Fintech: The next disruptive frontier

New financial technology (fintech) such as the blockchain, mobile payments and crowdfunding are being touted as having potentially transformative effects. We examine some of the key developments.

BOOMING INVESTMENT IN FINTECH

In recent years, a number of industries have been affected by disruptive innovation, driven by a broader collapse in barriers to entry and business start-up costs prompted by the internet revolution. The impact of *Airbnb* on hotels and *Uber's* 'war' on incumbent taxi firms are two of the best recent examples. Now it appears to be finance's turn to be disrupted, with growing interest in 'fintech' innovations that challenge incumbent players.

Global investment in fintech ventures was up from US$4.1 billion in 2013 to $21.2 billion just a year later.[1] Expectations of significant change in the industry are growing with many arguing that finance is ripe for disruption. Dissatisfaction with incumbents is conducive to fintech acceptance, with banks in particular suffering much opprobrium in the wake of the global financial crisis. These attitudes are particularly strong among young people. 71% of US millennials in one survey said they'd rather go to the dentist than listen to their banks, while four US banks ranked in the 10 least-loved brands.[2]

This supportive backdrop is encouraging the entry of challenger banks with potentially disruptive new models such as proposed smart-phone bank *Mondo*, which offers phone-based banking with digital spending and budgeting analytics. Mondo caught the attention of investors with a successful round of capital raising, partly via crowdfunding – indeed, it broke records for being one of the fastest crowd-raises ever. *Atom* and *Tandem* are two other examples of 'next-gen' banks seeking to challenge the established players.

CHANGING BEHAVIOURS ENCOURAGING NEW PAYMENTS TECHNOLOGY

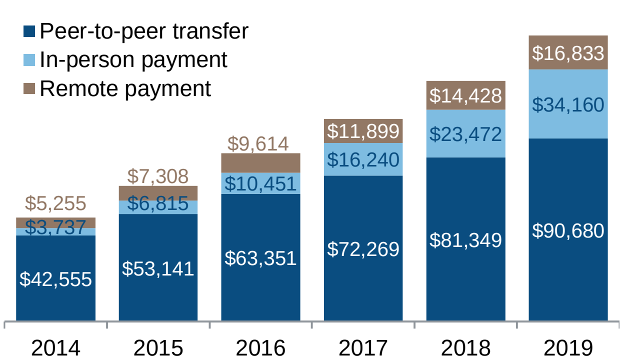
Payments are one of the most basic functions of everyday finance, and alternative systems are gaining ground. 44% of US millennials are using mobile payments, and 13% digital currencies.[3] US mobile payments are expected to reach $142 billion 2019 (Chart 1). A trend away from physical cash usage is also evident (Chart 2), supported in part by the state's desire to crackdown on tax evasion, and its potential in helping to implement negative rates (since e-money cannot be stored under a mattress).

AT A GLANCE

- New technology is encouraging a boom in financial services innovation, and drastically lowering barriers to entry in the industry.
- There is significant scope for the adoption of faster payments technologies.
- Emerging markets are a hotbed of payments innovation.
- The blockchain could deliver big efficiency gains for financials.
- Crowdfunding is powering a wave of startup innovation.
- Alternative lending may, however, be a more cyclical phenomenon.
- The best fintech is likely to be about doing old things in a more productive way, rather than doing completely new things.

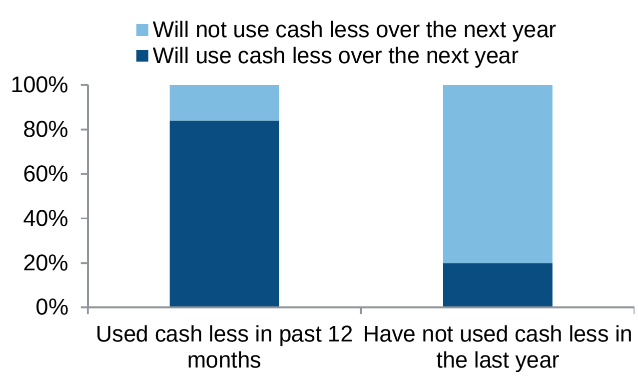
"The only useful thing banks have invented in 20 years is the automatic teller machine."
Paul Volcker, 2009

