Vlerick Centre For Financial Services

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Thematic Edition – Financial Technology, Fintech

Introduction

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Dear Reader,

In this sixth edition of Dialogue, emphasis is on innovation in the Financial Services industry. Since the financial crisis, banks have deleveraged their balance sheet and in some cases had to off-load businesses to deal with the consequences of the crisis. They are gradually complying with the tsunami of new regulations, not only in terms of more European oversight but also in terms of additional capital and new liquidity requirements. As a result, profit levels have dropped to levels where acquisition of additional capital is becoming a big challenge unless going forward profit levels can be restored to levels needed to be able to access the capital markets. As Jamie Dimon, CEO and Chairman of JPMorgan said among other things in his letter to the shareholders: ”While the banking system is safer than ever before, it does not mean that there are no challenges ahead and that these new regulations have not created new risks”. He even warned that the next crisis (and it will come, he claimed) will not be caused by the banks. He said that because of these too rigid rules: the next crisis might even be more severe with even greater volatility impact on the markets than experienced so far. While it is crucial that the efficiency and effectiveness and even more importantly the undesired effects of these regulations be assessed and if needed corrected, it should also be acknowledged that banks have still major strategic work ahead of them particularly in assessing the business model they need to face the new challenges.

The CEPS Banking Business Model Monitor 2014 has classified banks in the following clusters: investment banks, wholesale banks, focused retail banks and diversified retail banks. Contrasting the banking data pre-crisis and data post-crisis, the Monitor shows that 90% of the banks have not changed their business model. However in the group of banks having received public capital support, two/third have changed their business model to the greatest benefit of the cluster of focused retail banks. But that is of course because these banks were forced by the authorities to restructure their business and refocus on their domestic market. Choosing a sustainable competitive business model goes of course beyond the four clusters mentioned above. Besides the type of bank you want to be, it is at least as important to identify which corporate and/or retail customer segment you want to serve, which services/products you want to offer to your chosen client segment. It is particularly in the latter where banks still have a lot of work ahead of them. Banks are increasingly realising that innovation from within the bank is not likely to lead to greater competitiveness. The banks’ traditional risk management processes and project governance structures were designed when their services needed to be automated or made more real-time but are totally ineffective for innovation killing even whatever great idea that may have surfaced internally before it could become a service.

In the meantime consumer behaviour has changed and the world is becoming digital. The banks as a result are facing increased competition not only from "Fintech" start-up's focusing on a variety of financial technology services such as payments, lending, personal finance, equity finance and so forth but also from digital giants such as Google, Apple, Facebook who enter the financial services market by focusing on some components of the financial service chain leveraging the insights they have in their enormous client base without risking to be subject to regulations banks have to comply with. The *article of Bjorn Cumps "Why does Goliath partner with David?"* segments this new financial services landscape and discusses how banks may have opportunities to partner and to collaborate with these new competitors.

Venture Capital investment in FinTech companies has exploded the last few years reaching $12 Billion worldwide showing the degree of opportunities for innovation in the financial services industry. Most innovation so far has occurred in mobile payments and cash transfers. *The interview with Joachim Goyvaerts discussing PayPal's view on payments*, gives insights on how a start-up could take advantage of new regulation with the objective to foster a seamless European market as if it is a domestic market, of new technologies and of consumer behaviour changes. It is also interesting how PayPal to become successful had to become a trusted partner for its consumers. Something banks are often claiming is one of their distinct competitive advantages. *The interview with Heidi Rakels discussing Guardsquare* the world's leading provider of optimization and obfuscation software is a great example of a successful software development strategy by using the experience of users to continuously upgrade a product to achieve a stable, robust and reliable product. This article touches upon one of the reasons cited in Bjorn's article why banks have so far not been successful in innovation. The mismatch in skill set and the need for an innovative entrepreneurial culture in banks something which is almost contrary tothe financial services industry DNA.

Banks now realise that to take advantage of the innovation wave, they will have to look externally. We see innovation centers being set up in banks with the mission to better understand and learn from the external world, assess to what extent they should partner or collaborate with interesting initiatives outside and even in some cases are prepared to invest in FinTech venture capital funds. As *Johan Kestens states in the article "A Bankers' View on FinTech",* the focus of banks on the FinTech market should not be what they are doing to the bank but what the bank wants to do with them. Whatever the bank does with them, it should be relevant for the bank's clients. Indeed banks can learn from the healthcare business. While the healthcare has traditionally been successful in innovating from within, sole reliance on that source of innovation is not sufficient anymore. Given the high degree of investment in research, the time it takes to bring research to a final product and the difficulty to predict success, the healthcare sector realised that they had to take advantage of external innovation. Now they are very open to use whatever relevant mean to take advantage of these opportunities through acquisitions, partnerships and collaboration or even simply use their market knowledge to help these companies to develop their products. A fundamental motivation behind all of that is to better understand the external market.

