

Payments in the Wild Tech World

Digitisation and changing customer expectations

Global FinTech Survey 2016



87%

Most payments companies believe that some part of their business is at risk to FinTechs

35%

More than one-third of traditional players launch their own FinTech subsidiaries



Key messages

Contents

Introduction	3
Payments under siege	5
Top of mind: addressing new vulnerabilities	6
FinTechs disrupt with meaningful solutions	8
Payments are becoming the enabler	10
Active in opening FinTech subsidiaries	11
Conclusion	14
Appendix	
Participant profiles	15
DeNovo	16
Summary of the FinTech-related trends	17
Contacts	18



A vast majority of payments companies fear losing part of their business to FinTech



Over a quarter of incumbents' revenue could be lost by 2020 and margin pressure is a serious threat



Investments in cyber-security and fraud are top of incumbents' minds



Incumbents invest heavily in FinTech; many launch their own FinTech subsidiaries



The payments sector is acutely aware of the disruption caused by FinTech – only 4% of incumbents do not engage with FinTech

Introduction

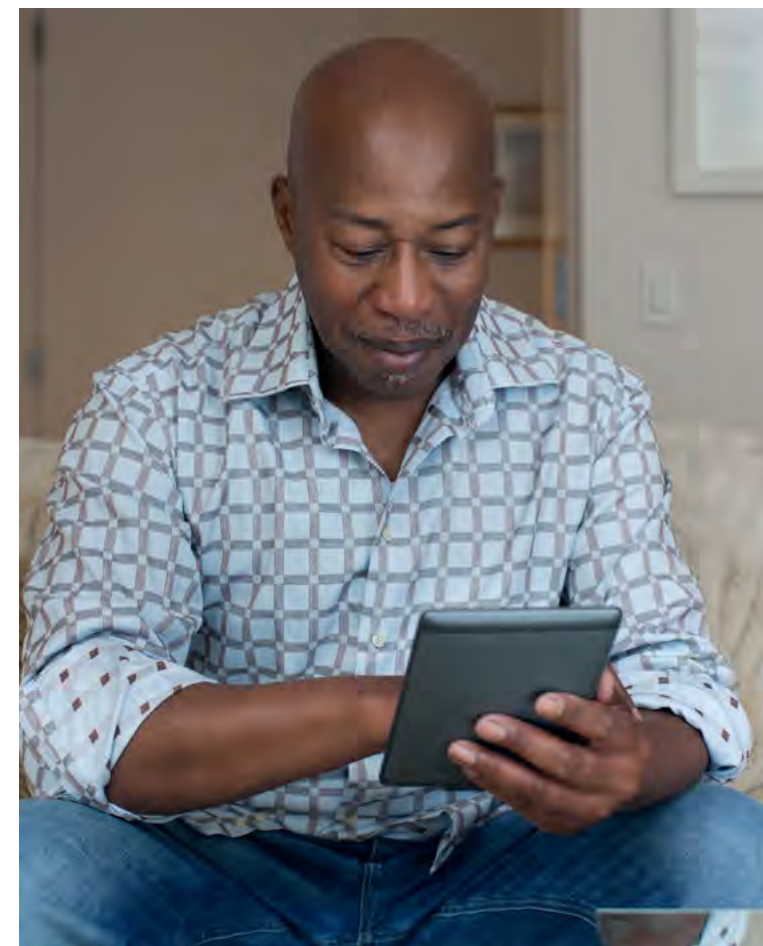
Payments used to be one of the industries least vulnerable to disruption. In a FinTech-flooded world, this is no longer the case.

In the last few years, companies in the payments and transaction space have worked towards building an ecosystem that promotes digital payments and reduction in the usage of cash. This has primarily been possible through the use of technology to enhance customer experience. While the traditional players have worked towards creating this ecosystem, it has also been equally (if not more) driven by the new market entrants or the FinTech players who are using technology to make financial services more efficient. The PwC Market Research Centre estimates that the number of non-cash transactions will grow by 69% from 2013 to 2020, which would represent over one million transactions happening every minute. However, new industry entrants, the so-called FinTechs, significantly disrupt the traditional payments business and pose serious threats. In addition, EU governments want to stimulate non-cash payments instruments, enhance security requirements

and spur competition with the upcoming Payment Services Directive 2. Pressure from the interchange regulation will result in revenue losses for card issuers.

Given the overlapping nature of business of these players, there has been a growing number of FinTech start-ups and payments providers venturing into partnerships and changing the payments arena, benefiting from the new technologies and market conditions while also leveraging alternative business models that complement traditional payments practices.

Mobile wallets will continue to proliferate globally as the first electronic payments channel for cash-based, previously unbanked segments. These new trends threaten existing incumbent margins and market power. This is why we will continue to see a growth of value-added offerings for new revenue streams and to differentiate against competition. Eventually, we will find a transformed consumer experience associated with shopping and money movement, but it will likely be driven by non-payments incumbents.



There is a need to incorporate advanced tools and technologies to protect consumers from ID theft and fraud. This is a natural tension that is creating a push-pull phenomenon within payments right now: the desire for frictionless transactions on one hand, and increased security measures to prevent fraud and cyber-crime on the other.

