The Bulletin

OMFIF

July-August 2018
Vol.9 Ed.7

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Digital invasion

Banks battle for the future of finance

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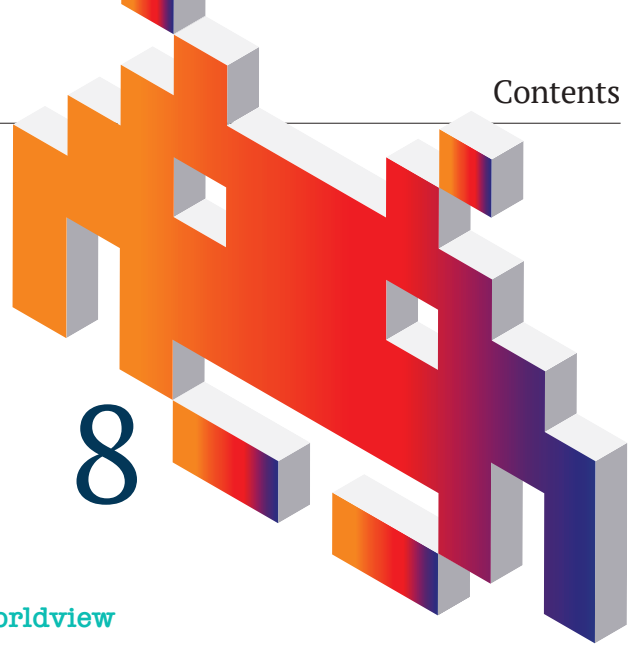

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Dialogue on world finance and economic policy

THE Official Monetary and Financial Institutions Forum is an independent think tank for central banking, economic policy and public investment – a non-lobbying network for best practice in worldwide public-private sector exchanges. At its heart are Global Public Investors – central banks, sovereign funds and public pension funds – with investable assets of $36tn, equivalent to 45% of world GDP.

With offices in London and Singapore, OMFIF focuses on global policy and investment themes – particularly in asset management, capital markets and financial supervision/regulation – relating to central banks, sovereign funds, pension funds, regulators and treasuries. OMFIF promotes higher standards, performance-enhancing public-private sector exchanges and a better understanding of the world economy, in an atmosphere of mutual trust.

Membership

Membership offers insight through two complementary channels – Analysis and Meetings – where members play a prominent role in shaping the agenda. For more information about OMFIF membership, advertising or subscriptions contact membership@omfif.org

Analysis

OMFIF Analysis includes commentaries, charts, reports, summaries of meetings and The Bulletin. Contributors include in-house experts, advisers network members and representatives of member institutions and academic and official bodies. To submit an article for consideration contact the editorial team at analysis@omfif.org

Meetings

OMFIF Meetings take place within central banks and other official institutions and are held under OMFIF Rules. A full list of past and forthcoming meetings is available on www.omfif.org/meetings. For more information contact meetings@omfif.org

OMFIF Advisers Network

The 173-strong OMFIF advisers network, chaired by Meghnad Desai, is made up of experts from around the world representing a range of sectors: monetary policy; political economy; capital markets; and industry and investment. They support the work of OMFIF in a variety of ways, including contributions to the monthly Bulletin, regular Commentaries, seminars and other OMFIF activities. Membership changes annually owing to rotation.

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Digital invasion

Changes in financial regulation introduced in the light of the financial and banking crises of the past decade, in conjunction with rapid progress in fields such as blockchain and artificial intelligence, are creating shifts in the relationship between technology and the banking industry. For banks, technology has traditionally been an important tool for spurring innovation and improving the efficiency of financial services. Now, however, financial technology companies are advancing into areas customarily dominated by banks. They are capitalising on the regulatory challenges banks face, especially when it comes to servicing smaller customers, as well as in relation to their biggest asset – data – which is helping them offer a more personalised and cost-effective service.

These developments are raising important questions for the policy-makers, regulators and reserve managers that are central to OMFIF's network. The integration of disruptive technology in financial services can support economic development through improving financial inclusion – a theme we will be exploring in detail in this year's edition of our Africa Financial Markets Index, in partnership with Absa. But innovation can also test governments and central banks as they seek to preserve a balance with user protection and stability of the financial system.

In its function as a forum for monetary and financial institutions and the private sector, OMFIF is devoting significant resources and energy to promoting dialogue in these areas. This month's Bulletin brings together experts from monetary authorities, governments and banks, as well as fintech companies. We have complemented this with research and analysis into central bank digital currencies, as well as a dedicated podcast series and a range of meetings. In March of this year we held a joint seminar with the Czech National Bank at their headquarters in Prague on the future of money and impact of technology on finance.

Throughout these activities, we have observed the gradual filling of the initial global policy vacuum relating to the strategic understanding of these technologies and their impact on finance. There is still much to be done. Regulatory responses to fintech, and especially cryptocurrencies, remain uncoordinated globally. Some authorities are choosing to ignore them, while others are responding to the risks by banning them altogether. But more and more are engaging with them, retaining in-house experts, issuing publications and collaborating to address these challenges.

Danae Kyriakopoulou
Chief Economist and Head of Research

»20 June, London

Real assets' momentum

'Sovereign funds and public pension funds are committed to real assets for the foreseeable future. Investments in real assets are unstoppable and here to stay,' said Alan Flanagan of BNY Mellon at the London launch of the OMFIF-BNYM report, 'Real Momentum: Global Public Investors and the Real Assets Market.' This latest report examines how GPIs are integrating real assets into their portfolios at an important inflection point for the market.

To download the report, visit bnymellon.com/RealMomentum

»14 June, London

Asset and risk management forum

OMFIF, the South African Reserve Bank and the World Bank Treasury's Reserves Advisory and Management Program, convened public sector asset managers, as well as select private market participants, over two days. The forum focused on governance, macroeconomic and financial developments, as well as the challenges and opportunities for public sector investment managers.

»11 June, London

The future of UK-Japan economic relations

OMFIF convened a briefing with Sir Simon McDonald, permanent under-secretary and head of the diplomatic service at the UK Foreign and Commonwealth Office. The discussion focused on economic relations between the UK and Japan after Brexit.

»27 June, London

Mexico economic outlook

OMFIF convened a briefing with Javier Guzmán Calafell, deputy governor and member of the board of governors at the Banco de México. The meeting focused on developments and challenges in the Mexican economy, monetary policy and global macroeconomic trends and opportunities.

»26 June, London

Changing times, changing norms

'There are important questions for monetary policy-makers about what "normalisation" will look like,' said Ian McCafferty, Bank of England Monetary Policy Committee member, in an OMFIF City Lecture. He offered thoughts on the set of challenges for monetary policy that normalisation might pose. These include changes to the underlying functioning of the economy, the calibration of policy, the limits to communication, and shifts in the social and political pressures on central banks.

»13 June, London

BoE 'prototype' stability committee

The Bank of England's financial policy committee, with a mandate that encompasses tools for guiding both borrowing and lending behaviour, could lead the way internationally in establishing the 'prototype financial stability committee', said Anil Kashyap, FPC member, in an OMFIF City Lecture. The committee was set up in 2013 as part of the bank's system of regulation introduced in the light of the financial crisis. The lecture examined how macroprudential policy-making does and should work in practice.

»18 June, London

Euro 'irreversible', membership not

The euro is irreversible, but the composition of the countries in Europe's single currency is not. That was a central bittersweet message delivered to the audience at OMFIF's seminar commemorating the 20th anniversary of the European Central Bank's establishment on 1 June 1998.

»13 June, London

'Implementing a suitable framework to guide central banks' governance, apply scrutiny and monitor performance is essential for maintaining these institutions' legitimacy.'

Paul Tucker, *former deputy governor of the Bank of England, in an OMFIF discussion on his book* Unelected Power.

FORTHCOMING MEETINGS

»Tuesday 17 July, Singapore

Future dynamics for ESG products

The second Global Public Investor Symposium with the Bank for International Settlements on combating climate change, promoting sustainable finance and the future of ESG products. The symposium forms part of a series of public-private sector meetings on climate change.

»Tuesday 17 July, Singapore

Asia launch of the fifth annual GPI

Asia launch of *Global Public Investor 2018*, the publication dedicated to asset ownership and management for GPIs. There will be a panel discussion focusing on investment trends in the public sector, new allocation models and the advances in fintech.

»Wednesday 3 October, London

US economic outlook

A City Lecture with **Charles Evans**, president and chief executive officer of the Federal Reserve Bank of Chicago and member of the Federal Open Market Committee. The lecture will cover developments in the US economy, monetary policy changes and macroeconomic trends.

»Thursday 4 October, Tokyo

Climate-related data disclosures for investors

The first OMFIF-Asian Development Bank Institute joint seminar on sustainable finance focuses on the importance of climate-related data disclosures for investors. The meeting forms part of a series of public-private sector meetings on climate change.

