

## The digital money revolution

The rapid pace and sheer scale of innovation in digital currencies and mobile payments indicates that a monetary revolution is forthcoming. The choice for governments and central banks is whether to stand in front of a train that is gaining steam, or get on board and reap the benefits, **writes Huw van Steenis**



### A key battleground in finance

How radically will digital currencies change our methods of exchange and the way that we think about money? With innovation in digital payments barreling ahead, these questions are now commanding the attention of the World Economic Forum and other international institutions.

Regardless of how Facebook's own digital-currency moonshot, Libra, fares, it has already provided a wake-up call for firms and policymakers around the world. "If revolution there is to be, let us rather undertake it than undergo it," Otto von Bismarck once said. The question for policymakers is not whether to try to shape the digital-money revolution, but how.

---

*In China, Alipay and WeChat Pay already control more than 90% of all mobile payments*

---

Digital money is already a key battleground in finance, with technology firms, payment processing companies, and banks all vying to become the gateway into the burgeoning platform-based economy. The prizes that await the winners could be huge. In China, Alipay and WeChat Pay already control more than 90% of all mobile payments. And in the last three years, the four largest listed payment firms – Visa, Mastercard, Amex, and PayPal – have increased in value by more than the FAANGs (Facebook, Apple, Amazon, Netflix, and Google). In a way, Libra is actually crashing the party late.

## Opportunities are clear

The opportunities offered by digital money are clear. Across Western countries, moving money is overly costly and inefficient, and those who end up paying the most are often the ones who can least afford to do so. As I argued in a report for the Bank of England (BOE) earlier this year, improving these processes could yield significant returns and social benefits.

Moreover, the needs – the potential returns – are even greater in many emerging markets, particularly when it comes to cross-border payments. According to the World Bank, the average cost of sending international peer-to-peer remittances averages around 7% of the sum. Efforts to improve the main payment channels are ongoing. TransferWise, for example, claims to have reduced the average cost of cross-border transfers for its clients to 0.74%. But less well-trodden routes remain a challenge, owing to the hurdles posed by anti-money-laundering rules and poor data quality.

---

*Some central banks have begun to explore the option of issuing their own digital tokens*

---

Given the concerns that Libra has raised, some central banks have begun to explore the option of issuing their own digital tokens. Others are studying the thorny legal and regulatory challenges posed by digital money, so that they can safeguard monetary and financial stability. For her part, Lael Brainard, a governor on the US Federal Reserve Board, recently suggested that the risks of cryptocurrencies outweigh the benefits. By contrast, the People's Bank of China is forging ahead – though not toward the decentralized or “permissionless” blockchain model envisioned by crypto enthusiasts. The PBOC wants to use cryptography to issue tokens to mainstream banks, which will then be passed on to customers within the existing two-tiered banking system.

## Five recommendations on digital money

Hence, if the European Central Bank (or others) wanted to be the first central bank to issue digital money, the opportunity is there for the taking. To policymakers considering the options presented by digital money, I would offer five recommendations from my BOE report.

First, monetary authorities should create the infrastructure to enable alternative payment methods to connect to one another. The private sector can flourish when central banks act as a platform for innovation, as BOE Governor Mark Carney has shown by granting non-bank payment firms access to the BOE payments system. But success will depend on how easily new providers can access the central-bank infrastructure, which will require well-designed application

programming interfaces through which to receive and share information.

---

*Success will depend on how easily new providers can access the central-bank infrastructure*

---

Second, policymakers should usher in the next generation of payments regulation. Rules need to be updated to reflect the increasing complexity and shifting risks of the current system. As the cost of payments falls, the value of data will grow. Yet existing rules pertaining to data sharing, security, and liability are mostly rudimentary. Given the flurry of new entrants, there is a case to be made for tiering regulation – as the Singaporeans have done – and stress-testing payment firms for their financial resilience and cyber-security protections.

Third, governments need to champion better digital identification, which is essential to improving financial inclusion, curbing cyber fraud, and reducing costs. Some countries have already made impressive progress on this front. India, for example, has largely cracked the identification problem with its Aadhaar program, which dramatically simplifies the process through which networks can know their customers. Countries that do not have a tradition of issuing national ID cards have more work to do, but their governments can cooperate with the private sector, or use existing high-quality national data sets such as passport and tax numbers.

---

*Existing rules pertaining to data sharing, security, and liability are mostly rudimentary*

---

Fourth, all countries need to support stronger messaging standards to improve cross-border payments, reduce costs, and prevent fraud. Just as postal codes help mail get to the right place, so too could better tagging of payment senders and recipients.