Most payments companies have already put FinTech (to a variable extent) at the heart of their strategies; only 4% of industry players do not yet engage with FinTech. However, with differing business approaches and operational processes, significantly more payments companies (compared to other financial sectors) are launching their own FinTech subsidiaries. This is one way to embrace disruption.

Figure 1: Key highlights from the PwC Global FinTech Report 2016



Source: PwC Global FinTech Survey 2016

Payments under siege

In the past, high barriers of entry protected incumbent payments companies from new entrants. This is no longer the case and payments executives are well aware of this ongoing and imminent disruption.¹

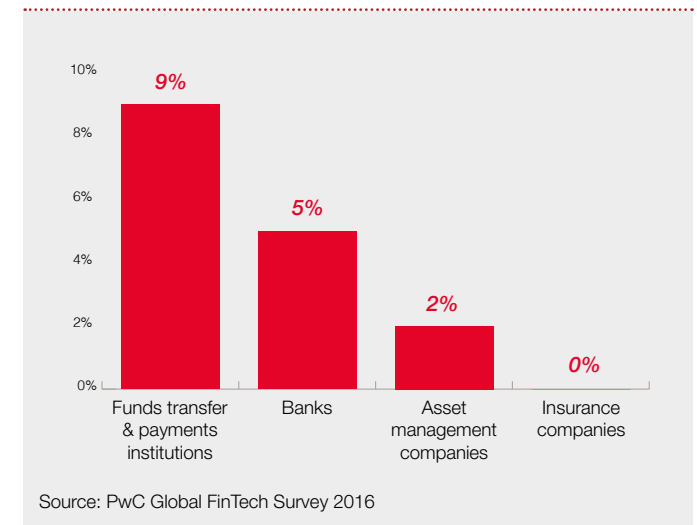
Open-source software, cloud computing, developers-on-demand, open app stores for distribution, and social media can enable fast technology deployment and adoption. In addition, new technology infrastructures such as blockchain could leapfrog antiquated payments systems in areas such as cross-border payments. Contactless merchant-based payments using Bluetooth, NFC or QR codes are posing a significant threat to the existing payments models. The financial industry is well aware of this ongoing and imminent change – according to financial sector players, over half of the traditional payments business (55%) might be disrupted in the coming years. After consumer banking, payments is the second-most disrupted sector overall.

Even though 13% of traditional payments companies believe that their business faces no FinTech-related risk, those who recognise the threat are afraid that, on average, as much as 28% of their business could be lost to the new players. This constitutes the highest percentage of all financial industry players.

Payments is also the sector with the highest proportion of participants that fear they could lose more than 60% or even all of their business to FinTechs (figure 2). The closer to the customer (or merchant) the disrupter plays, the more power that the disrupter has in influencing which payments providers are used in the future.

However, due to the rigid regulatory landscape, new entrants still need to cooperate and co-exist with incumbents. Many FinTechs in the early stages of market presence find it hard to muster the necessary expertise, brand recognition, substantial assets and expensive authorisation required in the financial sector.

Figure 2: Percentage of respondents who believe that more than 60% of their business is at risk of being lost to standalone FinTech companies within 5 years



“The key opportunity coming from FinTech is a much better consumer experience”

Head of Products in a global payments institution

¹ Disruption is understood as a radical reconfiguration of a particular field of business.

Top of mind: addressing new vulnerabilities

As fraudsters and those who commit cyber-security threats become more sophisticated, payments providers are becoming increasingly concerned.

