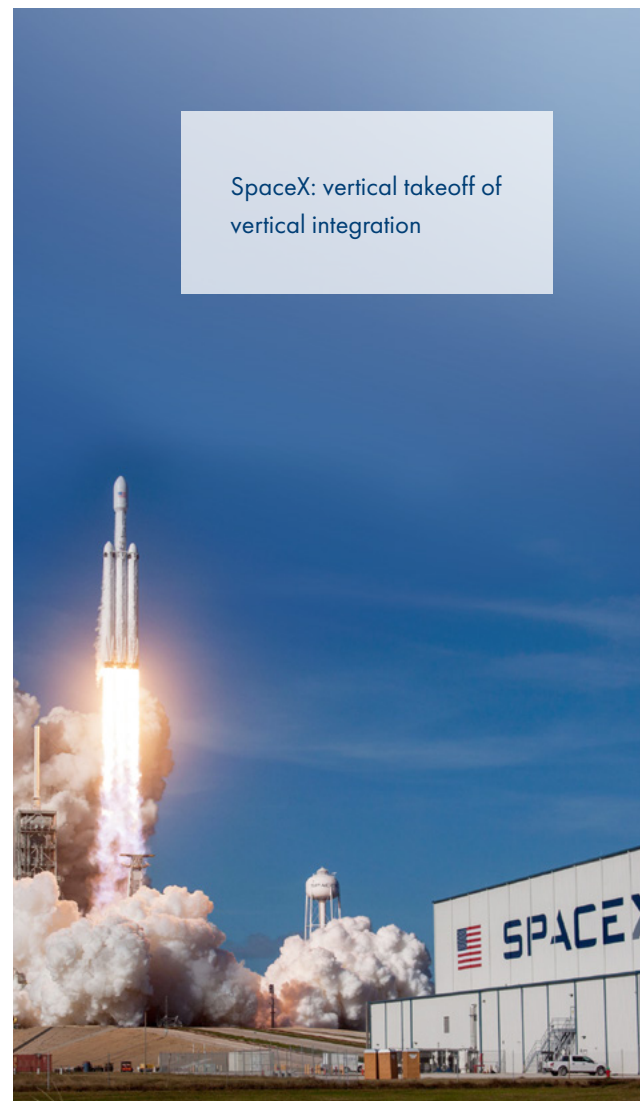


We sell our vehicles through our own sales and service network which we are continuing to grow globally. We believe the benefits we receive from distribution ownership will enable us to improve the speed of product development and improve the capital efficiency of our business.

Tesla annual report 2014

Rockets

The same trend can be observed in SpaceX, Tesla founder Elon Musk's other business. The only way to disrupt the cosy relationship of government subcontractors who charge NASA (and by extension SpaceX) large margins for rocket components is to make everything yourself. In manufacturing parlance, SpaceX is an extremely vertically-integrated company and this translates to a high balance sheet.



SpaceX: vertical takeoff of vertical integration



Planes

Moving from cars to rockets to planes, the trend for the past few decades has been for lower-balance-sheet businesses - for carriers to lease rather than buy a significant proportion of their fleet.

The major digital-era disruption to this business has been from European low-cost carriers. These have literally found new routes to passengers via smaller airports, but also through optimised 'digital native experiences'. It is no accident that easyJet's planes were branded with the company's web address in massive letters.

Like mobile-only banking, the premise is for lower-cost interaction with a website rather than telephone support and legacy workflows that ruin the online experience. As an example, seats and boarding passes for multiple journeys can be allocated and downloaded at the point of purchase, rather than having to revisit a website 24 hours before departure, as is the case with nearly all traditional carriers.

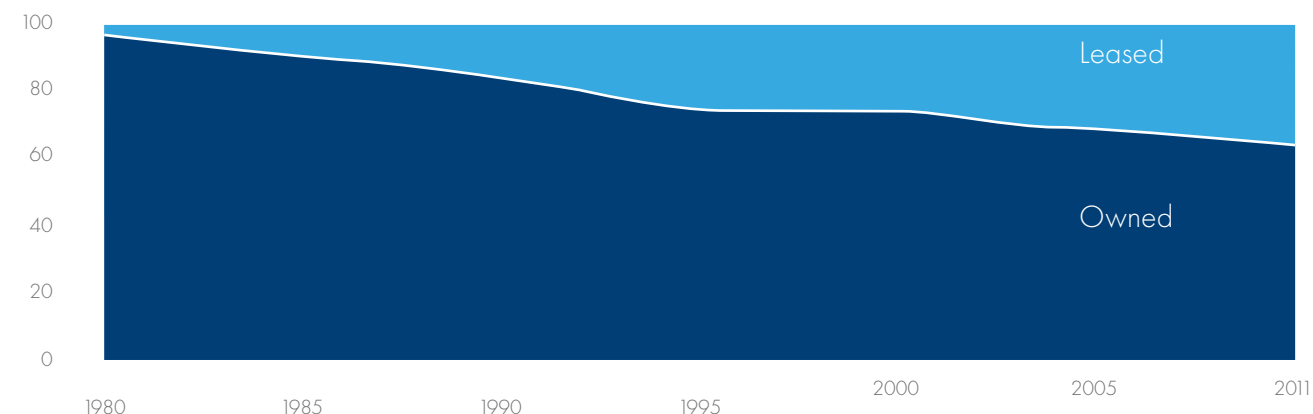
Despite the level of innovation, there has been no acceleration of the trend to lower balance sheets through plane leasing from lower-cost carriers. In the case of easyJet, it has purchased around

half its fleet of 200 planes (at a price of \$90m). So it is wrong to say that the world's biggest airlines don't own any planes. In fact, the opposite is true; the world's biggest plane owners don't have any passengers. The largest aircraft owners are leasing companies. GECAS (General Electric Capital Aviation Services), the largest of them all, owns around 1,700 aircraft operated by 230 airlines around the world.

Other low-cost airlines such as Ryanair, who are fond of owning most of their aircraft, don't do it in the same way as legacy carriers traditionally did; buy and hold for the full lifespan of the plane (30 years). Ryanair negotiated procurement deals with Boeing by buying in bulk, using them for around five years and then selling on before the price dropped too far. This is much like businesses do with company cars or the car-rental industry does with its vehicles.

In summary, the balance-sheet dynamics of digital-era airlines are much more complex than Uber and its cars, and represent neither a high nor a low-balance-sheet approach. The correct balance gives flexibility in that specific ecosystem. If we look at the European equivalent of the big US tech platforms, we find the same dynamic.

Rent to fly (% of global airlines fleet*)



*Western-built jets only, in service or storage.

Source: Ascend



Publishing

The publishing industry is having a hard time adapting to the digital era. As Jeffrey Zucker, president of CNN, once famously remarked, media companies face the prospect of “trading analog dollars for digital pennies”. As most traditional media companies have pushed online, they have cannibalised their existing revenue streams and seen profits tumble. Consider the UK market, where two of the pioneering online sites – MailOnline and the Guardian – remain heavily lossmaking. In January, the Guardian announced a loss of £50m and said it would cut costs by 20 per cent over three years.