For details visit omfif.org/meetings


GAME OVER
credit £$€¥000

Digital invasion

Market-altering disruptive technologies from blockchain to artificial intelligence present financial regulators with one of the greatest tests in their history. Big tech firms are encroaching on financial services, and both banks and policy-makers must be quick to respond.

Closing the tech regulation gap

Crypto-assets cut across sectors and policy areas

Tom Bull
EY

The cryptocurrency phenomenon introduces fundamentally new concepts and technologies while cutting across multiple policy areas. To harness the potential of cryptocurrencies, businesses and policy-makers must draw on lessons from both the technology and the financial services sectors.

To date, the regulatory response to the emergence of cryptocurrencies has largely been jurisdictional. Many regulators are moving from ignoring 'initial coin offerings' to banning them altogether. While some treat ICOs in accordance with the nature of the digital token offered, the interpretation of tokens' qualities can vary greatly between countries.

Regulators are more likely to intervene when there are signs of material consumer harm or law-breaking in areas including currency control, securities, anti-money laundering, tax and personal data. On the other hand, in some jurisdictions there is a sense that cryptocurrencies present innovative opportunities that should not be ignored.

Given the level of uncertainty associated with ICOs and cryptocurrencies generally, it is unsurprising that they are regarded as an ineffective alternative to traditional currencies. Given that cryptocurrencies fall outside current investor protection regulation, some experts argue that only the most sophisticated investors should engage with this nascent asset class.

This year policy-makers around the world are likely to adopt more coordinated approaches to the regulation of cryptocurrencies. In March, the G20 asked numerous agencies to present by July their recommendations on how to deal with crypto-assets. The UK Treasury has launched a taskforce, involving the Bank of England and Financial Conduct Authority, to examine the risks of crypto-assets and the potential benefits of the underlying distributed ledger technology.

Lessons from financial services

In certain spheres of technological and industrial activity, policy-makers decide to regulate specific technologies to ensure they are safely used. The technologies are not typically unsafe in themselves but could cause significant harm if applied without sufficient caution.

The concept of regulating technologies may appear unfamiliar to those in financial services where specific activities are regulated and firms must obtain authorisation to carry on these activities.

With new forms of technology entering the financial world, it may be time to close the gap between both fields' approaches to regulation. This principle could be applied to other areas, such as artificial intelligence, where it may be desirable to apply certain restrictions on where or in what ways technologies are used.

> 'As an asset class that falls outside current investor protection regulation, some experts have taken the view that only the most sophisticated investors should engage with cryptocurrencies.'

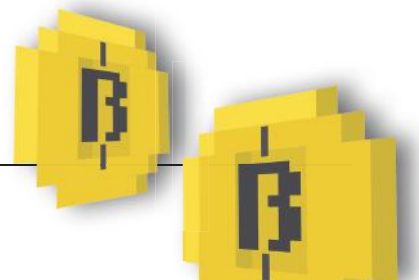
The digital economy can also learn much from established parts of the financial services sector. Digital marketplaces connect willing buyers and sellers of services and, in a financial services context, willing providers and recipients of capital. The operation of a multilateral trading facility is regulated activity, as is dealing (as principal or agent) in investments, including securities and derivatives.

These activities fall under Mifid II and the Markets in Financial Instruments Regulation. Cryptocurrencies, however, fall outside these rules, as they are not a regulated investment.

Many other digital platforms and marketplaces outside the sphere of financial services have emerged without any specific policy or regulation applied to them. However, there are principles that can be taken from financial services regulation and applied to these platforms. The structure of markets must be clearly defined and codified, creating transparent dynamics of price discovery. Certain types of behaviour by market participants or indeed the marketplace operator must be recognised as damaging to the market's orderly operation, so practices such as 'spoofing' (feigning interest in a transaction to manipulate prices) are treated as market abuse.

There is a global policy vacuum relating to cryptocurrencies. More broadly, not enough experts in government, central banks and regulatory authorities are thinking strategically about the development of the transaction platforms for these assets. Technology is expanding rapidly; policy-makers must be equally quick to meet the ensuing challenges. ●

Tom Bull is Director of FinTech Strategy at EY.



Banks call for parity with big tech

Unchecked giants need regulation to curb risks

Oliver Thew
OMFIF

At a conference in Brussels, a group of executives from some of Europe's largest banks were asked what they consider to be the greatest threat to the banking sector. The overwhelming answer – encroachment from technology giants such as Google and Tencent. Their concerns are not unfounded. Traditionally, tech companies have partnered with banks to provide back-end services and hardware. But over the past few years, big tech has advanced into areas historically dominated by banks.

The clearest example is in payments. Apple, Facebook, Google and Microsoft have all expanded their mobile-based payments businesses. By the end of 2017, there were 127m Apple Pay users, up from 62m in 2016. Alipay and Tencent dominate China's $5.5tn mobile payments market with 520m and 1bn monthly users respectively.

One of the reasons behind this is the development of smartphone technology. Banks have launched their own mobile apps, but tech companies have the advantage of owning the requisite hardware and operating systems. This allows them to sell devices with the platforms preinstalled, which encourages frictionless adoption.

However, the most important factor is data, which tech companies hold in abundance. By identifying consumer spending habits and behaviours, they can market highly personalised services that banks cannot provide. Tech companies can likewise offer free payments service to consumers, while ensuring profitability by selling data to third parties.

Core to tech firms' business

The challenge for incumbent financial institutions is not limited to the payments market. Amazon began providing loans to select retailers six years ago. Since then, the ecommerce giant has loaned more than $3bn to small businesses, including $1bn in the last year. Chinese tech giant Alibaba has gone one step further by establishing Ant Financial, which evolved out of its payments business into money market funds and microloans. This year, Ant Financial's consumer lending reached $95bn.

Amazon and Alibaba control huge amounts of data on the performance of third party retailers using their sites, which gives them greater insight than banks into the ability of these companies to handle loans. This ability to take unsecured personal credit to the market worries banks.

It can be argued that tech companies' shift towards financial services is simply part of a holistic consumer engagement strategy. With banks failing to provide efficient payments systems, it is natural that tech firms would use their hardware and data to offer frictionless systems. Similarly, many banks have reviewed their loan books since the 2008 financial crisis and found that serving small businesses is no longer worthwhile. Amazon and other tech giants, therefore, are positioned to fill the gap and provide working capital to retailers through their platforms.

Conversely, and more worryingly for banks, the move into payments and loans could suggest that tech giants view financial services as core to their business. Amazon is planning to expand its lending arm and is in talks with JPMorgan to develop a checking account-like product.

Regulatory parity

The response from the banking sector to tech companies' intrusion on their business is a resounding call for stricter regulation or, at the very least, regulatory parity. In the US, technology is the least regulated sector with just 27,000 regulations, compared to 128,000 for financial services.

As tech companies provide more and more financial services, it is imperative that they adhere to relevant consumer protections. For example, the use of mobile wallets by tech companies can be treated as deposit-taking and should entail equivalent regulation to protect depositors. In the loan market, there is a risk that large tech companies could use their influence to exploit retailers and deny equal opportunity.

$3bn

Amount Amazon has loaned to small businesses over the last six years, including $1bn in the last year

As tech firms continue to sprawl and provide increasingly diverse services, regulators will need to become more alert to systemic risks that could affect financial markets. One report estimates that banking services from Amazon could expand to more than 70m US customer accounts in five years, equal to the size of the country's third largest bank. Ant Financial has more outstanding consumer loans than China's second largest bank, and US tech giants are some of the largest holders of corporate debt in the world.

Banks will undoubtedly suffer losses as big tech moves into financial services. Regulation, however, should not be applied to safeguard the incumbents' profits. Instead, it should aim to protect consumers and ensure financial stability before risks materialise. ●

Oliver Thew is Business Development Manager at OMFIF.

Digitalisation spur to global companies

Shifting trade patterns bring new opportunities for investors

Rob Lovelace
Capital Group

Global trade and commerce is experiencing rapid change, and investors are seeking answers to how this will influence the investment landscape. Technological advances and how they are reshaping industry, as much as political negotiations, will determine the future of global business. China's rise and its influence on global growth is another critical aspect of this shift.

The concept of a 'global company' has evolved over the past two decades. Besides the old-line multinationals that dominate commodities, heavy industry and consumer products, there is a new generation of global companies that are giants in the digital economy, such as Google and Amazon.

Many parts of the digital economy are not captured in traditional metrics of international trade and GDP growth. Similarly, trade agreements or tariff regimes cannot easily dictate aspects of the digital economy. As an indicator of this expansion, cross-border digital traffic has grown 40 times larger since 2007 and is projected to grow 13 times larger in the next seven years.

Digital platforms are changing the economics of doing business across borders by lowering the cost of transactions. Enterprise software solutions and cloud computing enable firms to innovate new products and solutions in multiple locations, with faster speed to market. Small and medium-sized businesses have gained global access by using digital platforms to connect with customers and suppliers in other countries.