It is good to see that banks are taking initiatives to better assess what is relevant for them. The question however that can be asked is whether banks are doing enough upfront to question their business model. You see banks sometimes partnering with several initiatives in the same domain with the prime reason to maximise their chances to catch the successful wave. Some banks spend time and money in following-up and investing in start-up's but at least from the outside not always with a clear purpose in mind. It is of course important to develop a better understanding of how these FinTech companies and digital giants can influence the banks' business. However to maximise chances of success for a bank, it is of prime importance to redefine first their business model with a focus which client segments and services can give them a sustainable long term competitive advantage taking into account not only their own strengths but also the new business environment. This is not a small challenge given that many banks had to retract to their domestic market while consumers have become even more international and cross-border. Clarity on their business model going forward will put banks in a much better position to make the right choices. Insurance companies will have to face sooner or later (but rather sooner) similar external threats and opportunities as the banks do now and should also learn from other sectors how to readjust to a rapidly changing world.

We would appreciate receiving feedback and views. We plan to have the next Dialogue edition to focus even more on the business models of the banks and insurance companies, and if you want to make a contribution, please let us know. In case you have new ideas for other topics you may find interesting, your suggestions are also always welcome.

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"If you don't drive your business, you will be driven out of business"

B.C. Forbes

Why Does Goliath Partner With David?

Prof Dr Bjorn Cumps
Centre for Financial Services
Vlerick Business School

Welcome to Fintech !

Wealthfront, Motif Investing, Lending Club, Kabbage, Stripe, Square, Dwolla, Funding Circle, Adyen, Fidor, Simple, Nutmeg, … Never heard of these companies? This is just a small, random selection of Financial Technology ("FinTech[1]") companies currently shaping the Fintech landscape. The financial services sector is ripe for disruption and 2014 certainly was a remarkable year for Fintech. More than 1000 Fintech companies are currently being tracked[2] and they focus on a myriad of financial technology services of which payments, lending, personal finance, equity finance, retail- and institutional investments and infrastructure are the most important ones. Their goal is clear and straightforward: to offer a faster, better, cheaper service than traditional banks. Most of them share the same characteristics: they focus, are transparent, data-driven and use technology to create a unique customer experience. They move fast, offer flexibility and have an entrepreneurial spirit. They promise "funding within minutes, real-time payments and automatically balanced investment portfolio's" based on technology and software innovation.

Worldwide Venture Capital (VC) investment in Fintech ventures tripled in 2014 to more than $12 billion[3] (up from $4 billion in 2013). US Fintech still dominates the Fintech scene with more than $9 billion of these VC investments. But for the first time Europe experienced the highest growth in Fintech VC investments (215% year-on-year). UK & Ireland are still the dominant region in Europe yet the highest VC investment growth numbers in 2014 come from the Nordic countries, The Netherlands and Germany. There is little data available for Belgium but it is not on the forerunners list. Although Belgium has a great history in payments and infrastructure, it is certainly not one of the major

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1 http://www.allenovery.com/SiteCollectionDocuments/Fintech.PDF

2 Venture Scanner Insights - http://insights.venturescanner.com/2015/01/21/jan-2015-fintech-market-update/

3 Based on data from Fintech Innovation Lab London and Accenture - http://www.fintechinnovationlablondon.co.uk/programme-news/the-future-of-fintech-and-banking.aspx

players in Fintech today. Companies like Clear2Pay, Banksys, Isabel, Vasco, Ogone and others have certainly paved the way yet most of them have been acquired by foreign companies. There are promising signals coming from startups like Guardsquare, Sign2Pay and others yet compared to the Netherlands there is still work to be done on the Fintech front.

Towards a New Financial Services Landscape

Will Apple, Google or Facebook become a bank? One of the questions often heard the last couple of years in banks. Most of the major banks have had their eye on the digital giants, the large tech companies, to follow which moves they make entering the financial services sector. There is no doubt these digital giants are interested in parts of the financial services pie. Apple made their first move with Apple Pay to offer a new kind of payment experience: *convenient and secure*. But they collaborate with the banks and do nothing more than adding an experience and security layer on top of the existing payments systems. Google further examines how to further move into payments and financial advisory. Facebook recently announced their money transfer service, allowing users to send money using their messenger app[4]. So, Yes, these digital giants will also play an important role in the new financial services landscape. Traditional banks, digital giants and new Fintech startup ventures. These are the three major players which together will shape the new financial services landscape. Are they all to compete? Not necessarily! We see the first forms of collaboration between these different types of players already emerge. Figure 1 gives an overview of some of the emerging sector dynamics. We added only a few examples to illustrate. Many more exist.