Chart 1. Growth in US mobile payments



Source: Fidelity International, January 2016

Chart 2. Falling cash usage in Europe



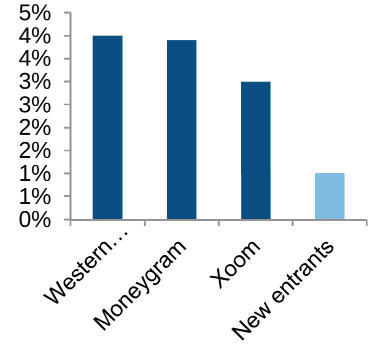
Source: ING Survey of 11,388 Europeans, May 2015

MOBILE TRANSFERS DRIVING FASTER PAYMENTS

The growing popularity of mobile phone banking is an important driver of faster payment development; there's not much advantage to mobile payments if settlement takes three days. Online retailers are accustoming us to one-click purchases, deliverable in just one working day – a contrast with the slow money transfers still found in many countries. Faster payments could also be highly beneficial for SMEs, given the importance of cash flow to them.4 Incredibly, nearly 50% of payments by US businesses are still made with paper cheques.5 The current US interbank system, Automated Clearing House, operating since 1974, still takes 2-3 working days to settle transactions. This is due to the fragmented nature of the US bank market, high levels of regulation and tight internal controls.

But the Fed is working on plans for a new system, which could be implemented on a 5-10 year horizon.[6] This could be modelled on the UK's Faster Payments Service, introduced in 2008, which has reduced customer transfer times to (typically) a few hours. Just as mobile transfers have encouraged faster payment development, faster payments can catalyse new mobile finance solutions, in a circle of innovation. New platform providers, unencumbered by legacy IT systems, will be well placed to profit,[7] particularly given the high regulatory costs shouldered by large money transmitters (Chart 3).

Chart 3. Compliance costs as a % of revenue

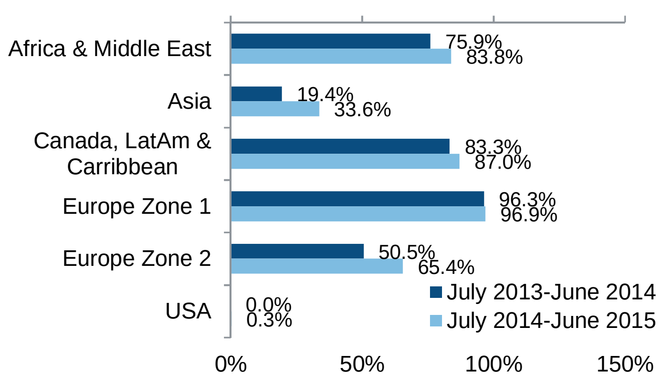


Source: Goldman Sachs, March 2015

INNOVATORS AMONG SMALL AND LARGE FIRMS

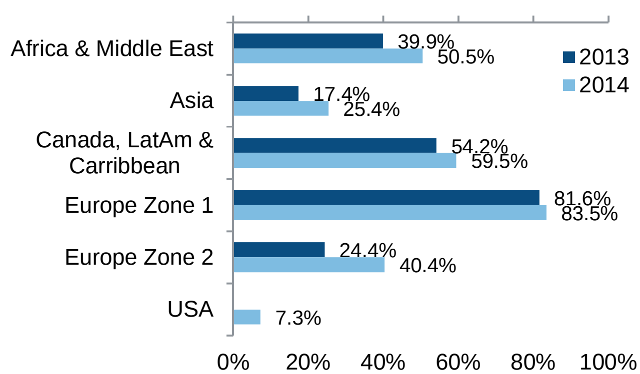
Payment innovation isn't just being pioneered by small firms and startups. Visa, for example, has arguably become far more like a tech stock than a financial stock, given its emphasis on new payments technology and the development of merchant analytics. And while Europeans may take contact and contactless card payments for granted, globally these account for just 33% of card based transactions, with particular scope for greater penetration in the US (Charts 4 and 5).