But many new companies such as BuzzFeed and Vox have taken advantage of changes in the way content is distributed to launch innovative business models. Take BuzzFeed as an example. Its model was built for the social-media age, using a team of staff reporters to create content that was designed to go viral - breaking news, celebrity-focused stories, lists and quizzes that people liked to share with their friends. And it made very intelligent use of data, turning extremely high traffic volume into advertising revenue and constantly investigating why some content works and other content doesn't to refine its content strategy. Ironically, this now extends to more traditional content, too.

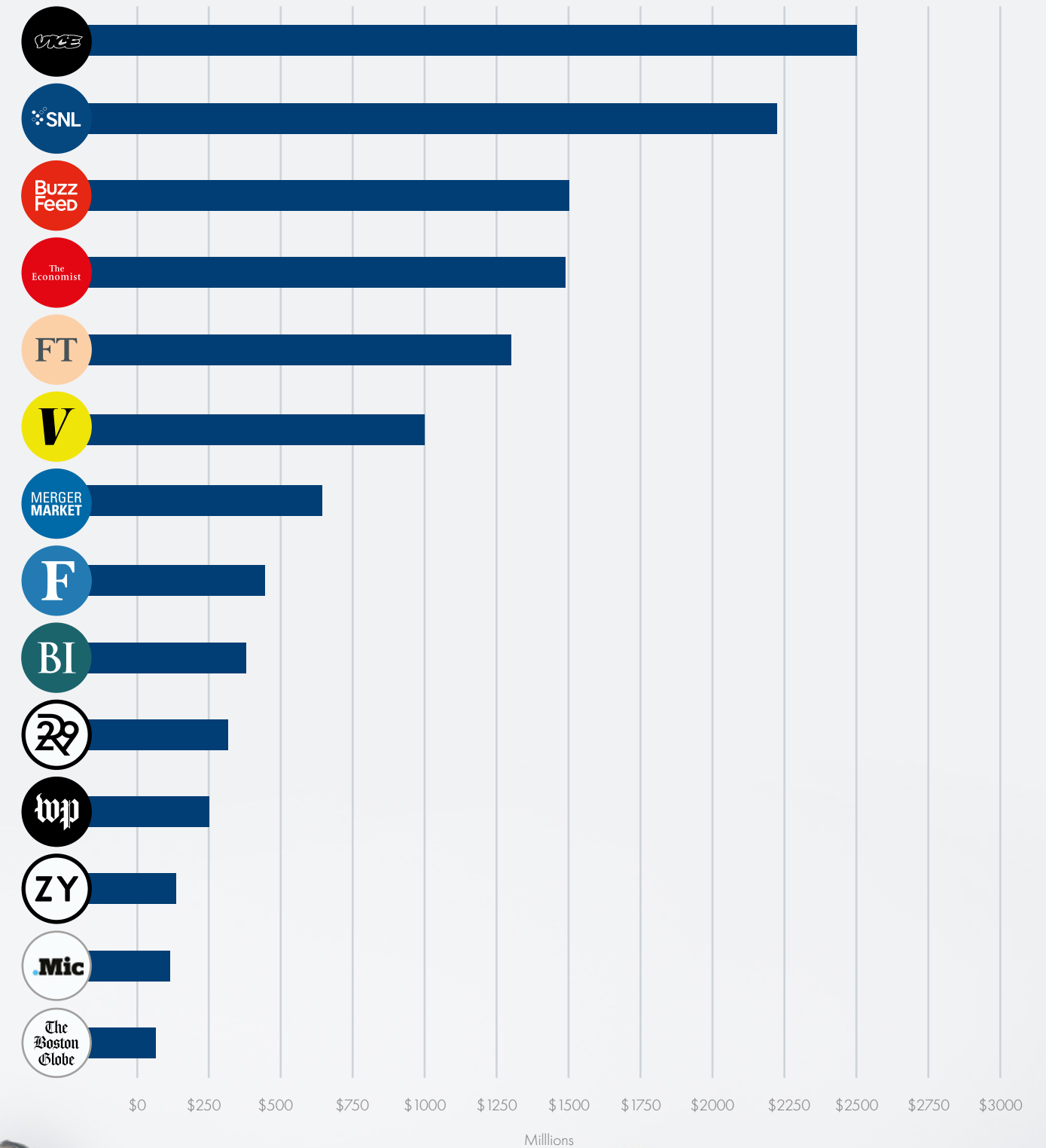
These new companies provide proof of two key facts. First, that changing the landscape opens up new routes to customers; second, that these new routes are often best captured with a vertically-integrated model. The lesson is less around asset intensity and more about digital nativity. Trying to turn digital pennies into sustained profits is almost impossible with an analog business model.



We have built our own CMS, our own real-time stats system, our own optimisation algorithms, hired our team of reporters, built our own ad platform and integrate all the pieces together into one product that works for our readers and our brand partners.

John Steinberg, former CEO at BuzzFeed

Valuations: New and Traditional Media Companies Compared (\$m)



Singularity Companies

Inditex: a European Singularity Company

No matter how disruptive low-cost airlines appear to be, they are by no means giant businesses in comparison with the big internet platforms. EasyJet is worth \$10bn, which is roughly the same size as the biggest European internet companies – but 50 times smaller than the largest US ones.

Unfortunately, a company of this scale does not sit at the top of the foodchain, and so the biggest European tech companies get eaten by their American counterparts (Activision’s acquisition of King, for example). Tech platform companies such as Google, Facebook or Amazon sit at the centre of their ecosystems, like singularities at the centre of galaxies. They swallow everything that crosses an invisible horizon that defines what they need to control. Europe has no singularity companies and so the focus on so-called unicorns (new \$1bn technology companies) is a dangerous distraction.

To spell out the seriousness of the situation with regard to moving towards the information economy, consider the value of the top three internet companies by continent: Americas approx \$1 trillion; Asia approx \$0.5 trillion; Africa \$60bn; Europe less than \$20bn.

This improves dramatically, however, when you look at digital-era companies that have exploited changes to the business landscape as a result of increased communication.

An example of this is Inditex, the parent company of fashion retailer Zara, a \$100bn company with global reach that is largely unheard of in the US outside of metropolitan areas such as New York. The US is a market that doesn’t fit the Inditex business model (largely due to cultural issues around more formal clothing) and is part of the reason why it is able to exist at all; absence of a US competitor. Inditex is one of the very few digital-era European companies that rivals the biggest US or Asian ones in size and it does so by capturing the efficiencies in supply chains that are only really possible because of global communication technology.

Inditex is a pioneer of ‘fast fashion’, quickly imitating the latest catwalk styles and speeding cheaper versions into stores. If companies such as Google have connected information together, creating a more efficient information flow, Inditex has done the same for physical supply chains.