As the size of these platforms increases, issues related to digital commerce and intellectual property will gain prominence in trade agreements. Similarly, regulators are demanding greater input on issues of privacy, location of servers and access to online information and services.

Industry giants in emerging markets

Over the last decade, China has become the largest growth market in the world for myriad industries. In 2016 it accounted for 30% of global sales of robotics, and it is the fastest-growing market for Starbucks, which is targeting 5,000 stores in the country by 2021. Understanding companies' China strategy is critical to evaluating the success of their global expansion efforts.

China's engagement in trade negotiations may also advance its own ambitions to open up its economy and give Beijing a platform for much-needed reforms. Any talks will have multiple layers of relationships to consider, and businesses with interests on both sides are likely to influence new deals.

While trade talks may contain bouts of unfriendly rhetoric, any new agreements between China and the US would include accommodations for both sides, given their mutual economic and financial dependencies. The impacts are likely to be company-specific and any investment strategy must be able to navigate such volatility.

China's influence has led to increased trade by emerging markets among themselves and with developed economies. In 2017, 35% of developed-market exports went to emerging markets, and 41% of the trade by emerging markets was among themselves, according to International Monetary Fund data. Emerging markets' share of global GDP has risen significantly to 40%.

Industry leaders are emerging in Asia as domestic demand rises to become a greater share of total output. Many of these companies, such as Chinese investment conglomerate Tencent and India's Sun Pharmaceutical, are less exposed to and reliant on demand from the US and Europe.

Global companies account for 80% of trade, 75% of private sector research and development and 40% of productivity growth. Global trade patterns will advance alongside increasing digitisation of commerce and the likelihood of new trade, tariff and tax structures in many parts of the world. Shifts in economic and trade regimes and turning points in markets give investment managers the opportunity to capitalise on short-term distortions in asset prices and to invest in select companies that will succeed over the long term.

Not all global companies will thrive in this new environment. Nevertheless, successful multinationals typically have innovative management teams, diverse sources of revenue and the resilience of solid balance sheets. These attributes offer great potential for success. ●

Rob Lovelace is Vice-Chairman and Portfolio Manager of Capital Group.

Artificial intelligence augments auditing

Machine learning and data science redefine finance practices

Robin Grosset
Mindbridge Ai

Artificial intelligence is changing the structure of industry in areas ranging from financial services and transport to healthcare and government. It can distil millions of oncology studies and patient data to generate prognoses and suggested treatments. In the legal industry, it is used to analyse complex legal clauses and systematises laborious contract analysis. AI is in smartphones, taking to the road in driverless cars, and using intuition and strategic thinking to play board games.

The adoption and numerous applications of AI – propelled by big data and cloud processing power – are changing many aspects of blue- and white-collar jobs, including long-established professions such as auditing. Auditors developed their familiar process of sampling to cope with limited time and lots of information: one cannot expect human auditors to review every individual transaction.

For several years, the Financial Reporting Council has reported that UK audits show widespread flaws. In a 2015 survey of inspection findings, the International Forum of Independent Audit Regulators noted that it 'is not yet satisfied that enough has been done by the audit profession to understand and address shortfalls in audit quality'.

Because of the use of antiquated approaches and tools, there is a lack of consistency in the execution of high-quality audits. With data creation doubling every 18 months, sampling is no longer an adequate auditing process. The good news is that the advancements in AI and machine learning create the opportunity not just to address this challenge but generate tremendous value.

Opening the black box

Businesses dealing with high volumes of data and varied data types should turn to AI to detect anomalies and fraud. It is possible now to install AI to examine a company's every transaction, meaning it is no longer reasonable to rely on sampling. Instead, AI can be used to assist human auditors.

Supervised machine learning forms the basis of many financial fraud-finding methods, where a computer system is trained using an algorithm that can improve prediction results based on a set of expected outcomes. Unsupervised machine learning alleviates the need for the maintenance of standard rules and decision-making. It is excellent for anomaly detection and clustering.

Against this backdrop of immense progress, AI systems must be able to clarify their findings and transition from being viewed as an inexplicable 'black box' if they are to win the confidence of major financial institutions. Moreover, Articles 13, 14 and 15 of the General Data Protection Regulation, the European Union's expansive defence of citizens' data privacy, all contain provisions that require organisations using data to perform automated decision-making to explain to the subjects of such decisions the logic behind the automation.

MindBridge Ai, a Canadian AI company, has developed an explainable AI that runs through 100% of transactions examined in an audit. It allows many organisations and early adopters such as the Bank of England, the Canadian government and accountancy firms BDO USA and Kingston Smith UK to benefit from advances in machine learning and data science. The methods used mean professional auditors can be more confident in their decisions, as each highlighted transaction is accompanied with easily understood explanations.

> 'AI systems must be able to clarify their findings and transition from being viewed as an inexplicable 'black box' if they are to win the confidence of major financial institutions'.

AI will improve financial institutions' ability to cope with the increasing amounts of information they hold by focusing experts' attention on the most important details of these data. Advanced AI systems will assist auditors and regulators in performing a more comprehensive analysis of transaction patterns. AI will not replace auditors; it will augment them. ●

Robin Grosset is Chief Technology Officer at MindBridge Ai.

Robotics' existential impact on labour

Policy-makers must answer critical questions on automation

Bhavin Patel
OMFIF

The loss of manufacturing jobs in advanced economies is due not only to the offshoring of production to emerging markets, but also due to the encroachment of robotics, automation and artificial intelligence on these processes.

Robots are becoming more reliable, proficient and cheap. The combination of machine learning, through studying large data sets, and artificial intelligence is expanding the number of functions that robots can take over from humans. In addition, the incorporation of advanced information technology systems in production has provided an abundance of relevant data for both sides of the supply chain, increasing production capacity by around 20%. According to the consultancy McKinsey, around 50% of existing jobs could feasibly be taken over by automation right now. By 2030, almost one-fifth of all jobs will be automated.

Companies that deploy automation can realise substantial performance gains and develop competitive advantages in their industries, their efforts contribute to the aggregate level in productivity. This incentivises companies to automate processes, despite the risk of major disruption to traditional labour markets. Such structural shifts are accentuated in many developed countries by aging workforces and the struggle to replace skilled retiring employees.

Global impact

The pace at which full automation can be implemented will depend on technical feasibility, which requires consistent innovation and falling installation costs. Industry will have to consider, too, the availability of low cost labour and whether adopting full automation will provide greater economic benefits than retaining human workers.

Advanced economies' manufacturing sectors will be the first to be displaced by automation, though services are liable to be impacted as well. Highly predictable work done in structured environments, such as data collection and processing, can be automated using algorithms. Banking jobs will also be affected. Deutsche Bank has said that almost half of its staff can be replaced by AI and automation, while Citi plans to shed half of its 20,000 technology and operations staff in the next five years.

Emerging markets will also feel the effects. As soon as wages and technology adoption in these markets begin to reach parity with those of advanced economies, automation will prevail. China has been able to adopt a commanding position in global manufacturing thanks to cost advantages in labour. But Chinese hourly wages are increasing, up 64% in 2016 from 2011 at $3.60 per hour – higher than average wages in India and Indonesia, among others – and will continue to rise as the expanding Chinese services sector puts additional pressure on wages. Eventually, wages in India and Indonesia will rise, causing similar displacement in these major markets.

Wealth redistribution

Some argue that entirely novel jobs will materialise naturally as others are displaced by automation, as has happened throughout history; the introduction of the tractor and shift away from labour intensive farming did not lead to long-term mass unemployment. Automotive industries in the US faced increasing automation between 1950-70, but wages and employment continued to rise steadily over the same period as jobs were redistributed to the emerging services sector.

However, today's pace of innovation and technological development is becoming exponential. Labour markets will find it increasingly difficult to identify new jobs and reduce slack over the medium term. Technological progress may make a society more prosperous in aggregate, but not everyone will benefit. Inequality will increase in the absence of political and regulatory intervention, as both blue- and white-collar workers are made to find new jobs that are likely to be less well paid, while business owners profit from automation.

50%

Percentage of existing jobs that can be taken over by automation

Universal basic income and taxes on robots have been suggested as methods of redistributing income and wealth more evenly. Others propose that a shorter working week will help redistribute time if some jobs are partially automated. Improving education in science, technology engineering and mathematics can mitigate poor labour market outcomes. Equally, bolstering industries that do not rely on robotics and are instead tied to human interaction, such as care-giving and teaching, will be essential.

For policy-makers, striking an appropriate balance between economic growth through automation and the defence of workers will be a significant challenge in both advanced and emerging market economies ●

Bhavin Patel is Economist at OMFIF.

Interoperability in mobile money platforms

Lessons from Modelo Peru's Bim for emerging markets

Paola Del Carpio Ponce
International Finance Corporation

Emerging markets face numerous challenges in their attempts at widespread provision of financial services. Peru, despite being one of Latin America's better performing economies for much of this decade, is no exception.