Chart 4. Percentage of contact & contactless transactions



Source: emvco.com, March 2016. Europe Zone 1: 37 western European countries. Europe Zone 2: 17 eastern European and central Asian countries (including Russia)

Chart 5. Smart payment card adoption rates



Source: emvco.com, March 2016

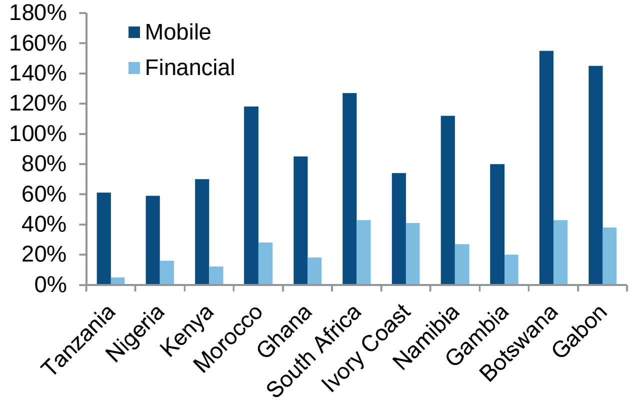
ALTERNATIVE PAYMENTS POPULAR IN EMERGING MARKETS

Many EMs are at the forefront of alternative payments, given their largely unbanked populations (50% of the world's population is unbanked).[8] In particular, the gap between relatively-high mobile phone ownership and low access to financial services (Chart 6) has encouraged the development of mobile payments. *M-Pesa*, first launched in Kenya in 2007 by Safaricom, is probably the most successful of these. M-Pesa now processes US$24 billion, equivalent to half of Kenyan GDP, and Kenya now has more mobile payments than any other country.[9] In China, nearly one-in-ten of all payments are now made using *Alipay* – an online ecosystem combining payment, lending, deposit and other functions (Chart 7), while 80% of bitcoin volume is exchanged into and out of Chinese yuan. This highlights that some of the best fintech opportunities are in EMs, which have effectively skipped the credit card stage of payments evolution, going straight from cash-based societies to mobile payments.

"The rise of fintech highlights just one of a number of opportunities emerging from the financial services sector. In this space, transaction processing firms are benefitting from the ongoing global secular shift towards card-based and electronic payments."

Sotiris Boutsis
Portfolio Manager

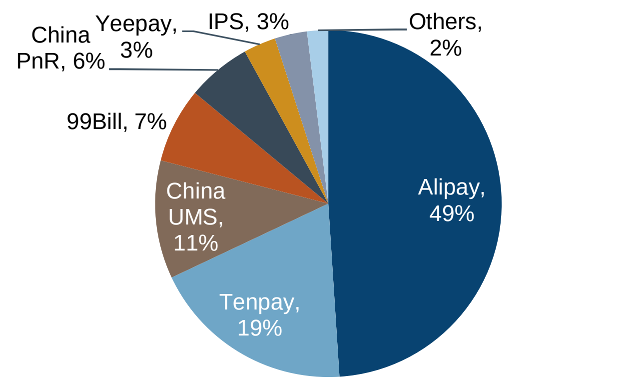
Chart 6. Mobile phone vs banking penetration across Africa



Source: Goldman Sachs, March 2015. >100%: more than one mobile per person

Chart 7. Alipay leads in China's online payments market

Shares of CNY5.4 trillion GMV market



Source: Goldman Sachs, March 2015. GMV: gross merchandise volume

BLOCKCHAIN OPPORTUNITIES ABOUND

The buzz around bitcoin has subdued somewhat, in part because its volatile price action (Chart 8) calls into question its use as money. But the hype around the 'blockchain' – the distributed ledger on which bitcoin is based – is reaching new heights, with hopes that it could result in significant settlement and transaction cost savings across financial services (Chart 9). Currently, trading in many securities relies on old-fashioned systems of negotiated contracts between buyers and sellers. It still takes almost 20 days on average to settle syndicated loan trades,[10] and the total cost to the finance industry of clearing, settling and managing post-trade environments is around $65-80 billion a year.[11]