Inditex stores carry very little excess inventory, allowing managers to request more stock if needed and encouraging them to create



In danger of being eaten: no European internet company is at the top of the foodchain.

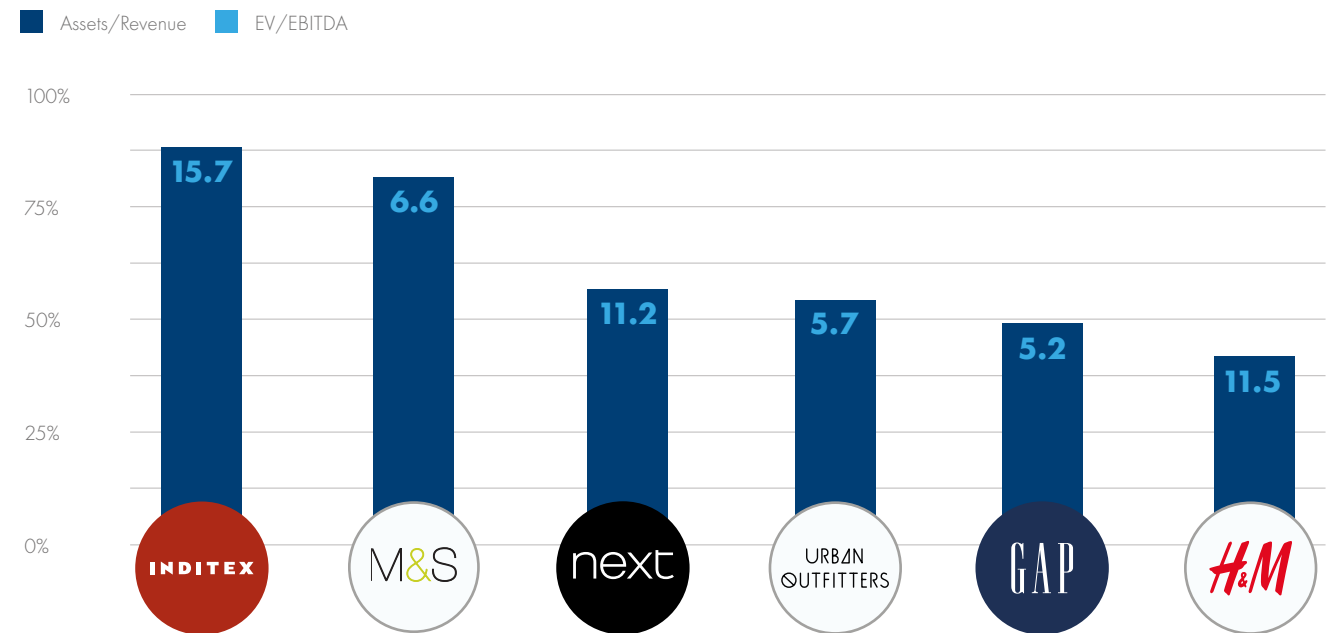
internet-style feedback based on customer reactions in physical stores. Inditex staff are trained to tease out this information, which is reported to headquarters every day by store managers. It is passed to a large team of in-house designers who in turn send designs to factories to produce new lines on a near-continuous basis rather than twice a year. Many luxury fashion companies such as Prada or Louis Vuitton now bring out four to six collections per year instead of two, because of Zara.

Like easyJet, what Inditex chooses to take on its balance sheet is complex and flexible. Unlike Apple, for instance, half of its product is produced by factories which it owns and are near to its headquarters in Spain. The remainder is produced either in near-shore locations such as Portugal, Morocco or Turkey, or in more remote countries such as China, Bangladesh, Vietnam and Brazil. The decision where to manufacture is one of supply-chain optimization, where high-trend items are made locally and the turnaround from design to arrival in store can be as little as two or three weeks.



A Zara factory: some it owns, some it doesn’t. Like airlines, there’s no simple answer as to what sits on balance sheet.

Asset Intensity vs Valuation: Inditex Compared to Other Clothing Retailers



Source: Company annual reports, Thomson Reuters

With manufacturing coverage across an entire ecosystem, Inditex is organic and adaptable, and sometimes higher labour costs are offset by faster turnaround and less excess inventory.

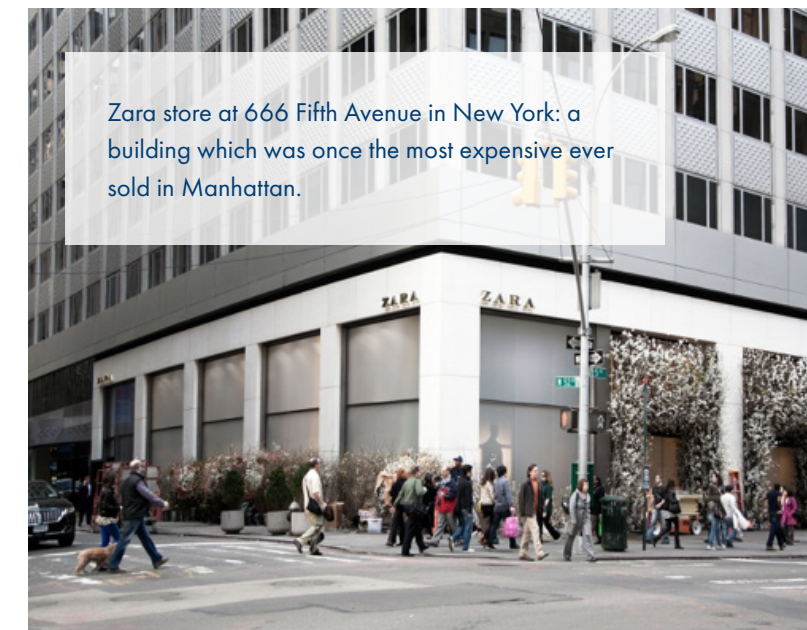
Aside from owning factories, Inditex has another area in which its balance sheet is unusually large; real estate. Ironically, Zara is a digital-era brand that spends next to nothing on advertising, with almost no marketing department and no promotion of designers as brands in themselves. Zara’s designers are anonymous partly because they clone rather than design. In many ways, Inditex is the Rocket Internet of retail.

To accuse Inditex of being a cheap, unsustainable proposition is to miss the point, however. As Masoud Golsorkhi, editor of Tank, a London magazine about culture and fashion, put it to the New York Times: “To the luxury brands, they are copycats, they are like mushrooms feeding off the main body of fashion... I was of the same mind myself, but I have grown out of that because I realise that the fashion companies also copy each other. In the end, no one’s original.”

As a function of the way it operates, Zara needs to piggyback on marketing for the fashion items it is cloning rather than build its own campaigns. This is where real estate comes in. By saving on advertising, Zara puts physical stores in the most expensive locations in proximity to luxury clothing brands whose retail strategy is to keep as far away as possible from cheap interlopers. As proof, Zara paid \$324m to buy space at 666 Fifth Avenue in New York, a building which was once the most expensive ever sold in Manhattan⁶.