First, we see collaborations between the digital giants and Fintech startups like f.e. between lenders/peer-to-peer lenders like lending club, cabbage, etc and some of the major platforms like Alibaba, E-bay and Amazon. Based on the huge amount of trading data available on these platforms the lending companies can quickly decide and provide small business loans to the e-commerce companies active on the platforms. Next, we see some activity between traditional banks and the Fintech startups. In lending for example traditional banks will refer their clients to the lending platforms for part of their lending needs. This way they hope to better help their clients by offering a portfolio of funding sources, most of it traditional bank loans and part of it alternative financing from peer-to-peer lending platforms. In return the P2P lending platforms refer to the banks for products they do not offer themselves like current accounts or cash management services. The deal between Royal Bank of Scotland (RBS) and Funding Circle is structured this way. Similarly, In Belgium BNP Paribas Fortis has a partnership with MyMicroinvest for those organisations willing to include crowdfunding in their financing mix. But some banks go beyond partnerships and actively monitor and buy Fintech startups. The Spanish group BBVA acquired the pure-play US digital bank Simple in 2014 to further accelerate its digital banking expansion. Finally, we see partnerships between the digital giants and the traditional banks emerge. The best

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[4] http://www.ft.com/intl/cms/s/0/00423da0-ccdc-11e4-b252-00144feab7de.html#axzz3Wd6ik900

example is Apple Pay. While banks were fearing Apple's move into financial services it turned out all they really wanted was a partnership with banks to get a piece of the pie, for now.

Why do these companies form partnerships? Are they not supposed to compete? Did Fintech companies not promise to disrupt the traditional banks? Yes, and they do. On some fronts they will compete and take over some of the pie of traditional banks. Lending Club has $7,6 billion of P2P loans funded to date (April 2015). These kind of volumes are no longer irrelevant to traditional banks. But all players also understand that if they partner and work together they can all benefit from these partnerships, complement each other and better fulfil client needs together. In the future we will see more of these ecosystems emerge. Success in the financial services sector will increasingly be determined by which ecosystem you chose to participate in and how these ecosystems will compete against each other. We see this happening in lending services but even more so in payment services.

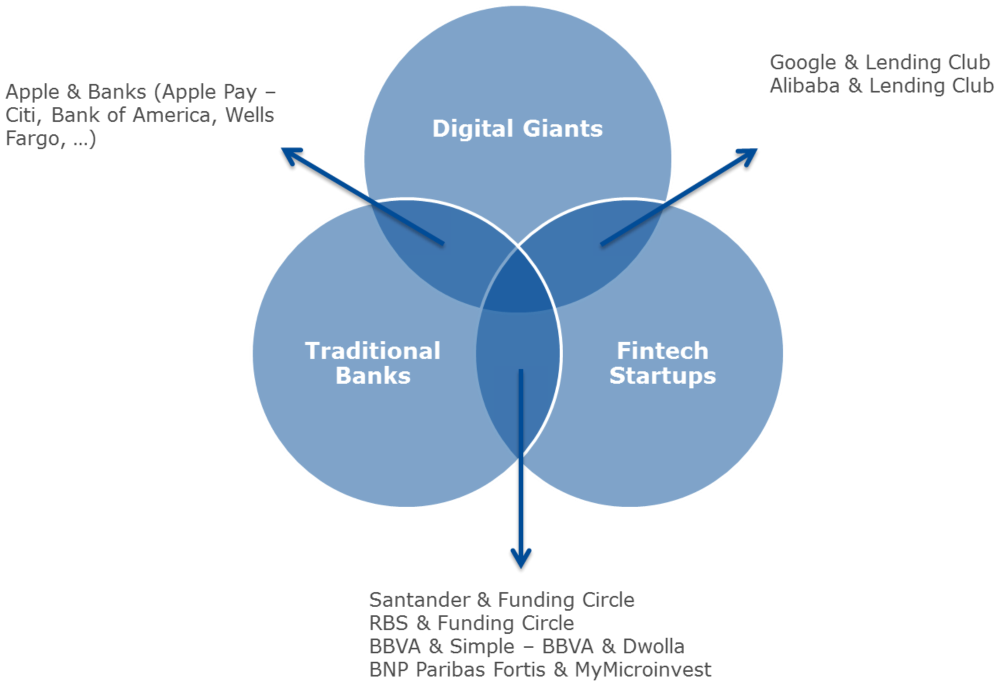

Figure 1 – Reshaping the financial services landscape

What's a Bank to do?