A blockchain allows instantaneous trading and verification, without a central ledger. Using decentralised networks for payments and settlement could help banks save billions of dollars a year – potentially $15-20 billion a year from 2022 according to Santander[12] – by improving and outsourcing slow and inefficient back-office settlement. This would cut the amount of collateral held up in global payment systems and reduce transaction costs. 'Email for money' is how one entrepreneur describes it, and the blockchain could expand flexible payments across industries. For example, if people had the option of an instant five pence payment to read an online article, this could help solve the problems the media has had in monetising online content, by doing away with the hassle and cost of signing up for annual subscriptions.

Big money is flowing into blockchain development, with the 'R3 consortium' of 42 financial institutions examining ways of adopting the technology into mainstream finance.[13] Successful development could result in significant profit gains across the financial sector, and open up the internet to a host of low-value products that had previously been excluded, because it would have cost more than the product was worth to collect payment. Investment opportunities could thus include successful blockchain developers as well as third parties that are able to integrate the technology into their business models.

Chart 8. Bitcoin to USD (Bitstamp exchange)

Source: Datastream, March 2016

Chart 9. Which of the following do you believe distributed ledger technology could help reduce?

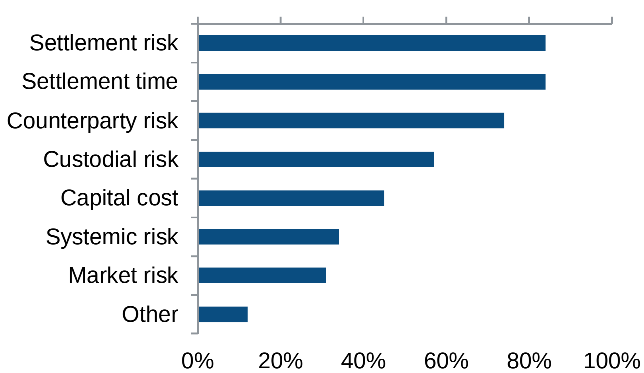
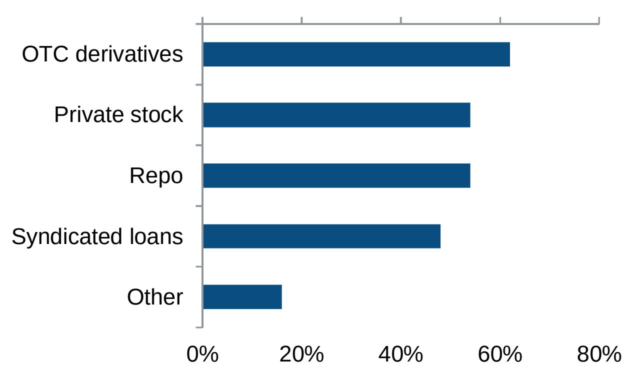


Chart 10. Other than payments and digital currency, what area/products could most benefit from the technology?



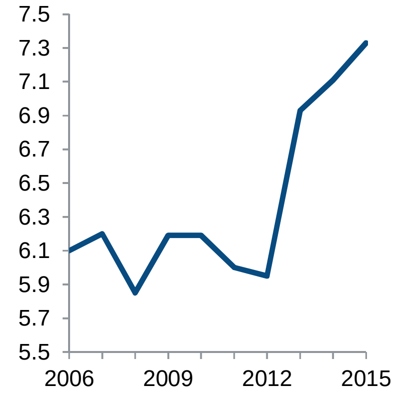
Source: Greenwich Associates, 'Bitcoin, the Blockchain and their Impact on Institutional Capital Markets', July 2015

ALTERNATIVE LENDERS ENCROACHING ON BANKS

Technology is a major enabler of lending innovation. The use of big data analytics combined with internet marketing and distribution is providing a platform for alternative lenders to take a growing chunk of the loan market from banks. The years since the global finance crisis have also seen strong regulatory demands for banks to raise their tier-one capital ratios, in order to make them more shock-proof in the event of future systemic crises. This has for the most part been achieved (Chart 11), but at the cost of banks reducing lending to riskier borrowers.