Only 29% of Peruvian adults own an account in a financial institution, far below the 51% average for the continent. Among the reasons is the perception that the costs of maintaining one – including commission, transaction and transport costs – outweigh the benefits. In fact, the availability of attention points for financial services is limited and heterogeneous among regions. This, in conjunction with Peru's largely informal economy, means the preference for cash is strong. Around 90% of transactions in the country are made in cash.

Several countries with low banking penetration rates have created mobile money platforms to promote financial inclusion, the most successful case being Kenya's M-Pesa. In Peru, where the mobile phone market is widespread, mobile money was envisioned as a tool to achieve financial inclusion and strengthen financial resilience for the poor.

Beginning in 2015, the Modelo Peru strategy emerged as a collaboration between financial institutions, telecommunications companies and the government towards financial inclusion. The resulting platform, Bim, is the world's first experience with full interoperability: different financial institutions, telecoms companies and cash-in/cash-out institutions interact within the same platform, without making any difference for the user. An e-wallet account can be opened without a pre-existing bank account, internet access on their phone or credit. A new user needs merely to present a personal national identification number, select a passcode and choose a financial institution with which they will create an account.

Adoption of Bim, however, has been slow and the number and value of transactions handled remain low. On the demand side, most Peruvians continue to prefer cash transactions and distrust financial institutions, traditionally associated with excessive fees. In addition, there is a widespread lack of understanding of how e-money works, which will only be curtailed by substantial financial education.

Regarding supply, cash-in/cash-out networks have been limited to the existing infrastructure offered by financial institutions. The greatest challenge to more widespread use of Bim in the short term is, thus, the size and scope of the distribution network. This requires significant investment in agents, the use of which will diminish as the platform is more widely used and the money stays in the network rather than having the constant need for cash-out operations.

Forthcoming strategies

To facilitate the growth of the distribution network, Pagos Digitales Peruanos, the company in charge of Bim, is piloting a strategy with some small businesses acting as promoters of Bim, performing operations for others with their own e-wallets.

Promoting mobile government-to-person transactions, especially among the most vulnerable citizens, is one possibility. These initiatives could be complemented by person-to government (payment of taxes), person-to-business (payment for services) and business-to-person (payment of salaries) systems. Different incentives, such as longer deadlines or discounts, could be established to promote Bim over other channels for these types of payments.

There are also significant challenges on the demand side to tackle in Peru's cash-centric economy. The adoption of Bim demonstrates that well implemented regulation is necessary but not sufficient to ensure the success of mobile money platforms. Political will and co-operation among actors involved in the national financial inclusion strategy is critical for results.

29%

Peruvian adults who own an account in a financial institution

Without building a wider distribution network, Modelo Peru is likely to remain an alternative financial service in locations where banking services are already available, instead of effectively promoting financial inclusion. However, being in a nascent stage, Bim still has plenty of space to mature. In addressing its shortcomings, Modelo Peru can set a precedent for other interoperable financial inclusion efforts in emerging markets. ●

Paola Del Carpio Ponce is an independent consultant on public investment policy in Peru and a former Research Assistant at Thought Leadership, Economics and Private Sector Development, IFC. This is an abridged version of 'Modelo Peru: A Mobile Money Platform Offering Interoperability Towards Financial Inclusion', by Paola Del Carpio Ponce in: 'How Technology Creates Markets – Trends and Examples for Private Investors in Emerging Markets'. IFC, April 2017, pp. 51-58.

Fintech needs forward-looking regulation

Japan leads efforts to encourage innovation while ensuring user protection

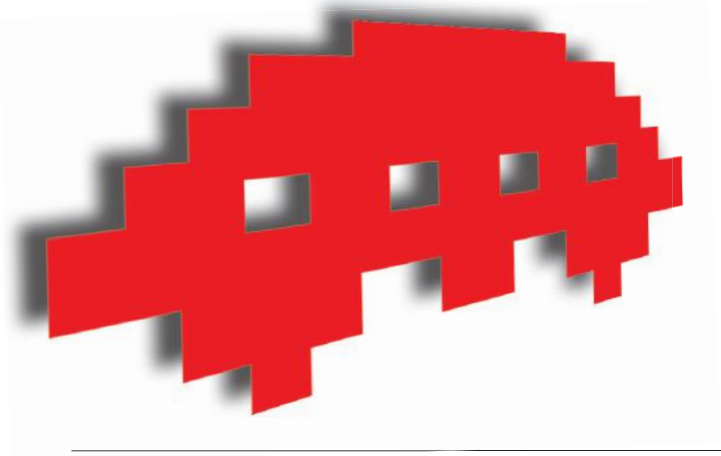
Motokazu Kasahara
Japanese Diplomatic Service

Various innovations in the financial sector, brought about by modern information and communication technologies, are providing new opportunities and growth potential. The phrase 'banking is necessary, banks are not' is heard throughout the industry nowadays, and this change is a crisis for many traditional financial institutions.

One of the most important duties of regulators is to eliminate obstacles in a forward-looking manner that facilitates the emergence and expansion of technologies. The digitalisation of our lives and the progress of financial technology influence each other, and will continue to cause problems for regulators. Financial services providers must adopt new values and create opportunities that enable them to provide convenience to customers, while also winning users' trust.

The Financial Services Agency, Japan (J-FSA) is making a significant effort to facilitate innovation, especially in fintech. Japan's regulatory framework has been amended to adapt to the fintech environment while still ensuring users of these services are properly protected. Specifically, the Banking Act was amended two years in a row.

The May 2016 revision of the act allows financial companies to invest in finance-related IT start-ups. Through the May 2017 revision, J-FSA facilitates innovation between financial institutions and fintech companies via a publicly available application programming interface, which gives developers access to proprietary software. With this open API initiative as the core tool, co-operation between fintech companies and financial institutions is expected to broaden while user protection is guaranteed.



Fintech hub

In recent years, there have been many attempts to commercialise blockchain technologies in various areas. To support innovation, J-FSA established the Fintech Proof of Concept Hub. Under this framework, J-FSA will set up a special working team for each selected proof of concept project, in co-operation with the relevant authorities as necessary. A special team will continually support each project by giving advice on issues related to compliance and supervision.

Fintech promotes the globalisation of financial activities. In this context, it is important for regulators to co-operate effectively internationally. To strengthen the international network, J-FSA has exchanged letters about establishing a FinTech Co-operation Framework with the Financial Conduct Authority in the UK, the Monetary Authority of Singapore, the Australian Securities and Investments Commission, the Financial Services Regulatory Authority of the Abu Dhabi Global Market (the financial free zone in the emirate), and the Swiss Financial Market Supervisory Authority.

The framework will have three functions: a referral mechanism, support for fintech companies and information-sharing between regulators. J-FSA hopes this framework will help innovative fintech startups to expand their businesses globally.

Cross-sectoral approach

Rapid progress in the field of information technology has brought about changes in the financial system, encouraging the unbundling and restructuring of services.

Taking such changes into account, a study group that advises the J-FSA is discussing a shift from an entity-based regulatory framework to a function-based, cross-sectoral one. In such a system, the same regulations would apply to activities with the same functions and risks, paying attention to a right balance between innovation and user protection.

Innovation will continue to create new problems for regulators, making it difficult to deliver consistent responses. The fundamental point is that regulators must always be guided by their ultimate goal: promoting national welfare by contributing to the sustainable growth of wealth and the economy. For the J-FSA and others, this must remain the key criterion for success. ●

Motokazu Kasahara is Finance Attaché at the Embassy of Japan in Singapore and former Deputy Director of the Financial Services Agency, Japan.

Sharing insights on AI in finance

Financial institutions withholding expertise in disruptive technology

Huy Nguyen Trieu
Centre for Finance, Technology and Entrepreneurship

The problem with innovations is that it is difficult to identify which will have a meaningful impact on the market. Will widely-heralded blockchain technology transform finance? What about quantum computing? Timing is one of the most important factors in determining which innovations will thrive; a bad idea today could become society-changing five years later.

Artificial intelligence, for one, was a topic of much fraught discussion and attention in the 1990s around the time of the dotcom bubble, and has again become a popular subject over the last few years. But is it for real this time, or is it just hype? Having advised many companies on AI and the use of machine learning for credit scoring, algorithmic trading or relationship management, I would summarise my views as follows: AI will be the single largest technology change in finance.

Competitive innovation

As co-founder of the Centre for Finance, Technology and Entrepreneurship, an education platform that trains professionals to navigate technological disruption in financial services, launching a course on AI seemed the natural next step.

This was not my first experience designing online courses, but it was the most difficult, given the dearth of industry specialists with deep knowledge of both AI and finance. In our search for lecturers, we discovered that there were fewer than 10 AI experts working in finance in many countries.