Fifth, and critically, policymakers need to create a roadmap for the decline of cash. In Sweden, cash payments have fallen by 80% over the past decade, and many other developed markets are just 5-10 years behind. Digital payments bring many benefits, but the Swedish experience shows that without a coordinated plan, the pace of change risks excluding some groups in society. As payment habits shift, each country will need a strategy to improve its payments infrastructure – including broadband and mobile-telephony networks – so that no one is left behind.

## Benefits outweigh the risks

Payments innovation is moving at a dizzying pace. Some ideas may fail to get off the ground, while others may need to pivot to become commercially viable. Other issues, like market dominance or cyber-security risks, will undoubtedly become more prominent in policy debates. On balance, however, the economic and social benefits of a frictionless, fraud-free, and trusted global payments system will likely outweigh the risks.

[This article first appeared in Project Syndicate on 13 November, 2019](#)

## Author

**Amrita Naik Nimbalkar**

Junior Economist, Global Macro

[amrita.naik.nimbalkar@ing.com](mailto:amrita.naik.nimbalkar@ing.com)

**Mateusz Sutowicz**

Senior Economist, Poland

[mateusz.sutowicz@ing.pl](mailto:mateusz.sutowicz@ing.pl)

**Alissa Lefebvre**

Economist

[alissa.lefebvre@ing.com](mailto:alissa.lefebvre@ing.com)

**Deepali Bhargava**

Regional Head of Research, Asia-Pacific

[Deepali.Bhargava@ing.com](mailto:Deepali.Bhargava@ing.com)

**Ruben Dewitte**

Economist

+32495364780

[ruben.dewitte@ing.com](mailto:ruben.dewitte@ing.com)

**Kinga Havasi**

Economic research trainee

[kinga.havasi@ing.com](mailto:kinga.havasi@ing.com)

**Marten van Garderen**

Consumer Economist, Netherlands

[marten.van.garderen@ing.com](mailto:marten.van.garderen@ing.com)

**David Havrlant**

Chief Economist, Czech Republic

420 770 321 486

[david.havrlant@ing.com](mailto:david.havrlant@ing.com)

**Sander Burgers**

Senior Economist, Dutch Housing

[sander.burgers@ing.com](mailto:sander.burgers@ing.com)

**Lynn Song**

Chief Economist, Greater China

[lynn.song@asia.ing.com](mailto:lynn.song@asia.ing.com)

**Michiel Tukker**

Senior European Rates Strategist

[michiel.tukker@ing.com](mailto:michiel.tukker@ing.com)

**Michal Rubaszek**

Senior Economist, Poland

[michal.rubaszek@ing.pl](mailto:michal.rubaszek@ing.pl)

**This is a test author**

**Stefan Posea**

Economist, Romania

[tiberiu-stefan.posea@ing.com](mailto:tiberiu-stefan.posea@ing.com)

**Marine Leleux**

Sector Strategist, Financials

[marine.leleux2@ing.com](mailto:marine.leleux2@ing.com)

**Jesse Norcross**

Senior Sector Strategist, Real Estate

[jesse.norcross@ing.com](mailto:jesse.norcross@ing.com)

**Teise Stellema**

Research Assistant, Energy Transition

[teise.stellema@ing.com](mailto:teise.stellema@ing.com)

**Diederik Stadig**

Sector Economist, TMT & Healthcare

[diederik.stadig@ing.com](mailto:diederik.stadig@ing.com)

**Diogo Gouveia**

Sector Economist

[diogo.duarte.vieira.de.gouveia@ing.com](mailto:diogo.duarte.vieira.de.gouveia@ing.com)

**Marine Leleux**

Sector Strategist, Financials

[marine.leleux2@ing.com](mailto:marine.leleux2@ing.com)

**Ewa Manthey**

Commodities Strategist

[ewa.manthey@ing.com](mailto:ewa.manthey@ing.com)

**ING Analysts**

**James Wilson**

EM Sovereign Strategist

[James.wilson@ing.com](mailto:James.wilson@ing.com)

**Sophie Smith**

Digital Editor

[sophie.smith@ing.com](mailto:sophie.smith@ing.com)

**Frantisek Taborsky**

EMEA FX & FI Strategist

[frantisek.taborsky@ing.com](mailto:frantisek.taborsky@ing.com)

**Adam Antoniak**

Senior Economist, Poland

[adam.antoniak@ing.pl](mailto:adam.antoniak@ing.pl)

**Min Joo Kang**

Senior Economist, South Korea and Japan

[min.joo.kang@asia.ing.com](mailto:min.joo.kang@asia.ing.com)

**Coco Zhang**

ESG Research

[coco.zhang@ing.com](mailto:coco.zhang@ing.com)