“Inditex have done process innovation very well,” says Nelson Fraiman, a professor at Columbia Business School who has studied the Inditex model. “Product innovation? No. But tell me one Chinese company that has done product innovation very well. They are brilliant at process. I think you should give a cheer for process innovation.”

Inditex has found new routes to customers in an information era and changed ecosystem. It has done this by adjusting its balance sheet where needed, rather than outsourcing everything and reducing it to a minimum.



Zara store at 666 Fifth Avenue in New York: a building which was once the most expensive ever sold in Manhattan.



Part 3

Fintech Companies and Balance Sheets

Like retail, exemplified by companies such as Inditex, H&M and Ikea, financial services is one area in which Europe has a chance to create companies that are top of the food chain in their sectors; fintech firms that sit at the centre of the digital-era financial ecosystem.

It is crucial that Europe produces technology companies capable of dominating this sector in order to claw back some of the ground lost to American internet platforms and also because of the massive importance of financial services to the European (and especially UK) economies. In total, the EU financial sector employs over 11 m people, 5.4% of the workforce producing 10% of economic output with clear pockets of global leadership in areas like foreign exchange (54% of global total) and OTC derivatives (65% of global total)⁷.

The fintech champions will be true technology firms and will involve large balance-sheet businesses, either directly or in partnership with incumbent financial services providers. This is because – unlike retail – money is all about information; and unlike internet platforms, banking is all about large balance sheets. Financial technology is the sector in which both Temenos and the Anthemis Foundry are involved, and the relationship between new routes to customers and the required balance-sheet size is one of the primary lenses through which to view and analyse it.

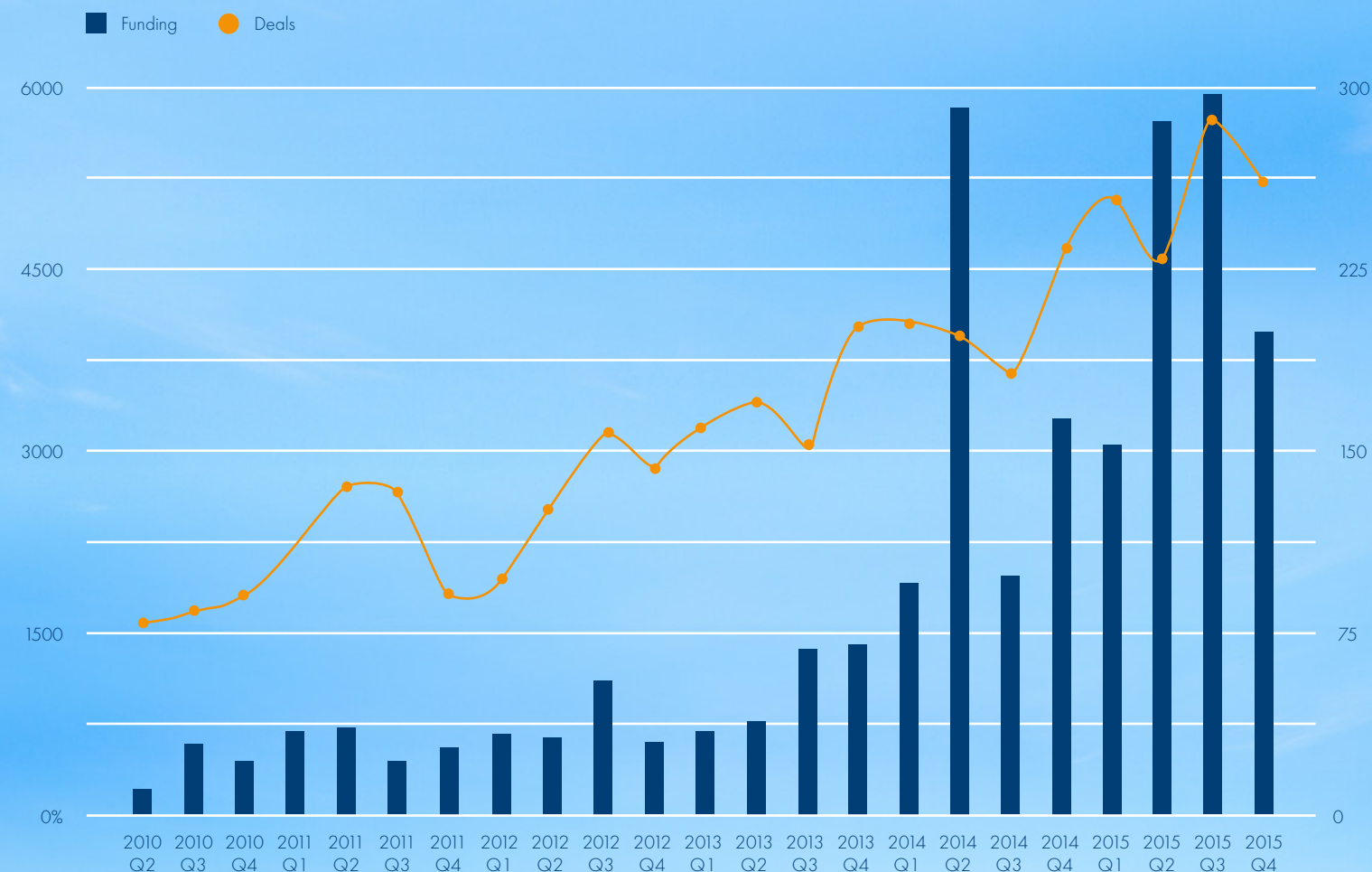
Why is the Financial-Services Sector Ripe for Disruption?

The technology trends described earlier in this paper are opening up the financial sector to new business models. The internet has provided fresh channels for distribution, meaning that physical distribution is no longer an expensive prerequisite for banking. Improvements in data processing and analytics have created opportunities for doing banking better, quicker and cheaper. And the Cloud has lowered operating costs, such that thousands of new companies have been created to capture a share of global banking and insurance profits worth in excess of \$1.5 trillion.

In addition, factors that have held back disruption in the past also seem to be changing. Regulation, once a formidable barrier to entry, isn't quite the friend it was (for now); consider the European Commission's moves on MiFID II, capping interchange fees or PSD II (the Access to Accounts provision that requires banks to provide third parties with access to customers' data). These are all aimed at promoting transparency and competition. Similarly, customer inertia is gradually fading, particularly among the young – whose propensity to switch primary account providers can be up to two times higher than average⁸.

This is why so much venture-capital (VC) money is being put into the sector, because there is a real sense that now might be the time when new entrants can really take a material slice of the financial-services pie (please see next page).