But there was a greater problem. When we found appropriate experts, some were reluctant to speak, or their organisations were not keen for them to share their knowledge. This is not a novel experience – not everybody wants or has the time to contribute – but it was much more common in setting up the AI course than in previous financial technology programmes.

It wasn't until I spoke with Stephan Murer that I understood why. Until last year, Murer was global chief technology officer at UBS. The bank has been very active in fintech, and particularly in blockchain – one of the many areas that Murer oversaw.

Murer is a senior lecturer on the CFTE 'AI in finance' course. When we discussed the challenge of convincing AI experts to share their insights, he said, 'It's normal, because AI is a competitive innovation.' As he described it, there are two types of innovation in financial services: system innovation and competitive innovation. System innovation requires collaboration between many industry players to be effective – take, for example, Swift, the interbank messaging provider that handles around half of all global high value cross-border payments, which can only work if many organisations use it. Competitive innovation, on the other hand, benefits the banks that are best equipped to exploit technological advances.

> 'Having advised many companies on AI and the use of machine learning for credit scoring I would summarise my views as follows: AI will be the single largest technology change in finance'.

In the case of system innovation, banks want to promote widespread adoption of the technology, and at the same time don't want to spend too much money investing in a technology that doesn't give them an advantage. On the other hand, for competitive innovation, financial institutions want to keep the technologies to themselves.

Both types of innovation can be seen today in two important areas of fintech development. Blockchain is an example of system innovation, while AI exemplifies competitive innovation.

There are very many AI initiatives in banks – many more than blockchain – but financial institutions don't share details about these projects. Despite the high volume of resources being poured into AI, most people are likely to miss its real impact on financial services until institutions begin to disseminate more information. ●

Huy Nguyen Trieu is the co-founder of the Centre for Finance, Technology and Entrepreneurship, the CEO of The Disruptive Group, an Associate Fellow at Oxford, and a former MD at Citi.

European money growth figures worrying

Weak credit growth and end of ECB asset purchases herald 'monetary cliff'

Juan Castañeda and Tim Congdon
Institute of International Monetary Research

Latest money data for the US (from April) and euro area (from March) were superficially less worrying than earlier in 2018. Money growth picked up in the US, despite the rise in the pace of the Federal Reserve's asset sales. Meanwhile, M3 (a measure of cash that is readily available to spend) in the euro area rose €30bn in March, compared with €8bn, €49bn and €2bn respectively in December, January and February.

The pace of the Fed's asset sales is due to increase again in the third and fourth quarters of 2018. More seriously, the growth of domestic credit in the euro area is declining as the European Central Bank curtails its asset purchases. The ostensibly stronger money figure in March reflected a boost from euro area banks' external transactions of €75bn. Without that, M3 would have fallen heavily.

Euro area money and credit developments in the 2010s can be viewed as a validation of the monetary approach to the balance of payments. Between 2010-14, domestic credit expansion (DCE) was weak or even negative. Fiscal austerity partly explains this, but more fundamental were the regulatory demands for higher capital-to-asset ratios in the banking industry. DCE impeded money growth and hence increases in domestic demand and output. In 2016, the ECB's asset purchases transformed this position: DCE was positive by more than €800bn, whereas the net external influence on money growth was negative by around €275bn.

The ECB will halve its monthly asset purchases after September and phase them out entirely by year's end. The international regulatory officialdom still believes banks are stronger and 'more resilient' if their capital-to-asset ratios are higher. There are rumours that a possible Basel IV capital standard will be even more stringent than Basel III. Banks' credit extension to the private sector may decline just as ECB asset purchases terminate.

On this basis, the ECB in late 2018 and early 2019 could face a 'monetary cliff' as credit and money both plunge into contraction. In that case, the euro area might pull in balances from the rest of the world to mitigate the money squeeze. However, the currency union would become a monetary 'black hole', and the process of monetary adjustment would spread the deflationary impact to other economies.

Despite a small upturn in inflation, the data do not present a case for major tightening of monetary policy. Policy settings in the main world economies signal a lower inflation rate in early 2020 than today. Moreover, zero or negative DCE in the euro area from late 2018 signals trouble in 2019.

Developments in Italy and Spain have aggravated their banking systems' funding problems. This, combined with the conclusion of the ECB's asset purchases, which have included large quantities of Italian and Spanish bonds, will exacerbate both Target-2 imbalances and borrowing costs in the euro area's third and fourth largest economies.

Juan Castañeda is Director and Tim Congdon is Chairman of the Institute of International and Monetary Research. **For a more detailed analysis of the latest money trends in different countries, see the IIMR monthly report at https://www.mv-pt.org/monthly-monetary-update**

Worldview

This month's expert analysis

Amundi and IFC launch the world's largest green bond fund

Frédéric Samama
Co-Head of Institutional Clients Coverage,
Amundi Asset Management

Climate change is increasingly on the radar of major long-term investors. Nevertheless, there remains a lack of products to help clients align their portfolios with a low carbon economy.

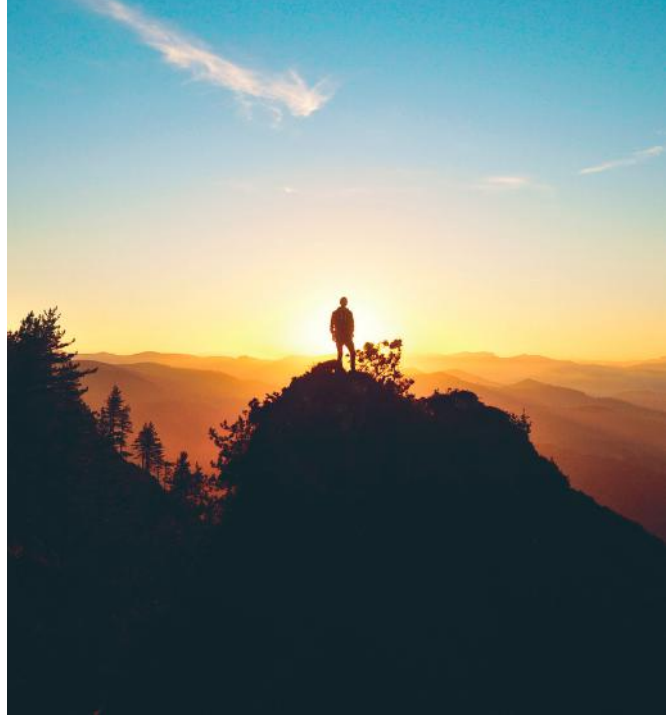
With that in mind, Amundi is proud to have been selected by the International Finance Corporation through a global tender offer to launch a $2bn strategy to deploy a green bond fund in emerging markets, called Amundi Planet Emerging Green One (AP EGO).

AP EGO is now the world's largest green bond fund. The previous incumbent stood at $345m. The fund addresses the gap between the low yield environment in developed markets and the extensive green infrastructure financing needs of emerging markets.

The fund combines an IFC risk sharing mechanism in the junior tranche, which offers private institutional investors an appropriate risk-return profile from the senior tranche in line with emerging market debt premia, with a strategic emphasis on current and prospective domestic financial institutions issuing green bonds. By focusing on green bonds issued by banks, investors are only exposed to the risks associated with the financial institution and not the infrastructure projects themselves. Banks play the role of intermediary, offer some diversification, complete the due diligence and implement the necessary currency swaps. Investors can thereby enter into emerging markets and green infrastructure financing, both of which are commonly labelled as 'too risky'.

The fundraising campaign following the launch of AP EGO in February 2018 accumulated $1.4bn from 16 institutional investors. The committed investor base includes, among many other institutions: Alecta, Sweden's largest pension fund; ERAFP, the French public-service supplementary pension scheme; Crédit Agricole Assurances; the IFC; the European Investment Bank; and the European Bank for Reconstruction and Development. This marks a strong commitment to green finance and, for some, a first move into green bonds or emerging markets.

AP EGO is the only green bond fund solely focused on investing and developing the green bond market in emerging countries. The IFC is operating an innovative supply side work stream to augment the fund's investments, complementing the project with the first comprehensive programme combining an 'ecosystem approach' to green bonds.



As the leading European asset manager, with more than $1.7tn of assets under management, Amundi takes seriously its responsibility to helps clients align their portfolios with low carbon initiatives.

The IFC's technical assistance facility will foster the development of green bonds aligned with international standards and the green bond principles. It aims to deliver: training to emerging market bankers; transaction support for green bond issuers' external reviews and impact reporting; and global and regional events to bring together local banks, investors, market practitioners and policy-makers.

The deal facilitates the growth of a new business model for financial institutions: instead of directly financing projects on their balance sheet, the balance sheet is used to unlock other investor capabilities. AP EGO has attracted attention from global leaders including Jim Yong Kim, president of the World Bank, and French President Emmanuel Macron, mirroring the burgeoning efforts of the public and private sector to complement one another's climate finance strategies.