Is this the end for banks? Will the future banking landscape be dominated by technology companies, condemning traditional banks to operationally excellent, heavily regulated infrastructure providers? It does not seem that way as most banks now embrace and invest in digital innovation. They do so banking on their own strengths and with a more open mind-set towards new partnerships with tech companies. They seed-fund, finance or collaborate with Fintech startup incubators and harvest the successful ideas or companies. They build environmental scanners to monitor the Fintech scene to understand how these companies better cater customer needs. So, contrary to a couple of years ago, the sense of urgency is no longer the main issue. But banks are facing other challenges to keep up with Fintech companies. A growing technological legacy, rigid governance structures, slow decision-making structures, a mismatch in workforce skillsets and a lack of an entrepreneurial, innovative culture just to name a few. Fintech and digital business: easier said than done for organisations who have to carefully balance investments between renewing their core back-end legacy systems and keep up with new front-end digital apps[5]. In academic literature we call this ambidextrous organisations[6]. Can the bank be both operational excellent and keep the current business and IT systems running while also being innovative, offering the customer rich, new experiences in the front?[7]

The main threat for banks does not come from outside but from within. It is not the Fintech companies who are the biggest danger. On the contrary, they offer many new and fresh ways of working traditional banks would have never thought of. The biggest danger for banks is perhaps their inability to quickly adapt to this changing landscape, open up, determine who to collaborate with, acquire, ignore or compete against. This will determine how their business model will evolve in the coming years. Building those ecosystems which offer best-in-class service and experience to their clients. Fintech can indeed be a threat to banks but is in my opinion foremost a formidable opportunity for traditional banks to change the image of the financial services sector. All that stands in the way is their own internal organisation. This will be their main challenge for the years to come.

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[5] http://www.ft.com/intl/cms/s/0/466102dc-d856-11e4-ba53-00144feab7de.html#axzz3Wd6ik900

[6] https://hbr.org/2004/04/the-ambidextrous-organization

[7] http://www.globalbankingandfinance.com/innovation-in-financial-services-beyond-the-red-castle/

A Banker's View on Fintech

Johan Kestens
CIO & ExCo Member
ING Belgium

Interview by Prof Dr Bjorn Cumps

What is your view on the impact of technology on Banking?

What the internet does is take away friction and reduce transaction costs dramatically by centralising everything through software. A number of industries are disrupted due to the lack of efficiency which existed before. Companies like Google, Amazon, Uber, AirBnB, etc offer a virtual marketplace where supply and demand find each other much more efficiently. What these organisations do is nothing more than being efficient dispatchers of digitised services. Also for the financial services sector: payments are mainly about dispatching messages.

What does this mean for financial services? There is an important difference between companies like Google, Facebook and banks. The digital services banks offer are not based on a "revenue by volume model". If Google gets more searches/clicks or Facebook gets more members they will earn more money. They have a very scalable model and more volume means just adding extra servers. This is not the case for banks. As people's lives increasingly digitise, they expect the same from their bank and banking services. The main difference is that for banks, people expect these new digital services but are not necessarily willing to pay for them. Although these are huge investments on our side.

You have to realize that there are at least 2 very different businesses in a bank. The first one is their main function: transforming deposits into loans and offering investment products. The second function is to build and manage a transactions platform. This transaction platform is now changing. The core process of this platform used to be: collect data during the day, process it at night and report it the day after. Now this has become a 24/7 business with a myriad of new services popping up every day. Again, we see a dramatic transformation of that business without a similar shift in the revenue model.

There is a lot of startup-activity in the financial services sector today. Do you consider these Fintech startups as a threat or an opportunity?

There is indeed a real frenzy activity of new startups in the financial services sector. They come in high numbers but many are too weak to survive on their own as a standalone business. They focus on transparency, customer centricity and better execution. For the traditional banks this is a problem as many of these startups form a layer between us banks and our customers.

We should not focus too much on what they are doing to us but on what we want to do with them. This is a big opportunity for us to innovate and serve our customers better. There are so many new startups it is near impossible to monitor let alone compete with every new initiative out there. We start from our own vision on banking: being trusted coaches for our clients throughout their lives. And all options are open to further strengthen this proposition. If we better partner with a Fintech startup because they have a unique service that can help us with our proposition, we will consider it. If there are opportunities to collaborate with larger tech companies, we will consider it. If we need to co-create services together with our clients, we will consider it. We do not opt for a conflict model vis-à-vis these new startups. On the contrary. We will evaluate the partner-buy-compete options but always in light of how it can strengthen our proposition to our clients.