VC Investment (\$m) and Volume of Deals in Fintech Start-ups, Q2 2010 to Q4 2015



Source: CB Insights



7) <https://www.thecityuk.com/assets/2015/Reports-PDF/Key-Facts-about-EU-financial-and-related-professional-services-2015.pdf>

8) <https://www.worldretailbankingreport.com/download>



Spot on: M-Shwari, a Temenos customer, acquired 9.3m mostly unbanked customers in 16 months, proving the power of providing financial services at the right price point and via the right channel

For corporate banking, the big disruptor is SaaS accounting. With real-time updates from multiple banks reconciled directly to a business's balance sheet, an individual bank account provides an incomplete – and increasingly irrelevant – picture. SaaS accounting may not replace large-enterprise resource-planning systems that combine this financial snapshot with supply-chain information, but it is possible it could evolve into something very powerful, and transfer from SMEs to bigger businesses.

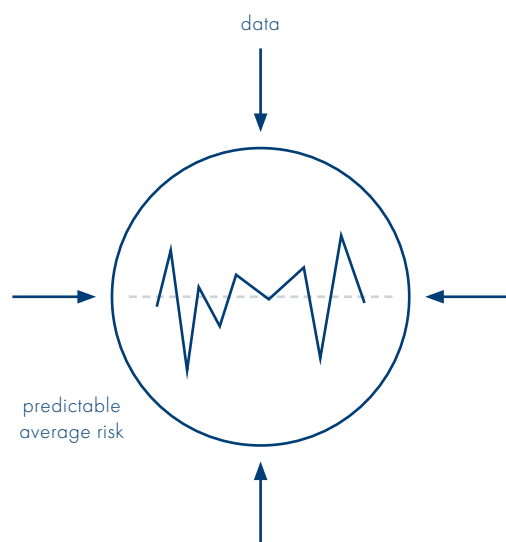
For private banking and wealth management, the disruptor is data. This means using data to manage risk better, make better investment decisions and drive much higher levels of automation that in turn open up the industry to everyone who needs investment advice.

For banking consortia and back-end rails, the disruptor could be blockchains and smart contracts (or whatever they morph into), as they allow for services that traditionally have had to be run by third parties such as SWIFT or Visa to be implemented in software-only form. With all parties being treated equally, anyone can take the lead in trying to establish them.

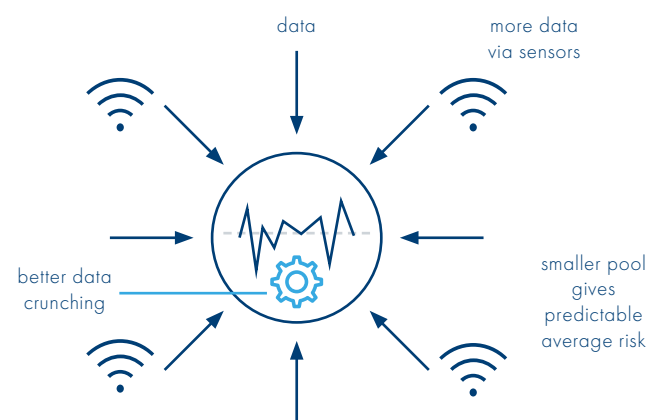
For insurance, more data from sensors and improved analytics will allow smaller pools of calculable risk. This means that insurance will become more granular and the range of products will increase. However, the market which allows for the punishment of bad luck (risk of a disease) vs bad behaviour (reckless driving) will be legislated – hopefully – to place it beyond the reach of insurers. The roles of re-insurers and underwriters may overlap differently, too.

What Are the Opportunities?

For retail banking, the big disruptor is obviously the smartphone. With a secure, network-enabled computer in everyone's hand, a smartphone is both bank and wallet. The idea of a physical building with classical marble columns as a display of conservative wealth – and therefore trust – for a product comprised of ones and zeroes is clearly absurd. The smartphone is both the battlefield for the future of retail banking as well as the means of opening up services to millions of new, formerly unbanked customers.



Risky business:
insurance will become more granular



Is it Possible to Operate a Balance-sheet-light Model?

As before, it should be possible to operate successfully in banking with a balance-sheet-light model. We are seeing the unbundling of financial services, with an array of new players originating financial products and services – such as unsecured credit – which are processed and settled by someone else, i.e. a bank. That is to say, we are witnessing the same separation of distribution and manufacturing that gave rise to the internet platform.

However, as before, we must be careful not to confuse a moment in time with a permanent state; financial-services innovation is in a transitional phase and we predict that the asset-light models of today will become asset heavier over time.

The Importance of Capital at Risk

Models where financial providers do not put their own capital at risk are unlikely to be acceptable to depositors, regulators or society over the longer term. Lending is at the core of commercial banking and – when scrutinised through a prism of, say, user experience – it is easy to overlook the profundity of what the financial system achieves.

The financial system gives depositors a guaranteed return on their investment without the risk of capital loss while at the same time maintaining the liquidity of those funds. Banks are able to do this because they risk their own capital against potential losses (not those of depositors). And, because they risk their own capital, banks are incentivized to and, for the majority of their long history, have been very good at determining risk.

Compare that with marketplace lenders. In most cases, they exactly match the value of loans they originate with third-party funding sources, meaning that there is no capital buffer (giving rise to the regulatory arbitrage that makes the model attractive) – and so depositors are liable for capital losses. Since this marketplace lending model is largely untested through the economic cycle, it remains to be seen whether, firstly, the depositors are aware that risk has been transferred to them away from the financial system; secondly, whether source of funding will dry up if capital becomes more scarce; and thirdly, in the absence of experience or capital at risk, whether the credit underwriting activities of lending platforms (where these haven't been outsourced to depositors) will be shown to be sound and prudent.

What is more, banks create wealth by lending more than they have in deposits. Contrary to what conspiracy theorists may think, without the kind of leverage that fractional reserve banking allows, money will not be spread out and capital will concentrate further in the



hands of those who already have it. Because of this, it's important that banking isn't replaced by distributed peer-to-peer platforms with no money-creation capability, but is either re-bundled as large corporations or run as a utility, with associated infrastructure. Both the corporate bundling and infrastructure propositions are large-balance-sheet ones, which cannot be said of internet platforms.

Delivering a Credible Proposition

To control the user experience, instill trust and safeguard their own destiny, many fintech providers will have to become full-stack providers or form partnerships with banks.

While the situation may be changing, it is still true that consumers trust banks more than fintech start-ups. So becoming more like banks (obtaining licences) or trading under a bank brand through a partnership may help fintech firms instill trust. What is more, plugging in to banks' existing distribution capabilities and customer bases may help B2C fintech firms get in front of time- and attention-poor consumers, which could explain why such partnerships have become more prevalent. For a bank, the advantage of partnering with fintech firms is not only to offer a broader range of services (see later) but also to offer services that it might consider inappropriate, like selling aggregated data. But partnering with banks is clearly not a prerequisite to achieve scale or acquire customers as PayPal demonstrates – its market cap is USD45billion (60% larger than Barclays, the UK's second largest bank, with almost four times as many customers).