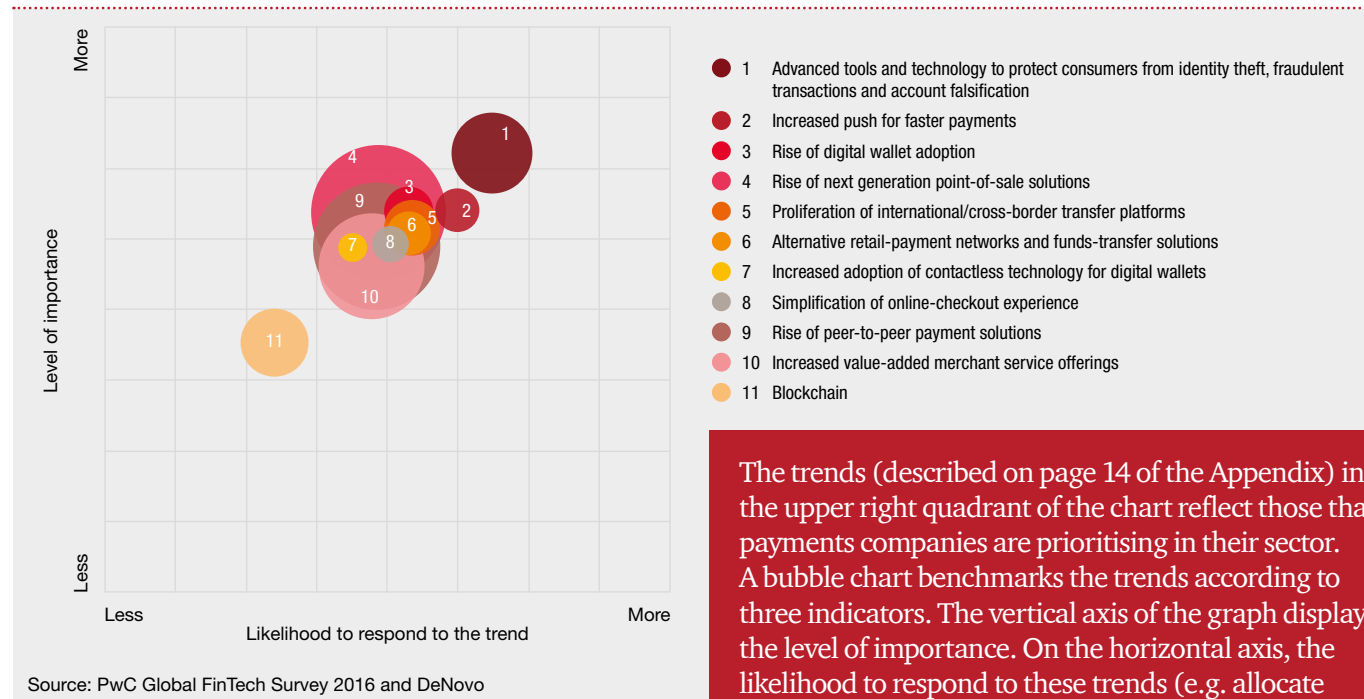
Virtual commerce is expected to double from 2015 to 2018 to USD 3 trillion in volume, with half the users coming from China.² Survey participants believe that the most critical trend impacting the industry is the development of advanced tools and technologies to protect consumers from security attacks and fraud. Influenced by mobile apps outside of financial services, consumers will continue to demand less friction in payments resulting in a continued push for faster payments. As a result, development of biometric data³ and tokenisation⁴ are taking centre-stage in the industry.

² eMarketer, *Worldwide retail eCommerce sales*, December 2015.

³ Biometric data - distinctive, measurable human data used for identification and access control, e.g. fingerprints, face recognition, DNA, retina, voice, etc.

⁴ Tokenisation - a process of substituting sensitive data elements with non-sensitive ones, i.e. the tokens. This increases data security as a token identifies the user, however, without sharing sensitive access data.

Figure 3: Trends in the payments industry ranked by importance and likelihood to respond



The trends (described on page 14 of the Appendix) in the upper right quadrant of the chart reflect those that payments companies are prioritising in their sector. A bubble chart benchmarks the trends according to three indicators. The vertical axis of the graph displays the level of importance. On the horizontal axis, the likelihood to respond to these trends (e.g. allocate resources, invest) is given, and the size of the bubbles is proportional to the number of related FinTech companies associated with the trend.



Domestic payments players need to figure out ways of framing products and services on top of the infrastructure upgrades they have been making in recent years. Moreover, as many stand idly by and neglect investments into cross-border payments infrastructure (i.e. back-end systems) and processes, new players are taking advantage of the inefficiencies by offering price-competitive solutions.

As payments become frictionless, incumbents become increasingly concerned about margin pressure. Almost three in four (74%) payments companies see this as a threat, the highest percentage of all financial sector institutions. Customer churn is also a serious concern for the industry (61% of respondents), and 52% fear losing market share to new players.

FinTechs disrupt with meaningful solutions

We will continue to see a proliferation of value-added offerings for new revenue streams and to differentiate against competition. Eventually, there will be a transformed consumer experience associated with shopping and money movement, but it will likely be driven by non-payments incumbents.

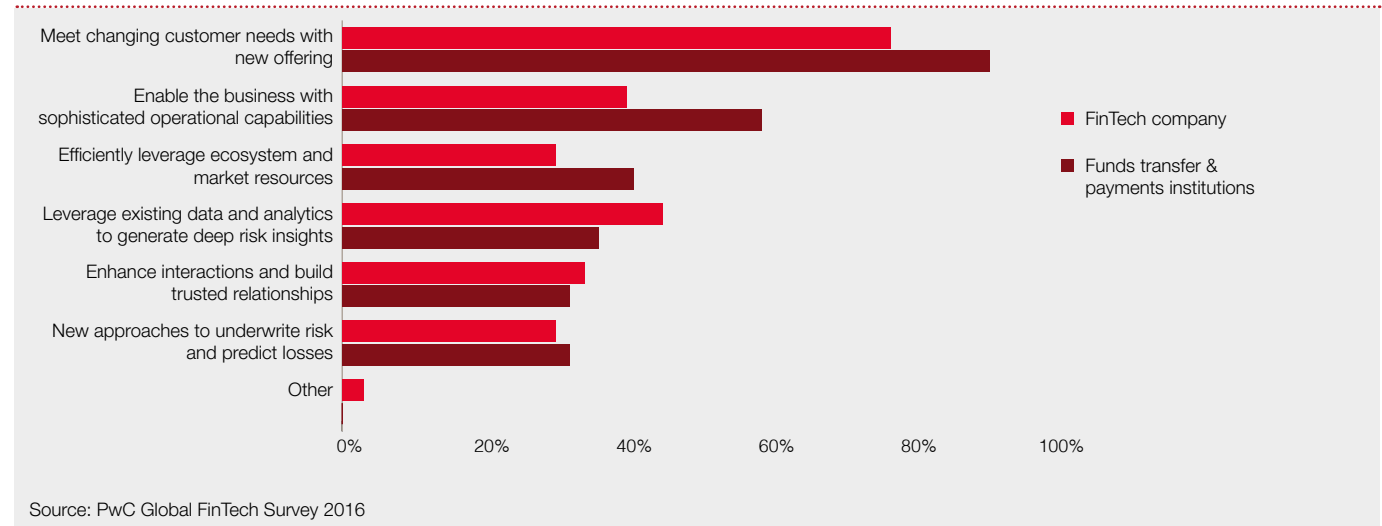
Incumbents focus on new service paradigms to win the “top of wallet” position, and they try to keep up to speed with new entrants by addressing changing customer expectations (figure 4). Rather than simply offering a payment transaction, FinTechs seek to enhance their attractiveness by including better experiences associated with shopping, money management around discretionary spending and money transfers.