**Jan Frederik Slijkerman**

Senior Sector Strategist, TMT

[jan.frederik.slijkerman@ing.com](mailto:jan.frederik.slijkerman@ing.com)

**Katinka Jongkind**

Senior Economist, Services and Leisure

[Katinka.Jongkind@ing.com](mailto:Katinka.Jongkind@ing.com)

**Marina Le Blanc**

Sector Strategist, Financials

[Marina.Le.Blanc@ing.com](mailto:Marina.Le.Blanc@ing.com)

**Samuel Abettan**

Junior Economist

[samuel.abettan@ing.com](mailto:samuel.abettan@ing.com)

**Franziska Biehl**

Senior Economist, Germany

[Franziska.Marie.Biehl@ing.de](mailto:Franziska.Marie.Biehl@ing.de)

**Rebecca Byrne**

Senior Editor and Supervisory Analyst

[rebecca.byrne@ing.com](mailto:rebecca.byrne@ing.com)

**Mirjam Bani**

Sector Economist, Commercial Real Estate & Public Sector (Netherlands)

[mirjam.bani@ing.com](mailto:mirjam.bani@ing.com)

**Timothy Rahill**

Credit Strategist

[timothy.rahill@ing.com](mailto:timothy.rahill@ing.com)

**Leszek Kasek**

Senior Economist, Poland

[leszek.kasek@ing.pl](mailto:leszek.kasek@ing.pl)

**Oleksiy Soroka, CFA**

Senior High Yield Credit Strategist

[oleksiy.soroka@ing.com](mailto:oleksiy.soroka@ing.com)

**Antoine Bouvet**

Head of European Rates Strategy

[antoine.bouvet@ing.com](mailto:antoine.bouvet@ing.com)

**Jeroen van den Broek**

Global Head of Sector Research

[jeroen.van.den.broek@ing.com](mailto:jeroen.van.den.broek@ing.com)

**Edse Dantuma**

Senior Sector Economist, Industry and Healthcare

[edse.dantuma@ing.com](mailto:edse.dantuma@ing.com)

**Francesco Pesole**

FX Strategist

[francesco.pesole@ing.com](mailto:francesco.pesole@ing.com)

**Rico Luman**

Senior Sector Economist, Transport and Logistics

[Rico.Luman@ing.com](mailto:Rico.Luman@ing.com)

**Jurjen Witteveen**

Sector Economist

[jurjen.witteveen@ing.com](mailto:jurjen.witteveen@ing.com)

**Dmitry Dolgin**

Chief Economist, CIS

[dmitry.dolgin@ing.de](mailto:dmitry.dolgin@ing.de)

**Nicholas Mapa**

Senior Economist, Philippines

[nicholas.antonio.mapa@asia.ing.com](mailto:nicholas.antonio.mapa@asia.ing.com)

**Egor Fedorov**

Senior Credit Analyst

[egor.fedorov@ing.com](mailto:egor.fedorov@ing.com)

**Sebastian Franke**

Consumer Economist

[sebastian.franke@ing.de](mailto:sebastian.franke@ing.de)

**Gerben Hieminga**

Senior Sector Economist, Energy

[gerben.hieminga@ing.com](mailto:gerben.hieminga@ing.com)

**Nadège Tillier**

Head of Corporates Sector Strategy

[nadege.tillier@ing.com](mailto:nadege.tillier@ing.com)

**Charlotte de Montpellier**

Senior Economist, France and Switzerland

[charlotte.de.montpellier@ing.com](mailto:charlotte.de.montpellier@ing.com)

**Laura Straeter**

Behavioural Scientist

+31(0)611172684

[laura.Straeter@ing.com](mailto:laura.Straeter@ing.com)

**Valentin Tataru**

Chief Economist, Romania

[valentin.tataru@ing.com](mailto:valentin.tataru@ing.com)

**James Smith**

Developed Markets Economist, UK

[james.smith@ing.com](mailto:james.smith@ing.com)

**Suvi Platerink Kosonen**

Senior Sector Strategist, Financials

[suvi.platerink-kosonen@ing.com](mailto:suvi.platerink-kosonen@ing.com)

**Thijs Geijer**

Senior Sector Economist, Food & Agri

[thijs.geijer@ing.com](mailto:thijs.geijer@ing.com)

**Maurice van Sante**

Senior Economist Construction & Team Lead Sectors

[maurice.van.sante@ing.com](mailto:maurice.van.sante@ing.com)

**Marcel Klok**

Senior Economist, Netherlands

[marcel.klok@ing.com](mailto:marcel.klok@ing.com)