Is Fintech becoming a financial bubble?

That is always a risk. We should be aware that there is a lot of buzz at this moment on digitization and technology. And yes, the technological evolution is going fast and hard but we should always be cautious for the hype. Technology is disrupting many service industries like photography, advertising, book publishing, travel, etc. And there is a clear pattern these tech companies follow: they are focussed, they are transparent and they deliver better execution. And they will try to do the same in the financial services sector. However, I am also convinced that this adoration of technology is like a pendulum and at a certain moment it will swing back the other way. Remember all the hype on Google Glass? We have to be very careful not to jump on every opportunity either. Some good ideas are just good ideas but not necessarily relevant for our clients. It is important to make a good selection on what to focus on.

Will the bank of the future be a collection of different financial apps?

No, I do not believe in that model. The risk I see with all these startups is that we will end up with a patchwork of hyper-efficient solutions which are not integrated. Clients will start looking for aggregation and that is where we should step in again by offer a uniform, integrated and convenient financial services experience to our clients. That is something each of these startups cannot offer individually. What most clients really value is professional guidance and coaching with regards to their financial situation. Of course we need to sell good products at fair prices. But that is not sufficient. The extra value we can offer over a collection of hyper-efficient financial apps is to coach and guide them: understanding their borrowing needs, spending patterns, saving needs, retirement plans. Clients expect us to use our expertise to help them in their personal financial management. So yes, some of our processes may be a bit slower or less efficient than those of some startups, but we are catching up and more importantly, we can fulfil the role of a trusted financial coach with an integrated, convenient solution. That is our strength which we should focus on. It says so in our strategy: *"Helping our customers to stay one step ahead in life and business"*. Bankers are essentially coaches with a backpack filled with financial expertise.

Many of the new services these startups offer are based on contextualisation. Is this something you are also working on?

Yes, but again we always look at it from a client's perspective. From a technology point of view it is of course amazing that we can target clients based on a number of real-time triggers like purchases, location etc. The technology offers a lot of opportunities. That is not the issue. The difficult part is understanding the fine line between being useful and relevant for a client and being intrusive or even harassing/scaring clients. Before we start deploying these new services we better know where that line is for clients. And it is not as if this is the same for every client. It differs. Our focus will always be on relevance. What is relevant and provides extra value for that specific client in that specific situation. If we cannot figure that out we will not do it. I really believe that relevance is key here. Let me give you an example. If your daughter is studying abroad and would like to buy a car there to drive to campus it shouldn't take her months to get a loan at a foreign bank just because she has no credit file over there. If we are her bank we should make sure we have the technology and processes in place to serve her from a distance and pay the car dealer so she can drive home with her new car. Because that is in the end the only thing that matters for her. Were we able to help her? Were we relevant? Similarly, that if you wire the foreign university her tuition you do not get an angry letter from them to point out that the amount was not correct and later have to discover this is due to a correspondent bank's fee. These kind of things make clients angry. If we can do these right we are relevant. That is what we should always have in mind in everything we do. And that is where I believe we as bankers will continue to make the difference. Digital technology will dramatically increase or change some basic, daily services. That is where we will see increased Fintech activity. But where we can make the difference with Fintech companies is on figuring out how we can be relevant throughout our clients' lives. This requires a subtlety and know-how which cannot be replaced by technology.

Belgian Fintech Startup – GuardSquare

Heidi Rakels
CEO GuardSquare

Interview by Prof Dr Bjorn Cumps

GuardSquare is a provider of optimization and obfuscation software for Java and for Android. Their mission is to optimize and protect mobile applications. The software helps developers to create apps which are faster, more compact and more secure. They currently have a fast-growing number of financial services clients (international banks, credit card companies, insurance companies, …).

How did GuardSquare start? Can you sketch the history?

Eric Lafortune and me (Heidi Rakels) founded the company in 2001. Eric created our first product, ProGuard, in 2001 as an open source project. ProGuard focussed on making Java programs faster, more compact and more difficult to reverse-engineer (through the process of code obfuscation i.e. convert code so it becomes difficult for humans to understand). It actually started as Eric's hobby and the first versions were open source, free versions of the software. The advantage we have with ProGuard is that this software evolved and improved slowly with input of the open source community. This means it was extensively tested in a myriad of different environments and circumstances. This makes it a very robust, stable product.

In a quite natural manner it evolved to become the standard for Java and was included in many SDK's (Software Development Kits – Sun, Intel, Android). ProGuard was mainly used in applets (on websites) and midlets (on cell phones) as having small programs was important for these applications. With the creation of Android in 2008 (which uses Java) ProGuard got a real boost as developers could use it to optimize their Android apps.