FinTechs seek to make payments work better by reducing the friction around already digitised payments. They employ superior technologies to reduce friction associated with current digital payments methods and rails. Examples of this include leveraging new or alternative rails (blockchain or faster payments rails) or applying predictive analytics to reduce shopping cart abandonment.

As payments institutions are often fully digital, it comes as no surprise that the industry has the greatest level of familiarity with blockchain technology, i.e. used for cryptocurrencies. Almost a third (30%) of respondents

are relatively confident about their knowledge of how the technology works. There are potentially three main blockchain benefits for the payments industry:

Figure 4: In which areas do you see the most important impact to your business from FinTech?



1. *Efficiency and speed.* Blockchain can highlight inefficient or fragmented payments areas, such as cross-border payments and provide the enabling infrastructure for faster settlement of money movement.
2. *Disintermediation.* Blockchain decreases the need to use correspondent banking relationships for cross-border transactions. New entrants will catch on and grow in popularity with blockchain-based technologies running alongside or within legacy infrastructure.
3. *Transaction costs.* The low cost of blockchain could significantly undercut today's current systems, such as wire transfers for cross-border payments. Santander InnoVentures estimates blockchain could save businesses up to USD 20 billion a year globally in settlement, regulatory and cross-border payments costs.⁵



⁵ The FinTech 2.0 Paper: rebooting financial services, Santander InnoVentures, 2015.

Payments are becoming the enabler

As specific payments subsectors advance or leapfrog through this evolution, payments services are becoming the enabler. This has implications around the visibility and relationships of payments companies with their customers.

The majority of payments companies have already integrated FinTech into their business models. The pace of adapting to new business requirements is determining future market winners and losers.

- 84% of payments executives believe that FinTech lies at the heart of their overall strategies versus just over 60% of executives in all financial sectors (figure 5);
- Also, a significant portion of payments executives believe their companies are fully or very customer-centric: 71% in payments versus 59% in the financial sector as a whole (figure 6).

Nevertheless, many still believe this customer centricity may not be enough to thwart disintermediation as FinTechs rise within their industry and as payments become less visible to consumers.

Figure 5: How would you rate your company on delivering true customer centricity?⁶

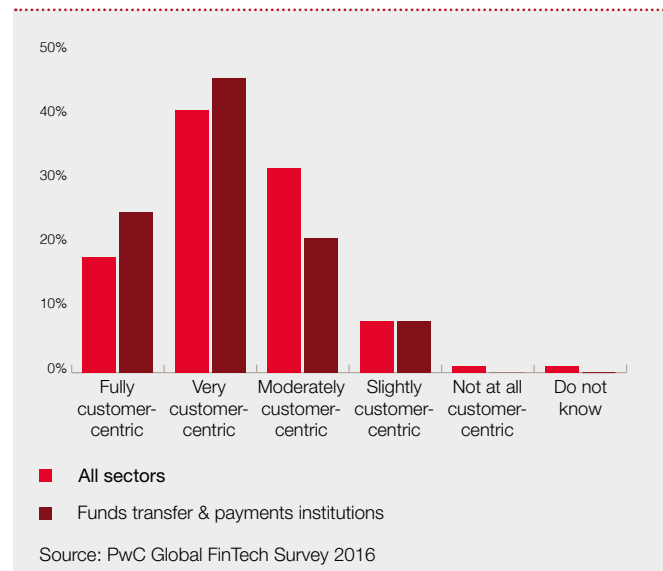
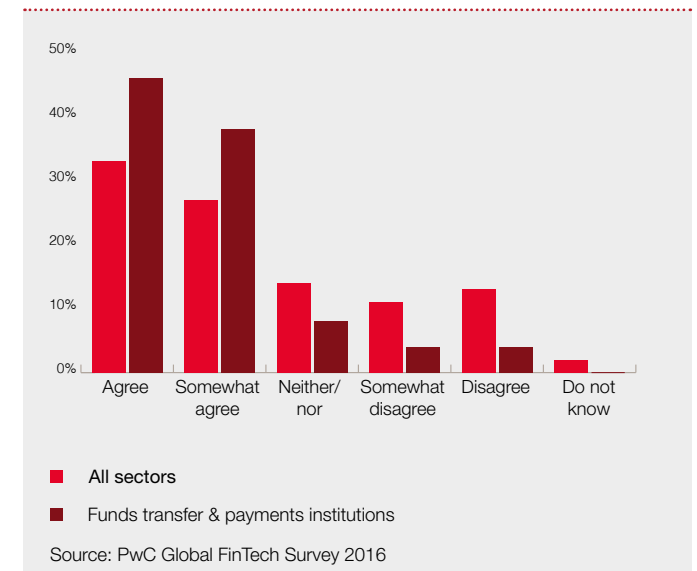