As the leading European asset manager, with more than $1.7tn of assets under management, Amundi takes seriously its responsibility to help clients align their portfolios with low carbon initiatives. After pioneering the first low carbon indexes and creating joint ventures with the EDF and CEA to finance green infrastructure in Europe and innovative green start-ups, Amundi is proud to have deployed this proof of concept on how to finance green infrastructures in emerging markets.

amundi.com

Developing economies face tantrums

Dollar strengthening and political uncertainty impair emerging markets

Otaviano Canuto
Advisory Council

The addition of a fourth US rate rise to the Federal Reserve's 2018 dot-plot graph after the June meeting of the Federal Open Market Committee sparked a bout of portfolio outflows from emerging markets. This followed a fleeting upswing at the beginning of the month that fell short on reversing the unwinding of exposure and sell-off of assets in May. Country differentiation has been accentuated, with exchange rate devaluation pressures and capital outflows occurring more notably in economies exhibiting higher vulnerability to sudden stops in foreign finance.

Since April I can single out at least three different factors that have led to sudden bursts of fears among investors of losses in portfolios in individual emerging markets. First, there is the 'dollar tantrum'. Argentina and Turkey were the two major cases of a rout in May, and they entered the current phase of rising US Treasury yields and dollar values sharing weaknesses. Their current account deficits had deteriorated substantially in the recent past. Since the 2013 'taper tantrum', Argentina's current account deficit has jumped to levels comparable to those of the then 'fragile five' (Brazil, India, Indonesia, South Africa and Turkey), while Turkey was the only one among the five countries to have remained there.

In both cases, inflows of foreign direct investment fall significantly short of covering the gap in the basic balance of payments. Because of structural current account deficits that are not financed by FDI but rather by hot capital inflows, both countries have featured low levels of reserve adequacy.

Another common feature they share is that their dollar-denominated debt as a share of GDP makes them more fragile in the light of the dollar's strength over recent months, while corresponding debtors in both economies do not have a 'natural hedge' in terms of dollar revenues. Ultimately, currency mismatches on dollar-denominated debtors' balance sheets have made them prone to shocks arising from dollar strengthening.

This combination of dollar-denominated debt and low levels of reserve adequacy in Argentina and Turkey made both economies highly sensitive to the effects of the mid-April US Treasury yield spike. Under such circumstances, any events seen as undermining commitment to appropriate policies could trigger an unwinding of positions by asset holders. This occurred in both countries amid rising doubts about their commitment to monetary policy targets.

Second, there is the impact of a 'political tantrum' on capital outflows and exchange rate depreciation pressures in Mexico and Brazil. For the latter, although balance of payment conditions are relatively sound and confidence in monetary policy is high, prevailing fiscal trends highlight Brazil's weakness in the absence of public expenditure reforms. Recent polls unfavourable to candidates committed to such reforms who will stand in October's general election have fed fears leading to portfolio rebalancing away from Brazilian assets. In response, the central bank sold a large amount of local currency-denominated foreign currency swaps to allay volatility and capital outflows.

A third source of shock is a 'trade tantrum'. Concerns about spillovers from the US-China trade war on global value chains have affected asset values in some Asian economies.

> 'A combination of dollar-denominated debt and low levels of reserve adequacy in Argentina and Turkey made both economies highly sensitive to the effects of the mid-April US Treasury yield spike.'

Raft of risks

The baseline scenario for emerging markets is that GDP growth is likely to decelerate in the near term. Portfolio rebalancing and exchange rate realignment tend to worsen the growth-inflation trade-off.

Heavy dependence on continued external financing is concentrated in just a few emerging markets. Only a few countries have balance of payments deficits that point to critical vulnerabilities, and overall reserve adequacy is close to its record high. To some extent, the weight of FDI in the composition of capital flows should make emerging markets more resilient against the impact of global portfolio rebalancing.

This view is subject to several risks associated with further US yield spikes and dollar appreciation. Investors will need to remain aware, too, of the effects of the Fed's balance sheet unwinding, in tandem with rising US bond issuances. Depending on financial market conditions and risk appetite, there might be some crowding-out pressures on emerging market bond holdings, particularly if the Fed decides to speed up its balance sheet 'normalisation'. ●

Otaviano Canuto is an Executive Director of the World Bank and a Member of the OMFIF Advisory Council. The opinions expressed in this article are his own.

Tale of two vice-chairs

Powerful economists will flank Powell, but he remains his own man

Darrell Delamaide
US Editor

In mid-June, John Williams took office as head of the New York Federal Reserve Bank, becoming the ex officio vice-chair of the Federal Open Market Committee. The New York Fed chief, unlike any of the other 11 regional heads, is a permanent voting member of the FOMC. This privilege comes from the fact that the New York bank executes all market operations to implement monetary policy.

Also in mid-June, the Senate Banking Committee approved the nomination of Columbia University economist Richard Clarida as vice-chair of the board of governors, virtually ensuring his confirmation in a full Senate vote.

This means that Fed Chair Jay Powell, the first non-economist Fed chief in 30 years, will be flanked by two academic economists. Moreover, the board of governors will be closer to its full complement of seven. In addition to Clarida, the Senate committee acceded to the nomination of bank regulator Michelle Bowman. In short, Fed governance and monetary policy are both slowly normalising.

Powell has already demonstrated that he is confident in his own opinions. The support of two economists may prove helpful, but the Fed chair is not likely to be a puppet. Williams has recently floated the idea of price-level targeting as an alternative to a fixed inflation target of 2%. Powell, at his press conference after the June FOMC meeting, quickly dismissed the idea.

Defending the inflation target, Powell said, 'We feel that that target has served the economy well and I'm strongly committed to it.' On price-level targeting, he said, 'This is an idea that's been written about for many years. It's not something that the committee has looked at seriously.'

Williams may have other theories he wants to test, but will have to make a strong case to convince Powell. At the European Central Bank's annual symposium in Portugal in June, Powell said that earlier cycles of low unemployment leading to higher inflation don't seem to apply now as inflation expectations seem to be 'well anchored'. Otherwise, he reiterated his conviction that conditions were right for gradual rate increases.

No signs of inflation pressure

The important news coming out of the June FOMC meeting was the dot-plot graph indicating two further rate rises this year after the two in March and June. 'The main takeaway is that the economy is doing very well,' Powell said in opening the press conference. 'Most people who want to find jobs are finding them, and unemployment and inflation are low.'

As for inflation, Fed policy-makers rely on the personal consumption expenditures index from the commerce department rather than the consumer price index from the labour department. Core PCE – which eliminates volatile food and energy prices – was only 1.8% in April, short of the Fed's 2% target.

The FOMC statement noted that inflation would be running 'near' the 'symmetric' 2% target in the medium term. 'Symmetric' indicates the Fed is willing to overshoot the target for a time because inflation has been low for so long.

Powell said the committee's view on inflation hadn't changed since March – there are still no signs of any significant pressure. The median forecasts from FOMC members puts core inflation for 2018 at 2%, little changed from 1.9% in March. It rises to only 2.1% in 2019 and 2020, according to members' projections.

Raphael Bostic, Atlanta Fed chief, echoed Powell in a speech he gave the following week. The economy is in good shape, he said, but not in risk of overheating. Even though unemployment is low, it is difficult to determine the 'natural rate' of unemployment, Bostic argued. In any case, there is no sign of it leading to inflation.

> **30**
> The number of years since a non-economist was last appointed Fed chief

'I do hear some reports of planned accelerations in wages and salaries. But just as often, I hear that the issue is one of attracting sufficiently qualified workers. In these cases, firms are focusing on developing and training internal candidates and increasing investments in automation,' said Bostic. He added that progress in this direction encouraged him to embrace a 'neutral' position in monetary policy, neither accommodative nor restrictive.

Governor Lael Brainard suggested that as tightening continues it could go somewhat beyond neutral to restrictive. Speaking in New York, she said, 'This outlook suggests a policy path that moves gradually from modestly accommodative today to neutral – and, after some time, modestly beyond neutral – against the backdrop of a longer run neutral rate that is likely to remain low by historical standards.' ●

Darrell Delamaide is a writer and editor based in Washington.

Fed and ECB risk being caught off guard

Tightening ignores troubles in emerging markets and Italy

Desmond Lachman
American Enterprise Institute

In 2008, both the Federal Reserve and European Central Bank were caught off guard by the Lehman Brothers bankruptcy that led to the worst global economic recession in the postwar period. Judging by their respective decisions on 14 June to tighten their monetary policy stances, it seems both risk once again being caught out by impending crisis.

A striking feature of the Federal Open Market Committee's policy statement justifying the shift to tighter US policy was its lack of comment on the worsening of global economic conditions. Instead, in unqualified terms it justified its view that an additional US interest rate rise is needed this year on the grounds that the US economy is strong and that inflation is likely to approach the Fed's target.

The Fed's seeming indifference to developments abroad is even more surprising considering how significantly the external situation has deteriorated since the FOMC's last meeting. US steel and aluminium tariffs, together with the threat of automobile tariffs, have dealt a blow to European investor confidence and raised the spectre of a trade war.