Nordea

Viewpoint: Nordea - Michal Panowicz

"Banks are supervised, regulated. They have to be prudent and customers are still attached to their banks. They still trust them," says Michal Panowicz, deputy head of digital banking at Nordea, northern Europe's largest financial institution.

For Panowicz, this sets out the limits of how far, in the short to medium term, fintechs can eat into banks' market share. He points out that in countries where established banks have embraced digital platforms – for example in Poland and Turkey – there is very little customer traction into fintech activity. This is because the banks themselves can offer services that compete with individual fintech startups – advanced money management, instant loans, mobile payments, convenient payments, video banking and so on.

"It comes down to how limited a fintech's offer still is. Take a typical digital challenger bank – it offers a current account with a debit card and maybe paying domestic bills is an option already. But you can't get a credit card, overdraft or bigger loan from them, not to mention savings or investment options. To get a full banking service you need to manage multiple providers as most fintechs are still specializing in singular product category," he says. "Your 'traditional' home bank gives you way simpler access to all your finance needs. It's still a better customer experience for the vast majority of customers."

While he concedes that fintechs will try to expand their offers (PayPal is already holding credit for customers for longer and is

offering lines of credit), Panowicz believes banks are much better positioned to take on the fintechs than the other way around. Under one key condition though – that they hone, accelerate and master their ability to digitize their businesses. He uses the example of separating risk from product distribution.

"I've seen two promising new models used by the already digitized banks: a profit sharing agreement with partners and a white label agreement. The latter has been done with Orange and mBank or T-Mobile and Alior Bank, both in Poland," he says. The telco provides its distribution network for account acquisition and loan origination, while the bank makes all the decisions on credit, manages the balance sheet and cross sells a wide range of additional products via capable digital and remote channels, no longer engaging the telco's distribution. Both of these partnerships have handsomely beaten even the largest banks in new customer growth in 2015.

"It's actually very difficult for fintechs to add new product areas – this will significantly increase complexity in their operations and may affect their capital requirements. And if they use customer deposits to lend, they will need a banking licence," he says.

"Over time, sure banks will lose some customers to fintechs. But banks still have some time to get really serious about making digital transformation happen and meeting the fintech challenge" he says.

Recent Bank and Fintech Partnerships

- BBVA with OnDeck to refer customers who might not qualify for a bank loan to the lending marketplace
- JP Morgan with OnDeck to offer a new lending product in 2016
- Santander and RBS UK with Funding Circle to refer small business customers looking for a loan
- Metro Bank with Zopa to lend funds through Zopa's online marketplace
- BancAlliance, a 200+ US community banks consortium, with LendingClub and Prosper to invest in loans originated through these platforms
- TD Bank Canada with Moven for mobile capabilities (PFM)
- 442 banks with R3 CEV – a startup developing distributed ledger-based protocols for financial markets
- Commonwealth Bank of Australia with Ripple to use latter's protocol to settle payments between its subsidiaries
- ING with Kabbage to bring platform lending to Europe's Small Businesses
- TransferWise with LHV (Estonia largest bank)
- Betterment with OnDeck to refer with Fidelity Institutional Wealth Services



A bigger reason for fintech firms to become more like banks would be so they can determine their own destiny.

In this first instance, this means protecting the economics of their businesses. Many fintech models separate the entities with the assets (loans) from the entities with the liabilities (funding) or create intermediaries. In such cases, many risks can emerge. In an era of negative interest rates, there is no money to be made on float and, in fact, without the ability to make interest-bearing loans, an entity can left exposed to significant losses. There is the risk of not finding sufficient funding, either in absolute terms or at attractive rates, which a banking licence and the ability to attract deposits alleviates. There is also the risk of imbalances forming between the duration of loans and assets, as well as the bigger risk of not being able to adjust interest rates fast enough in response to either changing interest income or interest expense. We are already potentially seeing the first signs of this kind of stress in the US marketplace lending sector, where players have begun to raise rapidly their interest rates in response to rising funding costs.

But there are other reasons why fintech firms will have to develop additional assets. Consider TransferWise as an example. It provides a platform for peer-to-peer payments, matching the FX needs of different people. However, it relies on another fintech company, Currency Cloud, to provide it with the necessary IT infrastructure. As such, it is not in control of its own future nor the systems by which it delivers customer fulfilment in an increasingly-contested marketplace. As a result, it will need to build out its own systems to remove this business-critical dependency (a process we understand is well underway) – as will others.

Square provides another example. In its IPO application, Square listed the following risk: “We are dependent on payment card networks and acquiring processors, and any changes to their rules or practices could harm our business.” In other words, like so many fintech companies, its business model is reliant on other financial firms to fulfil its services. While Square was targeting small, mostly cash-only retailers, its partners were happy to receive additional fees. But this may change as it attempts to serve larger retailers and expand its footprint. So, we predict that Square – like many other fintech companies - will be forced to forge stronger alliances with its partners or, less likely in this case, vertically integrate its business model.

Staying Competitive

Lastly, to stay competitive, it is highly likely that fintech companies will have to expand their offerings over time.

Just like other digital-age companies, successful fintech firms will add products and services as they seek to deliver

additional customer value (to retain competitive position) and grow wallet share.

While we’re unlikely ever to see a return to the universal banking model, there are limits to how many banking relationships consumers will want to enter into. There is a clear value-add where fintech firms and banks can augment their own core offering with additional own-labelled or white-labelled services, effectively rebundling the basket of now-unbundled products. Through acquisitions or more likely using Application Programming Interfaces (APIs), banks may bundle up the services of fintech companies or, as the tie-up between Transferwise and Number26⁹ presages, fintech firms may bundle up their own services.

This trend towards broader service provision is already apparent. Take Prosper’s recent acquisition of BillGuard. This shows a clear intention to offer additional, value-added services to its customers: a cross-sell opportunity as well as a way to differentiate in a commoditised market. But the clearest example is PayPal, which has been continually adding services over time and, now that it is extending credit, is fast heading towards becoming a full-service bank.

Will Facebook et al Disrupt Banking?

Since distribution can be separated from the manufacture of digital goods, it would logically follow that internet platforms should move into the distribution of all digital products, including banking, so as to capitalise on their network effects and maximise profits. And this seems to be what the industry is expecting. In a survey conducted by Temenos and Capgemini in 2015¹⁰, 27% of bankers opined that technology companies like Apple and Facebook represented their biggest long term threat. So will they?

It is possible to make the case for Apple, with security being its USP. The biometric authentication used in Apple Pay not only reduces the risk of fraud, it also brings security to the fore, a key feature of design and user experience. It does so since security is one of Apple’s core differentiators compared with Android (and this is incidentally why it also makes sense for Apple to publicly refuse to create an iPhone back door for the FBI). Security is a core part of the Apple brand and it is a core part of a bank’s value proposition. Thus, there is a brand DNA compatibility between Apple and financial services. This could mean that fintech becomes a strategic component of Apple’s future.