Figure 6: “My organisation has put FinTech at the heart of its strategy” – to what extent do you agree?



⁶ Companies delivering true customer centricity have re-oriented their entire operating model around the customer, increasing customer satisfaction and their own profitability in the process.

Active in opening FinTech subsidiaries

Payments companies are the biggest FinTech acquirers among all financial industry players. They are also more active in launching FinTech subsidiaries.

Traditional inter-bank payments partnerships have resulted in cost cutting and other market opportunities for incumbents. However, as FinTech is becoming an imminent threat to some areas, established players have to find ways to collaborate more closely with new entrants in order to generate value. For example, the central banks in the UK and US have recently announced that they are considering integrating digital versions of fiat currencies as part of their countries' respective money supplies.⁷

Compared to others in the financial space, a disproportionately large number of payments firms are investing heavily to engage with FinTech companies. A unique characteristic of this sector is that payments are mostly dealt with through the launch of FinTech subsidiaries (35%) and by engaging in joint partnerships (35%). P2P payments (including gifting and splitting bills), payments processing, cross-border payments, digital currency exchange and building payments technology standards are just some of the areas which are witnessing most of these partnerships between traditional players and FinTechs. Only 4% of payments companies do not engage with FinTech at all (figure 7), a proportion substantially lower than the financial industry average (25% overall).



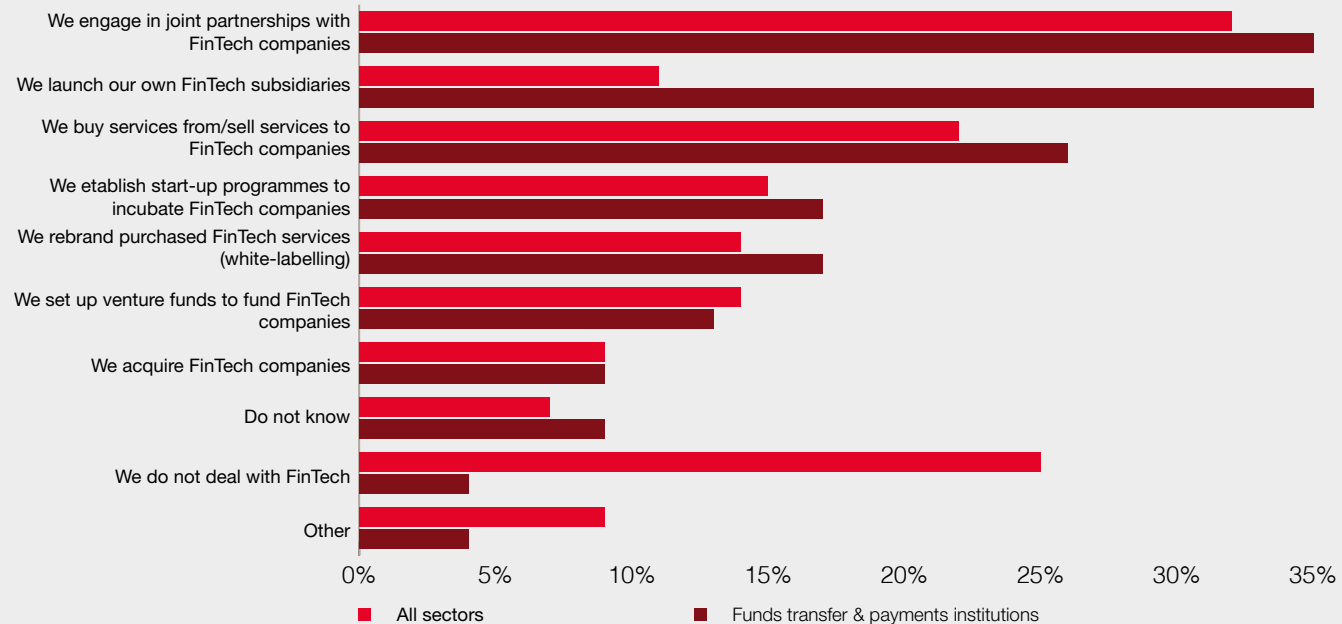
⁷ BNY Mellon, *Innovation in payments: the future is fintech*, October 2015.