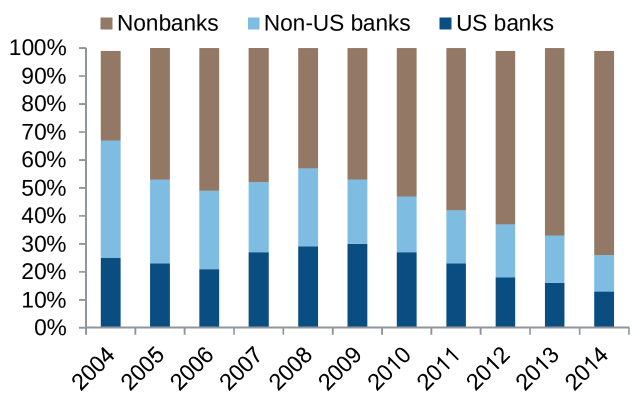
As a result of these factors, alternative lenders have been stepping into the riskier lending space vacated by banks (Charts 12 and 13, next page) – from personal and small business lending, to commercial real estate, mortgages, and student loans. Record low interest rates have encouraged credit creation, as investors move up the risk curve in search of yield and as lenders have become more comfortable with borrowers' abilities to make interest payments. Goldman Sachs estimates that across the six consumer-orientated lending sectors they view as most promising for alternative lenders, $7.8 trillion (20% of the market) could leave the banking sector.[14]

Chart 11. Rising OECD bank capital ratios



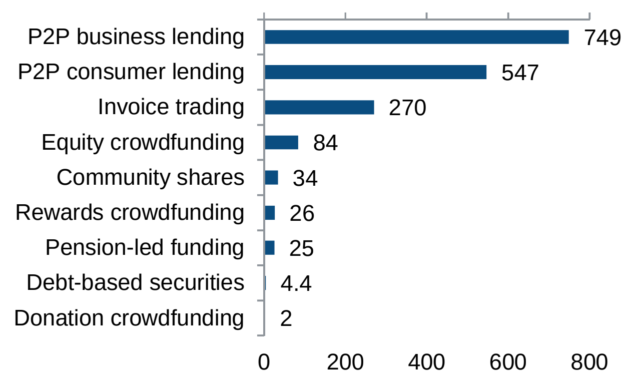
Source: Datastream, March 2016

Chart 12. Banks are taking a smaller role in riskier deals



Source: Goldman Sachs, March 2015

Chart 13. Alternative lending in the UK in 2014 (£ millions)



Source: Statista, UK March-September 2014

UNRESOLVED ISSUES WITH PEER-TO-PEER LENDING

Peer-to-peer (P2P) lending firms connect lenders to borrowers directly. In return for lending at a fixed rate for a set period, lenders get higher interest rates than they would on bank savings, while the borrower gets a lower rate than he would have paid a bank. This win-win situation is thanks to disintermediation – removing the banking middleman and all associated operating expenses, such as costly branch networks. The average FDIC-insured bank in the US had operating expenses of 5.3% of average loans outstanding in Q3 2014, compared with a figure for *LendingClub* of just 1.7%.[15]

It sounds enticing, but there are grounds for caution. For starters, much of the information provided by borrowers isn't verified. Recent SEC filings by *Prosper* disclosed that it verified employment and/or income for just 59% of loans from 2009-2015.[16] LendingClub's latest Annual Report notes that "we often do not verify a borrower's stated tenure, job title, home ownership status, or intention for the use of loan proceeds",[17] while other analysis suggests that nearly a third of the firm's outstanding loans during the first nine months of last year were issued without income verification.[18]

On top of this, nearly all of P2P lenders' revenue comes from origination, with only a tiny fraction tied to loan performance.[19] There are thus good grounds for suspicion about the quality of many loans, especially given that these lenders – as a post-financial crisis phenomenon – haven't been through a complete credit cycle yet; institutional lenders tend to use through-cycle default rates as a base line for their interest rates. Investors could be significantly undercharging themselves for the risk associated with many of these loans – especially given the lack (yet) of a significant secondary market.