Viewpoint: Fidor Bank - Matthias Kröner

Fidor Bank is an online-only German bank set up to bring transparency and fun to banking. Originally an online finance forum, it applied for and then received its banking licence in 2009 and today it has 110,000 customers and more than 320.000 community users. It recently opened up online in the UK.

One of its main selling points is that opening a current account is simple – there aren’t any credit checks; another is that it uses social media rather than advisers to promote financial knowledge with the motto “Banking with Friends”.

As it says: “We don’t believe in selling our customers products that they don’t want or need.” Instead, it operates a proprietary community and has forums on Facebook, Twitter, LinkedIn, YouTube and SlideShare, where people can raise any subject for discussion, from stocks to credit, debt, insurance or bonds.

Matthias Kröner, CEO, believes Fidor Bank and other disruptor financial service providers are the future of banking and that they will increasingly extend their remit to become full blown banks, just like Fidor Bank. “If a fintech wants to create sustainable value,

it has to think of regulation and getting whatever kind of licence it needs,” he says. “Otherwise, it will always depend on the production bank that it is using [to facilitate its service]. If you want to fully own the value chain and your customer, in this world you must have a licence.”

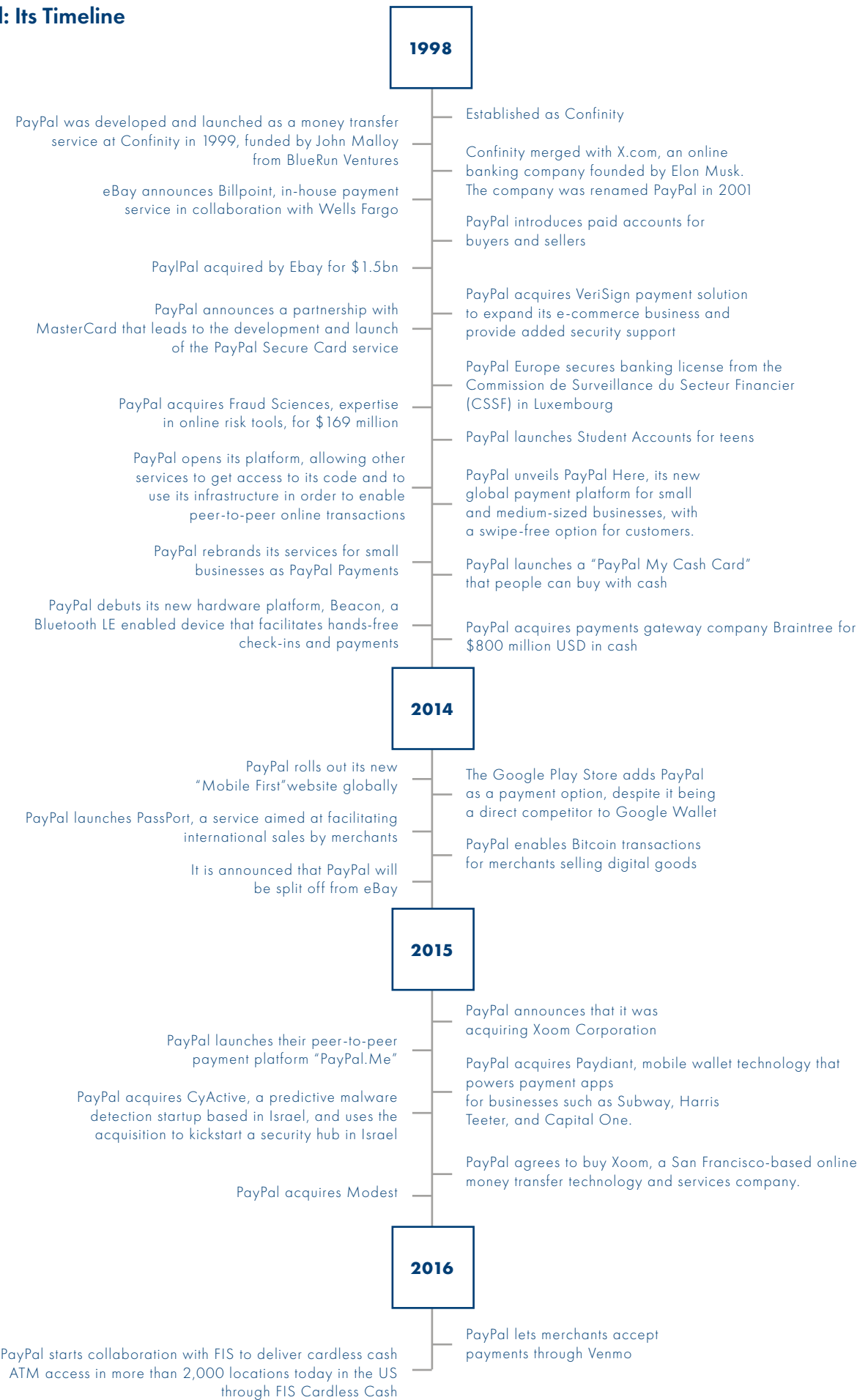
He also insists that distribution-only platforms can only go so far. “They can improve customer experience to a certain point, but they cannot change and improve the core DNA of a product or its process.”

However, he does believe that the fintech start-ups not having a license will continue to need the traditional banks for many reasons e. g. executing transactions, taking deposits, fueling and enabling lending etc.

His timescale is short as he expects fintechs to apply for banking licences this year. He also sees further disruption for the traditional banks coming from challengers, adding that there are more than 15 challenger banks waiting in the wings, all already regulated.

9) <http://venturebeat.com/2016/02/25/the-bank-that-fintech-built-number26-and-transferwise-team-up-to-re-invent-banking/>
10) <https://www.temenos.com/en/market-insight/universal-insight/temenos-8th-annual-survey/>