“FinTech is of double interest for our company – to position services for end customers and to provide B2B services to banks”

CFO at a European payments company



Figure 7: How are you currently dealing with FinTech companies?

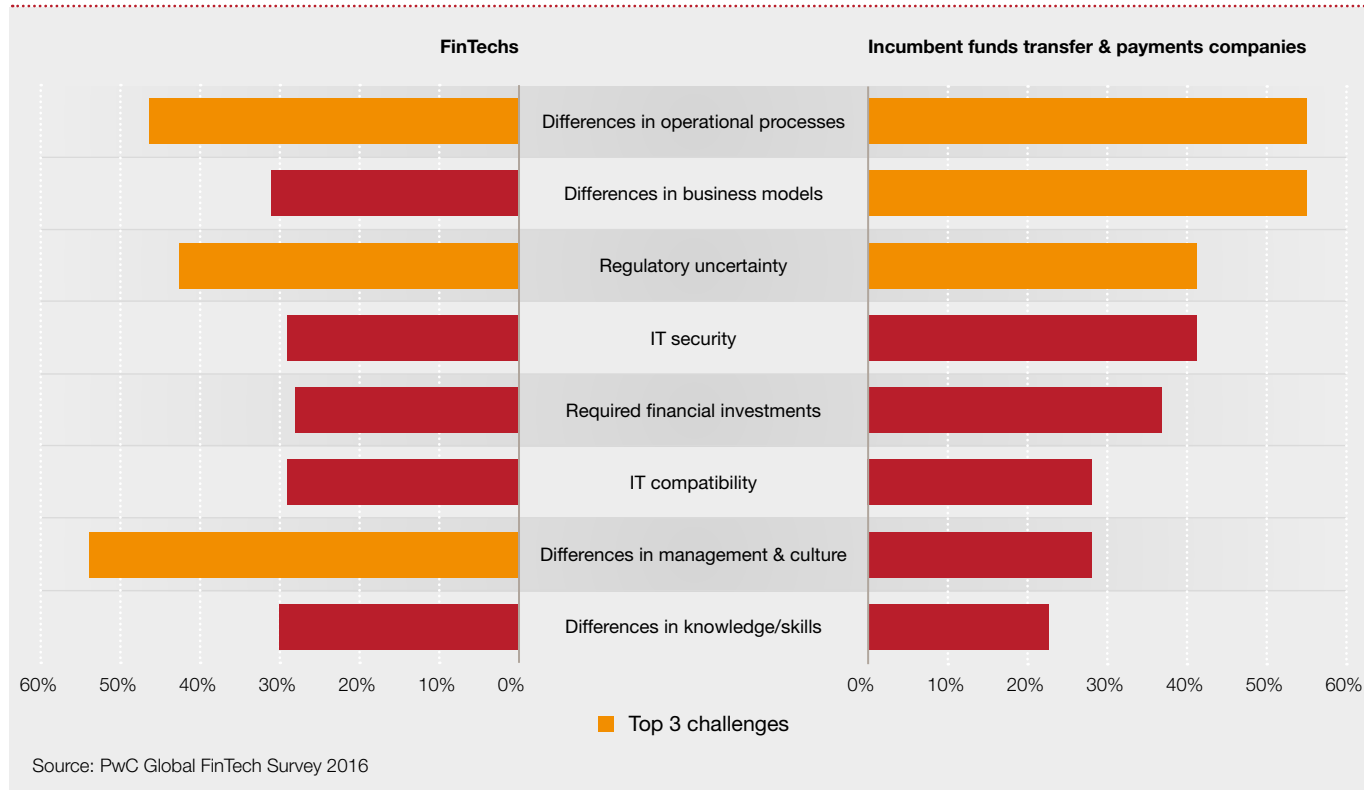


Source: PwC Global FinTech Survey 2016

“We are heading in the direction of having FinTech at the heart of the corporate strategy and we are getting closer to reaching that goal”

CFO at a global payments solutions company

Figure 8: What challenges did/do you face in dealing with FinTech companies?



Although survey participants from the payments sector are very active in dealing with FinTech companies, they recognise that their business models and differences in operational processes pose challenges in their partnerships. This may be one of the reasons why significantly more payments companies than players of other financial sectors launch their own FinTech subsidiaries (figure 8).

Conclusion

The growth in popularity of alternative payment methods tied to the increase in virtual commerce is driving the payments industry.

As the popularity of electronic payments increases, so do cyber-crime and fraud. New disrupters are affecting customer relationships and business models of the incumbents. Power dynamics of the industry are changing as people interact through new channels. In this new ecosystem, traditional players will seek new ways to make money in an industry seeing margin squeeze on the core transaction revenue stream.

As payments companies are much more eager to launch their own FinTech subsidiaries, technology-driven industry growth should, to a significant extent, be organic. Future sector growth will be driven by a continuous increase in global smartphone use. Technological advances will make this type of payments even more convenient, secure and cheaper – bringing in significant benefits both for payers and payees.