A next important milestone was 2010 when Google came with their License Verification Library (LVL – a way to secure apps) which was cracked within a week. As a response

Google advised developers to use security software such as ProGuard to better secure their apps. A few months later Google put ProGuard in their SDK. So today each developer using the Google Android SDK has access to ProGuard in can use it to secure and optimize their apps. So Google is actually distributing our software . This of course gave a major boost to the amount of users but also the amount of questions coming in. Most questions focussed on new security features which are more difficult to develop in open source. That is why we started in 2012 with our first real commercial product, DexGuard, built on ProGuard but with multiple extra layers of protection. With the launch of our first commercial product, DexGuard, in 2012 the amount of work started increasing so I joined Eric fulltime in the development of the software.

Did you target the financial sector specifically? How did you get into the Fintech world?

No, actually 2 weeks after the first release of DexGuard in 2012 the software was bought by an international bank. We did not really target banks but more and more banks started buying our software via our website. Last year we discovered that a number of international banks and payments companies tested and evaluated our software. They started asking our a lot of questions on competitive comparison with other software out there and each time they reacted very positively and bought our software. So we know that, especially in the financial services world, after rigorous testing our software is currently the best one out there.

Security is of course an important aspects for all types of financial services apps. Especially given the increased activity in Fintech developments I can see the potential. Where does your software differ from others and how difficult is it to copy what you do?

The advantage we have is that our software is built on a very robust, stable and reliable core which matured over 14 years. We have a learning path others can only be envious of. As ProGuard is part of the Android SDK we have millions of users who do the craziest things with the software and deliver us reports or ask for help. We have tested and adapted the core over and over again and have collected and learned from an enormous amount bug reports throughout those years. This is something which is very difficult to copy. You cannot just catch up with that. There are a number of competitors who try to catch up but it is difficult for them to reach that same level of maturity in a much shorter timeframe.

What is your business model?

Our software used to be quite simple and straightforward. Our free product ProGuard is well-known in the developers community and can cover a number of basic needs. For more advanced features people could buy DexGuard by simply downloading it from the website. Last year *Wim Witvrouw* and *Jurgen Ingels* came on board and decided to invest in our company and together with them we are rethinking our business model. Whereas before we focussed on quite knowledgeable smaller developers, now we will additionally target managers in larger organisations who understand the need for security but do not have the know-how themselves. We noticed for example that we received a lot of setup and support questions from large banks. So the goal is to introduce a subscription model for these clients which would include extra services like support, code reviews, training, audits etc. Our next step is to move beyond the product itself to offer more services and to target managers in larger organisations through direct sales and international resellers.

You mention Wim Witvrouw and Jurgen Ingels recently joined the company. How did this happen and how do you see the future together?

Eric and me have always been focussed on our product. We are hard-core programmers and we have very little experience with the business side. As we became more visible as a company we faced quite some challenges we did not really know how to react to. Things like patents, at a certain moment another company tried to acquire us and at these moments Wim, who we know a long time already, always helped us out. As he saw our client base grow and become more international he and Jurgen stepped in to help us professionalize our business. They see the potential and will help us to professionalize as an organisation. They mainly help us out on legal, commercial and business model aspects. The next step is to focus on the sales side and grow our client base beyond the 500 clients we currently have.

Heidi, you are not only a successful entrepreneur and software developer but also a retired judoka and former Olympic medallist. Are there similarities between both?

At the core there is always the passion for what you do. I have this both for sports as for software development. It is the passion that makes sure you persevere when it gets difficult and need to take some risks. I truly believe this passion is crucial.