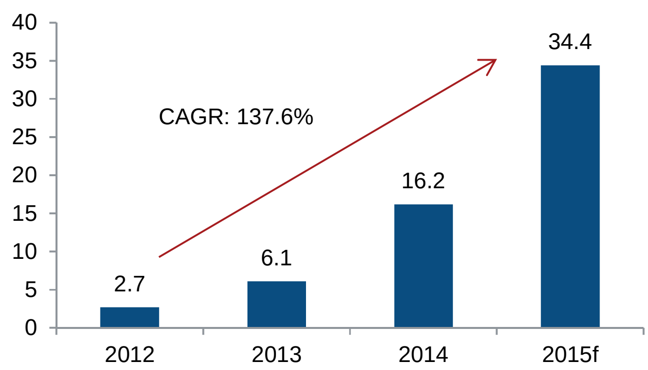
"I continue to favour disruptive e-payment companies such as PayPal, which are set to perform well thanks to the higher penetration of credit card payments from consumers. In particular, I like the growth potential of PayPal's credit business called Bill Me Later (BML). It's basically a service that's offered to users at checkout that allows them to borrow from PayPal to make their purchase. The company makes money by charging the merchant its standard take rate on the payment volume, and then charging the PayPal user interest and late fees on the balance."
Aditya Khowala
Portfolio Manager

SIGNIFICANT GROWTH IN CROWDFUNDING

Crowdfunding is changing the way people and businesses market products, services and ideas. It has seen significant growth in recent years (Chart 14), across a variety of fields

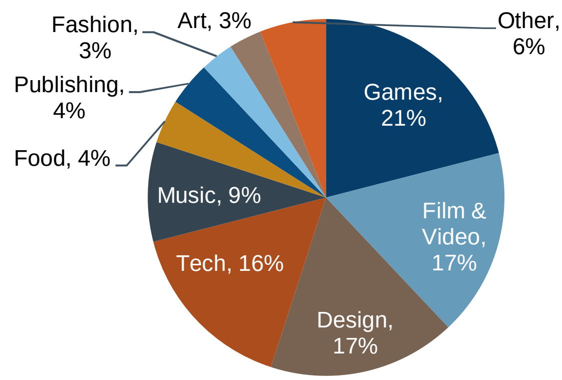
(Chart 15). Approximately 10% of the films accepted into the Sundance, SXSW and Tribeca Film Festivals are crowdfunded via Kickstarter,[20] an arts platform which has funded 101,951 projects, with $2.3 billion pledged by 10 million people.

Chart 14. Global crowdfunding volume (USD billions)



Source: Massolution, December 2015

Chart 15. Kickstarter funding by project category

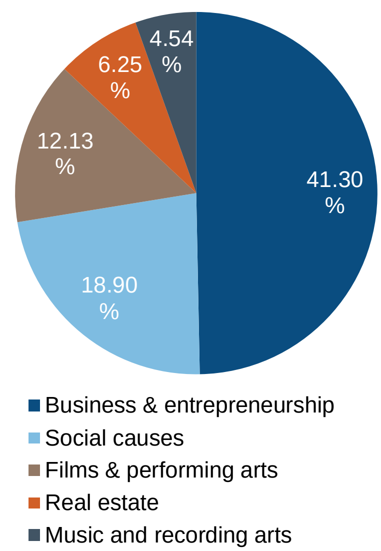


Source: Kickstarter, Goldman Sachs, March 2015

There are two main models of crowdfunding: donation or rewards-based models (common for charity fundraising campaigns), and equity investing platforms. The rapid rise of crowdfunding is again partly a consequence of the financial crisis, with startups struggling to access funding from cautious lenders. Millennials are less likely to own stocks due to their suspicion of the financial sector, yet they are more likely to invest in crowdfunding compared with older generations, largely down to it being deemed an 'authentic' experience which allows a greater sense of ownership than traditional financial assets. Millennials also have a greater desire for investments to reflect their personal values.[21]