However, FinTechs are gaining more power and are reinventing the payments industry. In the past 30 months, M&As in the FinTech sphere have been generating billion-dollar deals and investors are constantly injecting more money into the sector. M&A activity in the FinTech business is bound to proliferate as the market matures and start-ups continue to pressure the incumbents. These trends will further buoy up the industry as payments experience an inorganic upswing of business.

Despite both – major potential opportunities and disruptions – the constant growth of the sector will reward those banks and payments players that possess the capacity to understand the changes in customer needs and to deliver prompt and innovative responses to shifting market expectations.



Appendix

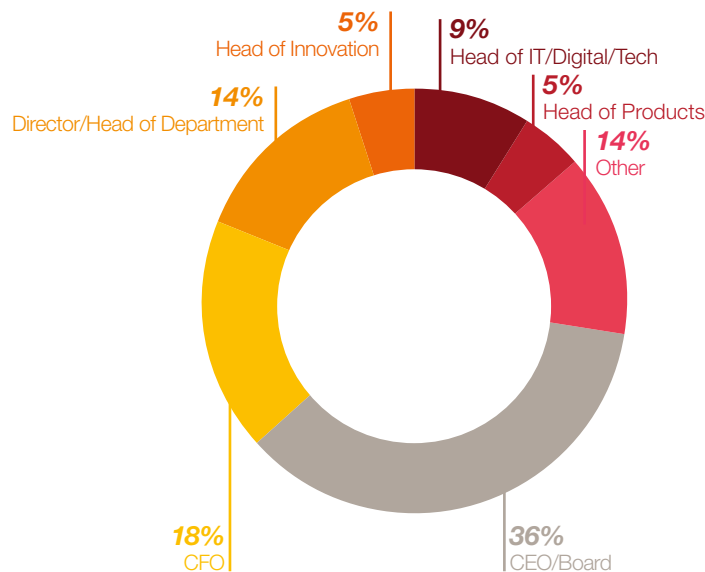
Participant profiles

The 2016 PwC Global FinTech Survey gathers the views of 544 respondents from 46 countries, principally Chief Executive Officers (CEOs), Heads of Innovation, Chief Information Officers (CIOs) and top management involved in digital and technological transformation, distributed among five regions.

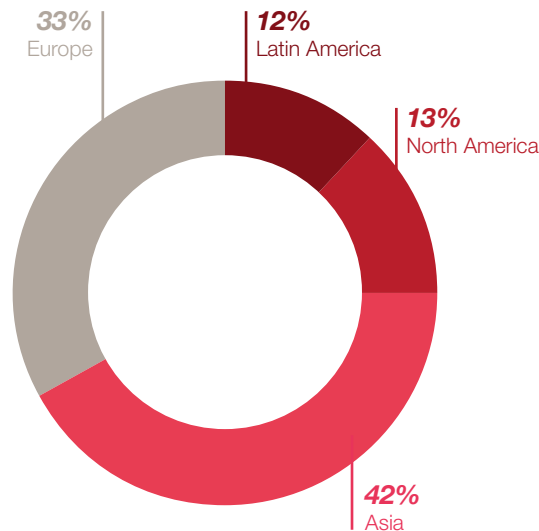
The payments-focused cut is based on the responses of 24 respondents from payments companies around the globe.

Breakdown of payments survey participants

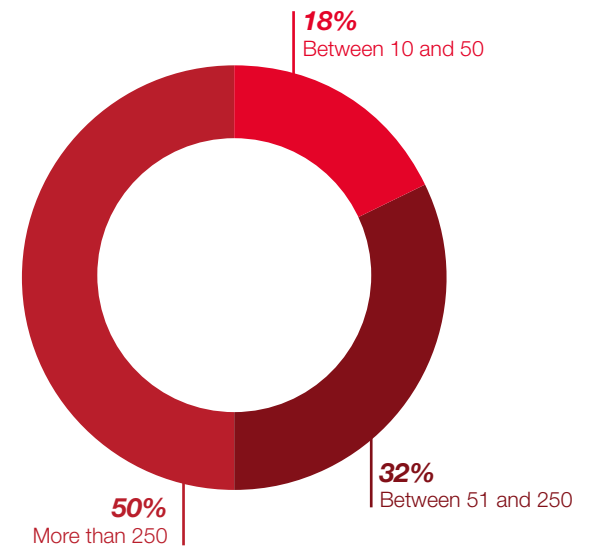
by type of respondent



by geographical location



by company headcount



DeNovo

More than ever, innovation impacts your business. DeNovo empowers decision-makers by instantly translating data, information and knowledge into the wisdom to adopt the right business strategies.

What is DeNovo?

DeNovo represents the next generation of strategy consulting – a new platform powered by Strategy&, PwC's strategy consulting team that is focused on FinTech. The rapid emergence of disruptive technologies and new business models requires a modern way of delivering strategic advice when and where you need it. Whether you are in the board room or on a phone call with your CEO, DeNovo provides you with answers in real time. Relevant content and insights are delivered to you via web, mobile and direct interaction with our team of innovation strategists.