PayPal's View on The Future of Payments

Joachim Goyvaerts
Head of Belgium & Luxembourg
PayPal

The customer leads the way to pay

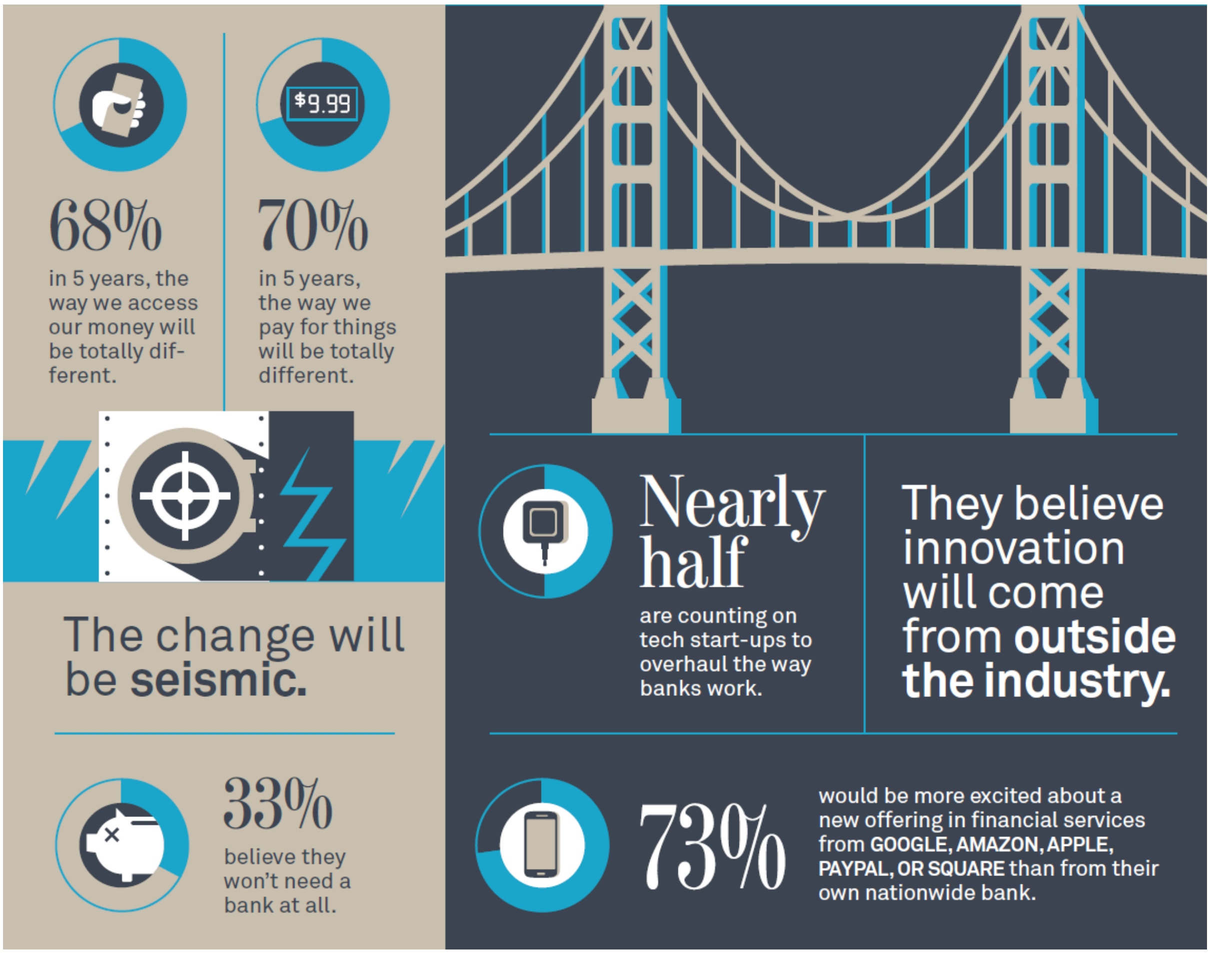
Facilitating access to money and providing multiple, safe, convenient and seamless ways of payment: that's in a nutshell PayPal's mission.

The generation of Millenials, born between 1981 and 2000, drive disruption in the way we will access money and pay, now and in the future. 68% amongst them expect to access their money completely differently by 2019, 70% estimates the same for payments. No less than 1 out of 3 is convinced that they will not need a bank at all. This generation expects innovation to come from outside the financial industry. They put their trust on technology companies such PayPal, Amazon, Google, Apple, or Square. Banks still struggle to differentiate and regain trust from this generation.

Trust the key word is out. For 16 years, PayPal has built up this trust worldwide, by linking a myriad of different local payment methods and currencies to its wallet. This has led to a loyal base of 162 million users worldwide in 2014, based on our e-wallet. PayPal provides the optimal user experience across user platforms diverging from desktop over mobile to internet of things. Thanks to these efforts, ways to access and pay with PayPal are unrivalled. Behind the scenes, regulatory compliance, risk management best practices and advanced technologies lead to a solid sustainable business.

Looking forward, we will address the challenges ahead of us in order to remain the undisputed digital native payment method, by focusing on three growth enablers:

1. Mobile Technology
2. Cross-border Trade
3. Regulation



The Millennial Disruption Index 2014 - Scratch – Viacom – Media Networks

http://www.millennialdisruptionindex.com/wp-content/uploads/2014/02/MDI_Final.pdf

Mobile Technology

Mobile technology unlocks the potential to provide an improved customer experience and to reduce frictions to the minimum when paying/buying. Zero touch check-out will become reality. PayPal acquired Braintree Payments, the payment gateway managing all payments for new mobile-driven business models such as AirBnB, Hotel Tonight and Uber. Braintree's One Touch literally allows making payment transactions with one touch. The convenience for the user monetizes into turnover conversion for the merchants. Mobile technology does not only add convenience and access to payments for the user. It reduces effort in IT development, ergo cost and TTM (time to market) to a smart copy paste of lines of code.