Crowdfunding is a major beneficiary of network effects made possible by social media. An entrepreneur can start a campaign, which a backer discovers and pledges money to. The backer in then incentivised to share the campaign across social networks, driving traffic to the crowdfunding site and increasing the chance that the campaign is successful and encouraging future campaigns.[22] The result is like a running tap of preference 'shares', from entities too small to issue actual preference shares, and where the 'shares' are sorted into different maturities and credit history.[23] However, while it is opening up funding possibilities for new entrants, it is not yet particularly fertile ground for investors, given the lack of a secondary market for these shares, and the speculative nature of the startups.

Chart 16. Leading global crowdfunding categories (2014)



Source: Massolution, March 2015

CONCLUSION

As noted by the Peterson Institute's Avinash Persaud: "It is likely that there has been little financial innovation since grain futures contracts were struck several thousand years ago in the Indus Valley. Most of what passes for innovation is just a new way of doing the very old thing of adding more debt and less down payment, reserve, or equity to traditional borrowing or lending contracts."[24] The most promising fintech – like crowdfunding, blockchains and new payments systems – isn't about doing completely new things, but about doing old things in a more efficient, productive manner.

Moreover, there remains an age-old trade-off in finance between accessibility of credit and the general security of lenders, which is why some of the claims by alternative lenders need to be taken with a grain of salt. There is no magical way of bypassing the trade-off between accessibility and quality of loans. If there is, it seems unlikely that institutional lenders with decades of underwriting experience haven't discovered it yet. A chunk of the alternative lending market is likely a cyclical phenomenon – a response to record low interest rates and perhaps temporary restraint from banks.

Finance is unlike other industries in the extent to which the state takes a critical – perhaps domineering – role. Disruptive entrants have to reckon with large, incumbent interests with significant political lobbying power. In addition, ventures like bitcoin and the enabling blockchain technology pose a direct challenge to the state's monopoly on money and payments. The current fintech cycle is delivering some very good (likely lasting) innovation. But careful research to identify the best long-term prospects will be especially important, given the amount of hype surrounding this theme at the moment, and the nascent, prospective nature of many fintech enterprises.

REFERENCES

1. BofA Merrill Lynch, Thematic Investing, May 2015
2. Ibid
3. Ibid
4. Bankingtech.com'The globalisation of immediate payments – rolling out faster transaction'
5. Goldman Sachs, Equity Research, 10 March 2015
6. Bankingtech.com'The globalisation of immediate payments – rolling out faster transaction'
7. Ibid
8. Goldman Sachs, Equity Research, 3 March 2015
9. Goldman Sachs, Equity Research, 13 March 2015
10. BloombergBusiness, 1 September, 2015
11. FT, 'UK start-up claims blockchain breakthrough in payment processing' 12 October 2015
12. FT, 'Banks seek the key to the blockchain', 1 November 2015
13. UK Business Insider, 'The technology behind bitcoin is coming to high finance faster than anyone predicted', 20 January 2016
14. Goldman Sachs, Equity Research, 3 March 2015
15. Ibid
16. Fool.com, January 2016
17. Annual Report 2014, Lending Club Corporation
18. Bankinnovation.net, February 2016
19. WSJ, 'Lending Club's Loose-Door Policy', February 2015
20. The New York Times, January 2012
21. Goldman Sachs, Equity Research, 13 March 2015
22. Ibid
23. 'Crowd financing is not banking' Peterson Institute, October 2015
24. Ibid

Important Information

This document is for Investment Professionals only and should not be relied on by private investors.