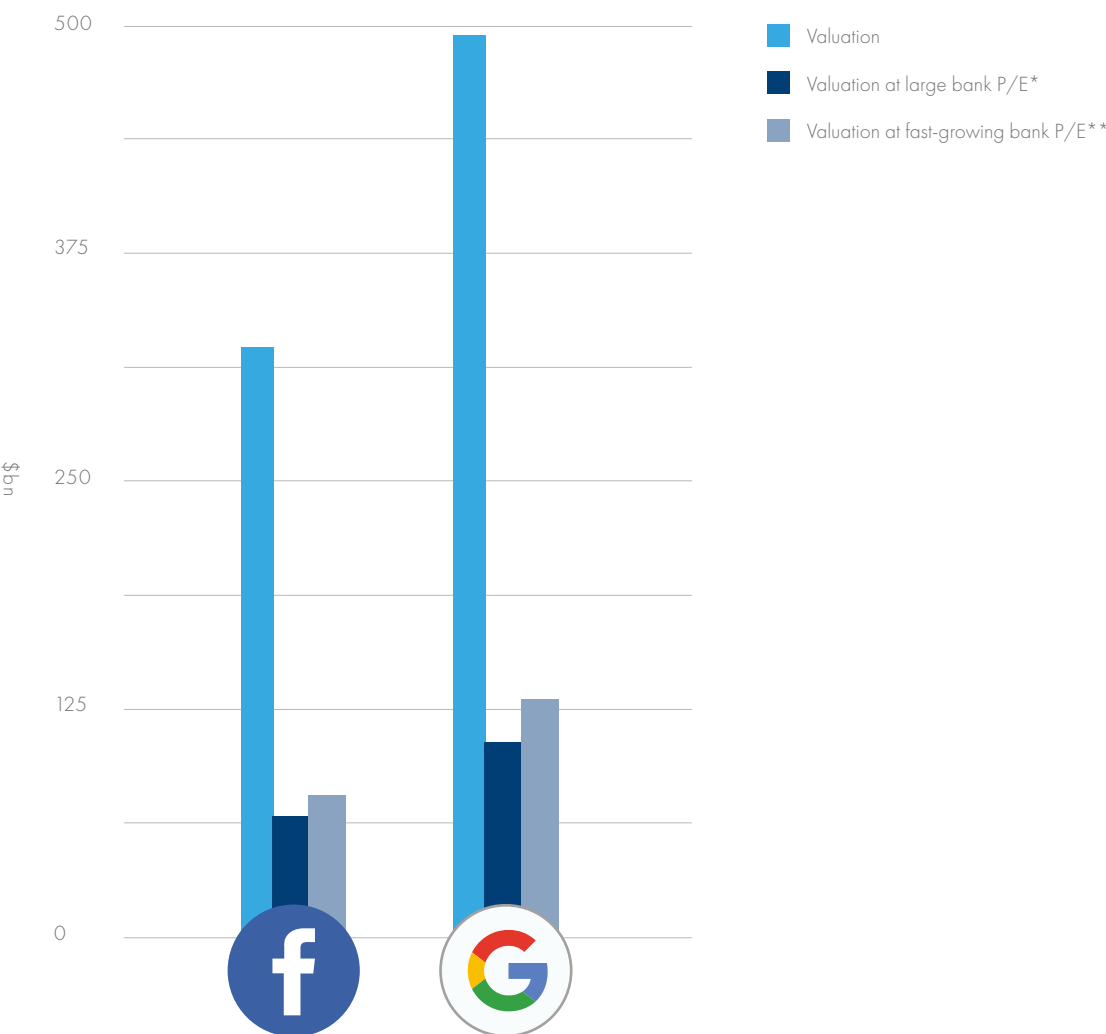
Paypal: Its Timeline



There is also a case for Alphabet and Facebook. Banking depends on networks. You can only use American Express in retailers that accept American Express. With this in mind, market share matters and actually Apple doesn't have that big a market share; it has big margins. So, there is arguably a stronger case for Facebook and Alphabet whose services command a much higher market share and reach a much bigger proportion of the global population.

But, none of these companies needs to push any deeper in financial services. The fact is that technology is bigger than banking: the largest companies are tech companies not banks. And not only are margins and returns higher in technology, but there is far less regulation. When Apple launched its Apple Watch, it could have positioned it as a medical device for recording all sorts of health information, creating the the compelling use case it lacks today. That it didn't implies that Apple saw too many risks in operating in such a heavily regulated industry. It could take the same view of financial services – as could other tech players.

Facebook and Google Valuations Restated on the Multiples of World's Largest Banks and World's Fast-growing Banks



* Taken average P/E ratios for JP Morgan, Bank of America, Credit Suisse, UBS, BNP Paribas and Societe Generale

** Taken average P/E ratios for Wells Fargo, US Bancorp, Bank of New York Mellon, State Bank of India, JP Morgan Chase, West

Source: Thomson Reuters, data taken as of close of business on 7 March 2016

Conclusion

Technology innovation has shaken up numerous industries, bringing the challenges of changing customer behaviour, new business models and an increasing rate of churn.

Such change has created the possibility of distributing digital services without manufacturing them, which has given rise to internet platforms like Facebook, which produces no content, and Alibaba, which holds no inventory.

Observing these trends, a school of thought has emerged which suggests we are seeing the advent of a new balance-sheet-light, distribution-only business model which, on account of its position at the top of the value chain and its low asset gearing, can generate superior returns over prolonged periods

We do not believe this is true.

To begin with, we have shown how these distribution-only platforms have become asset heavier over time as they seek to maintain competitiveness and maximise profits, and how this necessarily lowers their return on capital.

We have also demonstrated with reference to various industries – from planes to fashion retailing – that the internet era is not producing an overall trend to smaller balance sheets, just different routes to customers (with varying delivery models).

When we look at fintech, our conclusion is the same. In common with other industries, the digitisation of the financial services sector is opening up new routes to market, but not creating a clear trend to lower balance sheet businesses.

The fact is the situation is more complex than the balance sheet-light theory allows. Successful models will vary in asset intensity. Digitization moves the primacy away from hierarchical models towards ecosystems. Within an ecosystem, some things are controlled while others are not; some assets are owned, others are not. The key to success is for ecosystems to be as highly networked as possible.

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Based in Geneva, Ben Robinson is Chief Strategy and Marketing Officer at Temenos, with global responsibility for Strategy, Marketing and Innovation. A regular blogger and speaker on the subjects of innovation and fintech, Ben runs the “Swiss Technology Group”, a networking group aimed at promoting the technology industry in Switzerland, and is a mentor at Fintech Fusion, Switzerland’s first fintech start-up accelerator.

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David Galbraith is an entrepreneur and designer. With over 20 years of Internet experience he has co-founded 4 successful internet companies in London, New York and San Francisco. Currently he is a partner at Anthemis where he heads up the Anthemis foundry, a fintech company builder.

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About Temenos

Temenos AG (SIX: TEMN), headquartered in Geneva, is the world’s leader in banking software, partnering with banks and other financial institutions to transform their businesses and stay ahead of a changing marketplace. Over 3,000 firms across the globe, including 41 of the top 50 banks, rely on Temenos to process both the daily transactions and client interactions of more than 500 million banking customers. Temenos offers cloud-native, cloud-agnostic front office and core banking, payments, fund management and wealth management software products enabling banks to deliver consistent, frictionless customer journeys and gain operational excellence. Temenos customers are proven to be more profitable than their peers: over a seven-year period, they enjoyed on average a 31% higher return on assets, a 36% higher return on equity and an 8.6 percentage point lower cost/income ratio than banks running legacy applications.

Learn More

To find out how Temenos can help with your digital banking needs, contact sales@temenos.com or visit us at www.temenos.com

About Anthemis

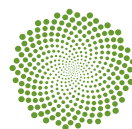
Anthemis is an investment and advisory firm focused on re-inventing financial services for the 21st century. We work with a diverse group of customers and partners – from start-ups and venture capital firms to financial institutions and private equity firms – to catalyse and accelerate positive and disruptive change across the financial industry. www.anthemis.com

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