**Piotr Poplawski**

Senior Economist, Poland

[piotr.poplawski@ing.pl](mailto:piotr.poplawski@ing.pl)

**Paolo Pizzoli**



Senior Economist, Italy, Greece  
[paolo.pizzoli@ing.com](mailto:paolo.pizzoli@ing.com)

**Marieke Blom**  
Chief Economist and Global Head of Research  
[marieke.blom@ing.com](mailto:marieke.blom@ing.com)

**Raoul Leering**  
Senior Macro Economist  
[raoul.leering@ing.com](mailto:raoul.leering@ing.com)

**Maarten Leen**  
Head of Global IFRS9 ME Scenarios  
[maarten.leen@ing.com](mailto:maarten.leen@ing.com)

**Maureen Schuller**  
Head of Financials Sector Strategy  
[Maureen.Schuller@ing.com](mailto:Maureen.Schuller@ing.com)

**Warren Patterson**  
Head of Commodities Strategy  
[Warren.Patterson@asia.ing.com](mailto:Warren.Patterson@asia.ing.com)

**Rafal Benecki**  
Chief Economist, Poland  
[rafal.benecki@ing.pl](mailto:rafal.benecki@ing.pl)

**Philippe Ledent**  
Senior Economist, Belgium, Luxembourg  
[philippe.ledent@ing.com](mailto:philippe.ledent@ing.com)

**Peter Virovacz**  
Senior Economist, Hungary  
[peter.virovacz@ing.com](mailto:peter.virovacz@ing.com)

**Inga Fechner**  
Senior Economist, Germany, Global Trade  
[inga.fechner@ing.de](mailto:inga.fechner@ing.de)

**Dimitry Fleming**  
Senior Data Analyst, Netherlands  
[Dimitry.Fleming@ing.com](mailto:Dimitry.Fleming@ing.com)

**Ciprian Dascalu**  
Chief Economist, Romania  
+40 31 406 8990  
[ciprian.dascalu@ing.com](mailto:ciprian.dascalu@ing.com)

**Muhammet Mercan**

Chief Economist, Turkey

[muhammet.mercan@ingbank.com.tr](mailto:muhammet.mercan@ingbank.com.tr)

**Iris Pang**

Chief Economist, Greater China

[iris.pang@asia.ing.com](mailto:iris.pang@asia.ing.com)

**Sophie Freeman**

Writer, Group Research

+44 20 7767 6209

[Sophie.Freeman@uk.ing.com](mailto:Sophie.Freeman@uk.ing.com)

**Padhraic Garvey, CFA**

Regional Head of Research, Americas

[padhraic.garvey@ing.com](mailto:padhraic.garvey@ing.com)

**James Knightley**

Chief International Economist, US

[james.knightley@ing.com](mailto:james.knightley@ing.com)

**Tim Condon**

Asia Chief Economist

+65 6232-6020

**Martin van Vliet**

Senior Interest Rate Strategist

+31 20 563 8801

[martin.van.vliet@ing.com](mailto:martin.van.vliet@ing.com)

**Karol Pogorzelski**

Senior Economist, Poland

[Karol.Pogorzelski@ing.pl](mailto:Karol.Pogorzelski@ing.pl)

**Carsten Brzeski**

Global Head of Macro

[carsten.brzeski@ing.de](mailto:carsten.brzeski@ing.de)

**Viraj Patel**

Foreign Exchange Strategist

+44 20 7767 6405

[viraj.patel@ing.com](mailto:viraj.patel@ing.com)

**Owen Thomas**

Global Head of Editorial Content

+44 (0) 207 767 5331

[owen.thomas@ing.com](mailto:owen.thomas@ing.com)

**Bert Colijn**

Chief Economist, Netherlands

[bert.colijn@ing.com](mailto:bert.colijn@ing.com)

**Peter Vanden Houte**

Chief Economist, Belgium, Luxembourg, Eurozone

[peter.vandenhoute@ing.com](mailto:peter.vandenhoute@ing.com)

**Benjamin Schroeder**

Senior Rates Strategist

[benjamin.schroeder@ing.com](mailto:benjamin.schroeder@ing.com)

**Chris Turner**

Global Head of Markets and Regional Head of Research for UK & CEE

[chris.turner@ing.com](mailto:chris.turner@ing.com)

**Gustavo Rangel**

Chief Economist, LATAM

+1 646 424 6464

[gustavo.rangel@ing.com](mailto:gustavo.rangel@ing.com)

**Carlo Cocuzzo**

Economist, Digital Finance

+44 20 7767 5306

[carlo.cocuzzo@ing.com](mailto:carlo.cocuzzo@ing.com)