Today, PayPal is picking up the mobile opportunity quite well. We have processed 1 billion payment transactions in 2014, the equivalent of the entire Belgian card payments volume. With an annual growth of 67% in 2014, we are determined to continue on this path in 2015. However, if we look at the recent past, smart technologies have not always delivered their full potential. E-purses on smart cards such as Proton have been struggling with a sustainable business model, lacking above all trust and convenience from users, both consumers and merchants.

Mobile payments do not exist as such. Consumers are not looking for a different trusted partner for their payments per device. How does a payment solution need to look like when people start to combine devices such as a smartphone and a smart watch? Current risk models differ strongly between the physical and online world. The data on a smartphone can enhance fraud detection and prevention. Cloud based solutions to keep financial data securely stored enable to transcend the devices in all their appearances.

That is also the reason why PayPal strongly believes in innovative technology solutions, such as the one proposed by the FIDO Alliance. FIDO ('Faster Identity Online') is an open source initiative to find an alternative open standard to passwords as authentication method. Passwords are not only obviously inconvenient, they are also costly and often ineffective. Costly for corporates who have to manage password change requests and blocked accounts. Ineffective since often users use the same passwords for different applications and even share them or neglect keeping it secret.

An excellent example of PayPal engagement in the quest for innovative technologies to ensure seamless and secure payments, is the fingerprint authentication PayPal offers on Samsung S5 and Tab S models.

Cross-border Trade

A second potential growth enabler is the sharp increase in cross-border commerce. The global generation of millennials drives this volume to more than triple in 5 years to $307 billion in 2018.

PayPal supports this trend by allowing its users to pay through their PayPal wallet in over 200 markets, in over 110 currencies, while sellers and buyers can settle through PayPal and hold their wallet balances in 26 major currencies. Payments, in a mix of countries, access their local bank accounts, credit and debit cards, PayPal prefunded account balance, and even a line of credit both for buyers as well as sellers, filling a real need helping people to build a truly borderless marketplace.

Locally, Belgian e-commerce merchants are tapping into this potential. Cross-border receiving volumes through PayPal grow year after year at more than 30%. Western European countries provide the large majority of this volume and growth. This brings us to the third growth enabler, regulation.

Regulation

The single European market with a single currency and Single Euro Payments Area (SEPA) clearly accelerates cross-border trade. For PayPal, SEPA has been an important opportunity to streamline the payment flows and user experience. Thanks to SEPA direct debit, we have been able to directly link bank accounts with the PayPal wallet in key European markets. This is a growth booster as it allows access to bank account for buyers while eventually driving costs down for PayPal and its merchants.

Many regulatory initiatives on consumer protection such as the Dodd Frank Act in the US are aligned with our philosophy on Buyer Protection. In the key EU markets, PayPal will extend the Buyer Protection duration from 45 days to 180 days in 2015. This is another demonstration of the strong commitment of PayPal to protect its users. PayPal believes that payments of today need to cater for customer’s behaviours and choices of tomorrow. Crucially, regulations must support innovation and technology development to ensure payment providers can meet customer’s continuous evolving demand.

Payment security policies are one of the corner store for this approach. Technology development – especially in the digital area – happens much faster than any policy drafting or review. To prevent quick obsolesce security policies should not limit innovation: this can be achieved by catering for new security technologies. As the area of authentication has already benefited considerably from new technologies, EU policies should adequately encourage adoption of innovative developments to prevent widening the gap between EU and the most advanced technological countries. To adequately embrace innovation, future proof regulations should have an outcomes based approach: i.e. quantify the security objectives whilst providing payment service providers with the flexibility on how to achieve them.

The main challenge with digital payment security is to find the right balance between a great user experience and security. In a rapidly changing payment environment this is especially tricky. However, customer convenience is an essential element in the authentication process and merits careful consideration. A cumbersome process is likely to lead to customer friction, which leads to avoidance strategies that frustrate the security objectives. PayPal experience shows that customer usability is equally important in maintaining overall security, as it is in encouraging a safe use of the product and prevents abandonment of transaction or avoidance strategies. When security is successfully combined with convenience, an effective security outcome is achieved. When the two depart, product use may suffer or security may be compromised.

These three growth enablers energize PayPal to lead innovation and customer centricity in the world of digital payments and enable People through Payments.