At the same time, the installation of a populist government in Rome has put Italy, the euro area's third largest economy and the country with the world's third largest sovereign bond market, on a collision course with core European countries. This could presage a return of the euro area sovereign debt crisis and raise existential questions about the single currency. To underline this, over the past month Italian government bond yields have climbed higher and Italian capital flight has increased.

Emerging volatility

The Fed is also seemingly indifferent to a decline in the emerging market outlook. The currencies of Argentina, Turkey, Brazil, Mexico and South Africa are all under intense pressure that could threaten these markets' economic recoveries. With contentious elections scheduled in each of these economies for this year and next, the plight of emerging markets looks set to deteriorate further.

Like the Fed, the ECB seems to be following a questionable line of thinking. Its decision to end its bond buying programme by the end of the year is ill-advised in the light of tense trade relations with the US and troubles in Rome. It would have been more suitable to wait and see how the protectionist cycle and Italian situation play out before removing a key source of support from the overall European economy, which includes purchasing around €3.5bn of Italian bonds each month. The decision to end the programme will complicate the delivery of ECB support if Italy comes under severe market pressure.

The Fed and ECB are mandated to run policies aimed at meeting their respective domestic economic policy objectives. However, the 2008 financial crisis should have taught central bankers that no modern economy exists independently of others, and that events abroad can have a material impact on any country's economic outlook. By not focusing on the rapidly deteriorating international economic outlook, the Fed and the ECB risk failing to deliver on their respective mandates. ●

Desmond Lachman is a Resident Fellow at the American Enterprise Institute. He was formerly a Deputy Director in the International Monetary Fund's Policy Development and Review Department and the Chief Emerging Market Economic Strategist at Salomon Smith Barney.

'The currencies of Argentina, Turkey, Brazil, Mexico and South Africa are all under intense pressure that could threaten these markets' economic recoveries.'

Few jobs for young Italian men

Stable aggregate employment masks shifts in workers' age and gender

Filippo Cartiglia and Mario Re
Arrowgrass Capital Partners

Over the 10 years from late 2007 to late 2017, total employment in Italy has increased by just 129,000. This statistic confirms that the country's economy has grown much more slowly than the rest of Europe in the aftermath of the 2008 financial crisis.

Large shifts in the composition of employment lie behind a broadly stable aggregate. Employment has shifted from the young to the old and from men to women. In 2017 the employment rate (the ratio of people in employment over the total population) was 58%, slightly below the peak of 58.6% before the crisis.

However, there were 3.1m more workers aged over 45 and 3m fewer workers aged 15-44, bringing about a sharp increase in youth unemployment. The number of employed women increased by 591,000, while the number of employed men decreased by 462,000. There is still a significant employment-rate gap in favour of men for all age groups.

Male employment was hit harder by the recession, whereas female employment rose to an all-time high of 48.9% over the decade. As illustrated in the table, this period has been particularly difficult for younger (15-44) men. Employment declined by 2m (equivalent to a 23% decline relative to the end of 2007). In contrast, the number of older (45+) women in work increased by 1.7m (equivalent to a 52% rise relative to the end of 2007).

The same pattern was seen in the UK, with two possible explanations for both countries: the gender pay gap and gender differences between sectors. During the recession, struggling companies may have decided to lay off male workers, who are paid more, and replace them with female workers, who are typically paid less, to save costs. It is also likely that the recession hit industries where male employment is higher, such as manufacturing and construction, harder.

Pension reform

The participation rate, the sum of those with a job and those looking for a job, has increased considerably in Italy, going from about 65% in late 2007 to 69.6% at the end of 2017. This was driven mainly by the Fornero pension reform introduced in late 2011, which increased the effective pension age for both men and women. However, Italy's participation rate is still well below the average for the Organisation for Economic Co-operation and Development.

Pension reform has a large positive impact on long-term growth prospects and was needed to put public finances on a more sustainable path. Having said that, the reform-mandated postponement of retirement for older workers may have reduced job openings for the young.

It is possible that as older workers had to retire later, companies with stagnant manpower needs hired fewer younger workers.

Some observers, noting that the aggregate employment rate for 15-64 year olds is close to record highs, might infer that the underutilisation of labour must be small and that wage inflation pressures are likely to increase if employment growth persists. We would disagree strongly.

First, the increase in female employment is due to long-term trends that are likely to continue in the years ahead. Second, the sharp increase in the unemployment rate among the young – currently close to 35% in the 15-24 age group and 17% in the 25-34 age group – is clearly involuntary. Third, increased participation by older workers reflects a permanent structural change, unless the pension reform is reversed.

We believe there is a large amount of slack in the Italian labour market. With the aggregate participation rate in Italy still well below the OECD average, it has room to grow significantly. ●

Filippo Cartiglia is Chief International Economist and Mario Re is Equity Research Intern at Arrowgrass Capital Partners.

Strong employment growth for women over 45
Incremental workers matrix by age and gender, 2007-2017

2007-17 (thousands)		Age group		Total
		15-44	45+	
Genders	Males	-1915 (-22.6%)	+1452 (+27.2%)	-462 (-3.3%)
	Females	-1070 (-18.2%)	+1661 (+51.8%)	+591 (+6.5%)
Total		-2985 (-20.8%)	+3113 (+36.4%)	+129 (+0.6%)

Source: ISTAT and Arrowgrass calculations

When construction contractors collapse

Value of public private partnerships' security packages likely to rise

Garret Tynan
Kroll Bond Rating Agency

The high-profile collapse of Carillion has drawn attention to public-private partnerships. The British construction group was reported to have just £29m in cash but £7bn in liabilities when it was placed into liquidation on 15 January. New partners will need to be found for the affected projects.

In a PPP, a public sector entity (grantor) awards a concession-based contract to a special purpose vehicle owned by private investors (sponsors) to design, construct and operate an asset, such as a school or road, over a defined period. The special pupose vehicle will pass down its obligations to a building contractor and operator.

On any project, delays or cost increases may occur that mean a contractor's parent company has to become involved. If the parent files for bankruptcy, creditors would only have an unsecured claim against its assets. In such circumstances, the other participants may need to protect the project. Considering the size of the PPP market, this has not been necessary very often. Apart from Carillion, another significant example was the withdrawal of Jarvis, the engineering company, from the UK's private finance initiative market in 2004-05.

Most lenders will try to work with the sponsors to complete the project. This is usually the best strategy from a loss-mitigation perspective, as the sponsors have in-depth knowledge of the project, a relationship with the grantor and an incentive to inject additional funding to protect their equity investment. The Jarvis restructuring was complex, but the many parties involved eventually reached agreement on a package that allowed affected projects to proceed to completion.

> 'Most lenders will try to work with sponsors to complete the project. This is usually the best strategy from a loss-mitigation perspective as the sponsors have in-depth knowledge of the project'.

If the original contractor is terminated, then it will need to be replaced. This is especially true for projects that depend on a single entity as opposed to a joint venture. Carillion was a member of the original joint venture appointed to construct the Aberdeen Western Peripheral Route in Scotland. The remaining members, Galliford Try and Balfour Beatty have reportedly taken on 90% of Carillion's employees to deliver the project. In contrast, if a new contractor is appointed to a project, it would probably require a premium and the contract is unlikely to be for a fixed price given the risks attached to completing work started by another party.

Project participants could try to complete construction using only key subcontractors under the guidance of a technical adviser. This is a risky proposition. Unless the works are straightforward, cost over-runs, delays and litigation could affect the long-term viability of the project.

Public sector attitude

The attitude of the public sector is an important factor. PPP contracts are designed to incentivise the private sector to complete construction of an asset. However, the grantor retains the right to take it over if problems occur and lenders fail to step in. In theory, the SPV is entitled to compensation if the contract is terminated, but the mechanisms for calculating these payments are complicated and vary across jurisdictions and sectors.

Recoveries to lenders will be influenced by the importance of the project. High-profile infrastructure projects that provide an essential service may attract government support if the grantor is convinced it is in the best interest of the public and is politically acceptable, as in the case of Reliance Rail in Australia in 2012. Construction delays meant the project faced the risk of a funding shortfall, which could have meant other participants would have been unable to continue supporting it. The confidence created by the New South Wales government's promise of support was a major factor in the project successfully refinancing in 2017 without the need for government funding.

> **£7bn**
> Carillion's liabilities when it was placed into liquidation on 15 January

KBRA believes that the value of security packages for greenfield PPPs across Europe has fallen in recent years as consortia tried to control costs and deliver competitive bids. However, the value can be expected to rise again as lenders digest the implications of Carillion's unfortunate collapse. ●

Garret Tynan is Director and European Head of Infrastructure and Project Finance at the Kroll Bond Rating Agency.