This document is provided for information purposes only and is intended only for the person or entity to which it is sent. It must not be reproduced or circulated to any other party without prior permission of Fidelity.

This document does not constitute a distribution, an offer or solicitation to engage the investment management services of Fidelity, or an offer to buy or sell or the solicitation of any offer to buy or sell any securities in any jurisdiction or country where such distribution or offer is not authorised or would be contrary to local laws or regulations. Fidelity makes no representations that the contents are appropriate for use in all locations or that the transactions or services discussed are available or appropriate for sale or use in all jurisdictions or countries or by all investors or counterparties.

This communication is not directed at, and must not be acted on by persons inside the United States and is otherwise only directed at persons residing in jurisdictions where the relevant funds are authorised for distribution or where no such authorisation is required. Fidelity is not authorised to manage or distribute investment funds or products in, or to provide investment management or advisory services to persons resident in, mainland China. All persons and entities accessing the information do so on their own initiative and are responsible for compliance with applicable local laws and regulations and should consult their professional advisers.

Reference in this document to specific securities should not be interpreted as a recommendation to buy or sell these securities, but is included for the purposes of illustration only. Investors should also note that the views expressed may no longer be current and may have already been acted upon by Fidelity. The research and analysis used in this documentation is gathered by Fidelity for its use as an investment manager and may have already been acted upon for its own purposes. This material was created by Fidelity International.

Past performance is not a reliable indicator of future results. Investments in small and emerging markets can be more volatile than other more developed markets. Due to the lack of liquidity in many smaller stock markets, certain country select funds may be volatile and redemption rights may be restricted in extreme circumstances. In certain countries, and for certain types of investments, transaction costs are higher and liquidity is lower than elsewhere. There may also be limited opportunities to find alternative ways of managing cash flows especially where the focus of investment is on small- and medium-sized firms. For funds specialising in such countries and investment types, transactions, particularly large ones, are likely to have a greater impact on the costs of running a fund than similar transactions in larger funds. Prospective investors should bear this in mind when selecting funds.

This document may contain materials from third-parties which are supplied by companies that are not affiliated with any Fidelity entity (Third-Party Content). Fidelity has not been involved in the preparation, adoption or editing of such third-party materials and does not explicitly or implicitly endorse or approve such content.

Fidelity International refers to the group of companies which form the global investment management organization that provides products and services in designated jurisdictions outside of North America Fidelity, Fidelity International, the Fidelity International logo and F symbol are trademarks of FIL Limited. Fidelity only offers information on products and services and does not provide investment advice based on individual circumstances.

Issued in Europe: Issued by FIL Investments International (FCA registered number 122170) a firm authorised and regulated by the Financial Conduct Authority, FIL (Luxembourg) S.A., authorised and supervised by the CSSF (Commission de Surveillance du Secteur Financier) and FIL Investment Switzerland AG, authorised and supervised by the Swiss Financial Market Supervisory Authority FINMA. For German wholesale clients issued by FIL Investment Services GmbH, Kastanienhöhe 1, 61476 Kronberg im Taunus. For German institutional clients issued by FIL Investments International – Niederlassung Frankfurt on behalf of FIL Pension Management, Oakhill House, 130 Tonbridge Road, Hildenborough, Tonbridge, Kent TN11 9DZ.

In Hong Kong, this document is issued by FIL Investment Management (Hong Kong) Limited and it has not been reviewed by the Securities and **Future** Commission. FIL Investment Management (Singapore) Limited (Co. Reg. No: 199006300E) is the legal representative of Fidelity International in Singapore. FIL Asset Management (Korea) Limited is the legal representative of Fidelity International in Korea. In Taiwan, Independently operated by FIL Securities (Taiwan) Limited 15F, 207 Tun Hwa South Road, Section 2, Taipei 106, Taiwan, R.O.C. Customer Service Number: 0800-00-9911#2

IC16-28