DeNovo's Subject-Matter Specialists in FinTech lead a dedicated team of over 50 strategists, equity analysts, engineers and technologists. Using both public and proprietary data from over 40,000 sources and leveraging our global network of over 200,000 professionals, we cut through the noise to explain which start-ups, technologies, trends and new market entrants

are relevant to you and, more importantly, why.

Who uses DeNovo?

DeNovo is designed for CEOs, CTOs, Business Unit Heads, Heads of Strategy, and other key decision-makers in FS who need a trusted resource to understand the emerging trends that impact their business strategy and what actions to take.



<http://www.strategyand.pwc.com/denovo>

Summary of FinTech-related trends in payments

DeNovo's Team is tracking emerging trends in FinTech to explain which start-ups, technologies, trends, and new market entrants are relevant to the payments industry and more importantly, why. The trends highlighted below are a snapshot in time of the most relevant ones for the sector. For an updated view, please subscribe to the DeNovo platform.

1. Next generation point-of-sale (POS) solutions	Novel tech-based loyalty programs improve customer engagement and enhanced technology at the physical POS, such as the use of QR codes or Near Field Communication (NFC), enhances security of mobile wallets.
2. Increased value-added merchant service offerings	Additional services offered by merchant acquirers and processors including enhanced data analytics, reward and loyalty programs, fraud management, chargeback protection, check processing, refund management and customer relationship management solutions.
3. Peer-to-peer (P2P) payment solutions and digital wallet	FinTech companies are providing an increased number of solutions to facilitate P2P payment solutions. Increasing adoption of digital wallet for the use of e-money, secure storage and cryptocurrencies.
4. Alternative retail-payment networks and funds-transfer solutions	These electronic payment networks are alternatives to traditional networks offered by Visa, MasterCard, Discover and American Express. This includes online payment systems, such as PayPal and Stripe, and loyalty and gift card solutions, such as Starbucks.
5. Proliferation of international/cross-border transfer platforms	Increased number of solutions and points of user interaction that enable faster and cheaper cross-border funds exchange or remittance.
6. Simplification of online-checkout experience	The checkout experience can be directly affected by ease of website navigation, delays in transaction processing, volume of security checks, and limited payment options. New vendors aim to eliminate the multiple inept steps (i.e. shopping cart, card info, etc.) currently required in an online checkout process.
7. Consumer protection from identity theft, fraudulent transactions and account falsification	The use of topological analytics to ensure the authenticity or identify fraudulent transactions.
8. Increased push for faster payments	Companies are focused on the funds transfer and payment space to limit the number of intermediaries for the purpose of faster (to immediate) transfer and/or settlement and with this, a lower fee. This can include direct party transfer, peer-to-peer (P2P) transfer, use of prepaid account to transfer with a mobile phone and no bank account.
9. Contactless technology for digital wallets	Non-cash payment methods, such as credit and debit cards, smartcards, or other devices (e.g. mobile phones), that use radiofrequency identification to secure payments at a physical POS terminal.
10. Blockchain	Use of distributed and decentralised ledger technology in which transactions are recorded in order to improve payments, clearing and settlement, audit or data management of assets. There is also the possibility to create a so-called "smart contract" using blockchain technology. This is essentially a contract that is translated into a computer program and, as such, has the ability to be self-executing and self-maintaining.

Contacts

Vivek Belgavi

India FinTech and Technology
Consulting Leader
PwC India
+91 982 028 0199
vivek.belgavi@in.pwc.com

Steve Davies

EMEA FinTech Leader
Partner, PwC UK
+44 131 260 4129
steve.t.davies@uk.pwc.com

Menekse Gencer

Payments FinTech Leader
Director, PwC US
+1 415 565 1796
menekse.gencer@us.pwc.com

Manoj Kashyap

Global FinTech Leader
Partner, PwC US
+1 415 498 7460
manoj.k.kashyap@us.pwc.com

John Shipman

APAC FinTech Leader
Partner, PwC Australia
+61 8266 0198
john.shipman@au.pwc.com

Acknowledgment

We would like to thank Dariush Yazdani, Gregory Weber and the PwC Global research team for their involvement in the development of this report, as well as Áine Bryn and the Global FS Marketing team for their contributions.

pwc.com/fintechreport

At PwC, our purpose is to build trust in society and solve important problems. We're a network of firms in 157 countries with more than 208,000 people who are committed to delivering quality in assurance, advisory and tax services. Find out more and tell us what matters to you by visiting us at www.pwc.com.

This publication has been prepared for general guidance on matters of interest only, and does not constitute professional advice. You should not act upon the information contained in this publication without obtaining specific professional advice. No representation or warranty (express or implied) is given as to the accuracy or completeness of the information contained in this publication, and, to the extent permitted by law, PwC does not accept or assume any liability, responsibility or duty of care for any consequences of you or anyone else acting, or refraining to act, in reliance on the information contained in this publication or for any decision based on it.

For more information about the global Financial Services marketing programme, please contact Áine Bryn on +44 (0) 20 7212 8839 or aine.bryn@uk.pwc.com.

© 2016 PwC. All rights reserved. PwC refers to the PwC network and/or one or more of its member firms, each of which is a separate legal entity.

Please see www.pwc.com/structure for further details.