The chart

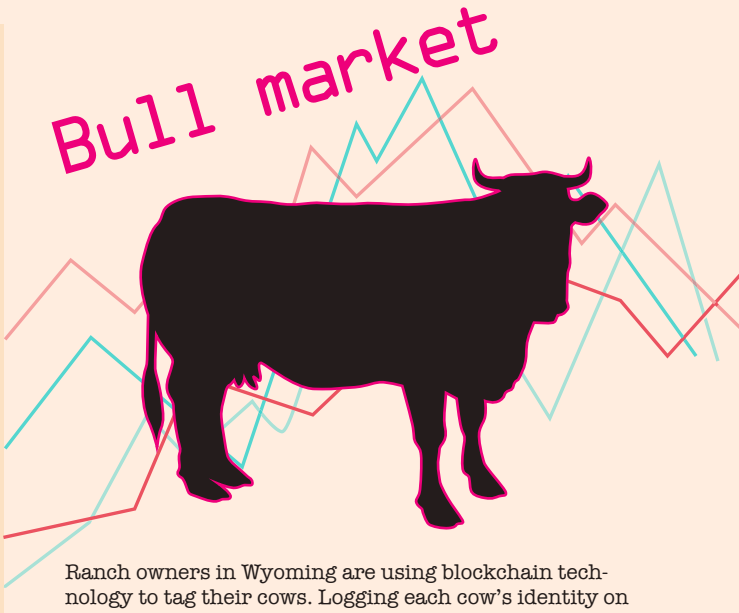
Each month we take a look at a chart from the world's central banks. This month, the People's Bank of China.

Since April, the renminbi has fallen by 4.3% against the dollar to its lowest level in more than six months, accelerating steeply in mid-June even as the dollar itself was weakening. This could be seen as Chinese retaliation against Donald Trump's trade war, helping its exporters remain competitive despite rising tariffs. But it also reflects concern over China's growth prospects and tightening credit conditions. The Shanghai Composite index this year has had its worst performance since 2016 as investors sell their assets, contributing to the slide in the currency's value.

Renminbi falls to 2018 low
Dollars per Rmb, $

Source: People's Bank of China, OMFIF analysis

The digital numbers



Ranch owners in Wyoming are using blockchain technology to tag their cows. Logging each cow's identity on the blockchain helps prove they are of the right quality, allowing for a premium of up to $700 per head. This was made possible by Wyoming passing legislation to create a framework for blockchain and crypto-businesses. It has allowed their ranchers to gain a competitive advantage on rivals in states like Arizona, Michigan and North Dakota, where legislators are yet to enact crypto-friendly laws.

$46bn

The total value of digital crypto-assets wiped out in a cybersecurity incident at a South Korean cryptocurrency exchange in June. The total value of crypto-assets tracked by coinmarketcap.com was around $830bn in January; that value has sunk to $269bn.

Trust, not rules, foundation of central banking

Meghnad Desai

THE aftermath of the 2008 financial crisis led to a boom in one sector in particular – books by central bankers and finance ministers. Former Bank of England Governor Mervyn King, Federal Reserve governors Ben Bernanke and Alan Greenspan, and Hank Paulson, US Treasury secretary between 2006-09, have all written memoirs with explanations for the crisis and prescriptions for the future. Now Paul Tucker, the BoE deputy governor turned academic, has made his contribution.

Unelected Power: The Quest for Legitimacy in Central Banking and the Regulatory State is a massive tome. Unlike his peers, Tucker takes an academic multidisciplinary approach to examining the case for central bank independence. This specific discussion occupies the final 180 pages of *Unelected Power*. Before we get there Tucker takes us through 'the economics of credibility, political science of sectional interests, political theory of legitimacy and the sociology of trust'. My advice is to stick to the last 180 pages and turn to earlier chapters as and when Tucker refers to them. The salient points of the opening sections are, in any case, reproduced in the book's conclusion.

Tucker offers a systematic review of the arguments for central bank independence, as well as a closing segment expressing doubt about its continued relevance in the current low inflationary environment. He refers mostly to the Fed, the BoE and European Central Bank. Other monetary authorities, including the Bank of Japan, are rarely touched on.

It was only after the abandonment of the gold standard by the US in 1971 that the power of issuing money and the creation of credit became a subject of public debate. Inflation was ascribed to the presence of too much money and its causes were traced to wage bargaining. While the possibility of any long-run trade-off between inflation and employment was denied, there was scope for monetary policy to have an impact in the medium term. Central banks could use interest rates to anchor inflationary expectations. After much debate, economists (at least in the US) arrived at a consensus and the 'great moderation' prevailed from the mid-1980s onwards. Central bank independence was a pillar of this consensus.

But independent of what? Tucker sets up a comparison between the military and the judiciary, which are free from daily interference by the state and central bank. What limits can be imposed on an ostensibly autonomous institution? Obviously there must be clarity about the objectives to be pursued and boundaries must be set as to what an agency cannot do. Tucker treats this point at length.

The 2008 crisis was a turning point. Experts on the great moderation failed to anticipate the fallout and US economist Robert Lucas even argued that such crises could not, in theory, be predicted. Serious questions were raised. If central bank independence was granted on the basis of the trade-off of inflation and unemployment, yet the crisis showed that price stability was not sufficient for financial stability, what was the point of central bank independence?

As it happens, it was this independence that gave central bankers and their friends in the finance ministries the clout to act swiftly and flood markets with liquidity. This stopped the crisis from turning into a great depression, though countries were not spared the great recession.

Thus, although central bank independence was underpinned by an inadequate (if not false) theory, it proved useful in tackling the crisis when it happened by unorthodox means. It was not rules – discussed so thoroughly by Tucker – but personalities, especially Bernanke, that did the trick.

This is not to fault Tucker. It is in the nature of an economic problem. For predictable outcomes, rules can be made and boundaries drawn. But uncertainty, as Keynes said long ago, cannot be dealt with in any systematic way. It is only in extreme events, infrequent though they may be, that policy-makers need to improvise. At that stage, what matters is not rules but trust, which markets must have in the probity and capacity of the individuals in charge – the central bank governors. ●

Lord (Meghnad) Desai is Emeritus Professor of Economics at the London School of Economics and Political Science, and Chair of the OMFIF Advisers Council.

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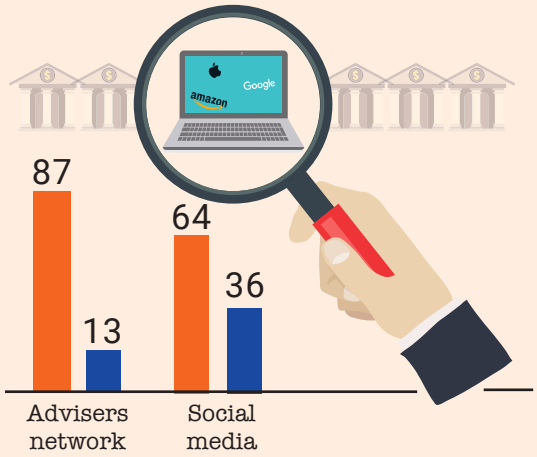
Advisers network poll

Big tech 'must not have a regulatory advantage'

Networks suggest entry into financial products needs scrutiny

Need for same (●) or different (●) financial regulations between banks and 'big tech', % of responses



This month's poll focuses on how best to regulate large technology companies and financial institutions. Participants were asked: **'With companies like Amazon and Google beginning to offer similar services as banks, should 'big tech' be brought under the same regulations?'**

Of those who responded to the advisers network poll, 87% believe there should be parity in regulation between the sectors. Many advisers made it clear that big tech businesses should not be allowed to evade certain financial regulations, especially in areas where user data are concerned. However, some expressed caution that over-regulation could stymie tech companies' ambitions, stifiling innovation and variety for consumers. This is reflected in the 13% of advisers who suggest there should be differing regulations that take into account big tech's unique characteristics.

The social media poll painted a similar picture, with 64% of respondents feeling that the two sectors should have the same regulations.

Big tech may need to be regulated the same way as banks. However, using regulations as unfair obstacles may restrict the entry of big tech in the banking industry.

Hans Blommestein, Vivid Economics

It should not be a competitive advantage to evade regulations that protect consumers.

Irena Asmundson, California Department of Finance

Big tech should be regulated, but on a considered basis, and taking into account the new risks (such as cyber fraud and hacking) that it presents, as well as more traditional risks posed by financial intermediaries.

George Hoguet, CFA

Big tech should be brought under the same regulations. History shows that most fancy new financial innovations result in excesses and financial crises.

John West, Asian Century Institute

They need to be regulated, but the 'same' as other industries may not be appropriate. They should show intent if they wish to claim exemption as a tech provider.

Consuelo Brooke, formerly Soditic Group

All 'banks' should face the same regulatory regime. That said, the lighter, the better.

Steve Hanke, The Johns Hopkins University

September's question:

With many people attributing at least some of the blame for the collapse of services firm Carillion to the 'big four' UK accounting firms, should their oligopoly on the audit market be broken up?