

# Top-10 Trends in Commercial Banking: 2018

What You Need to Know



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# Introduction



When compared with retail banking and other industries, commercial banking appeared relatively unscathed by disruption – until recently. However, as corporate customers began to seek more from their banks, things started to change. Intensifying customer expectations have forced banks to reassess their operational, technological, and customer service strategies. Along with mounting customer expectations, new entrants, changing regulations, evolving technology, and a drive toward openness are further transforming the industry landscape, and by extension, the role of banks and their way of working.

While on the one hand, regulators continue to safeguard customers by asking banks to maintain healthy balance sheets, they are simultaneously encouraging bank innovation and opening doors for new market entrants. As a result, these new entrants, such as online marketplace lenders, have carved a niche space for themselves in the industry and are beginning to flourish.

Banks are adopting various approaches to keep pace with industry changes and to ready their systems for the new challenges and opportunities. Banks are overhauling their back-end processes by digitizing processes. Additionally, banks are also leveraging data analytics and automation to streamline their operations as well as have robust risk management processes in place. To save on operational costs and enhance agility for rapid changes, banks are increasingly adopting a hybrid-cloud approach as well.

Given emerging technologies and market dynamics, future-focused banks are upgrading their systems to be more agile and open. New modular systems can leverage Application Programming Interfaces (APIs) to connect with third-parties such as FinTechs to drive innovation, enhance customer experience, and open new business avenues. Collaboration with other entities is fostering bank innovation with an eye on long-standing corporate customer problems such as slower payments and settlement, complex and paper-based trade finance processes, and difficulties in originating and supervising syndicated loans.

The commercial banking industry is expected to evolve rapidly, and banks will have to keep pace with this change, as well as continue to advance their operating models. This document aims to understand and analyze the top-10 commercial banking trends that are expected to drive corporate banking ecosystem dynamics in the coming years.

# Trend 01: Banks Make Significant Investment in Back-Office Digitization

*Banks are reinventing their back-office processes through digitization for better decision making, performance tracking, and customer insights*



## Background

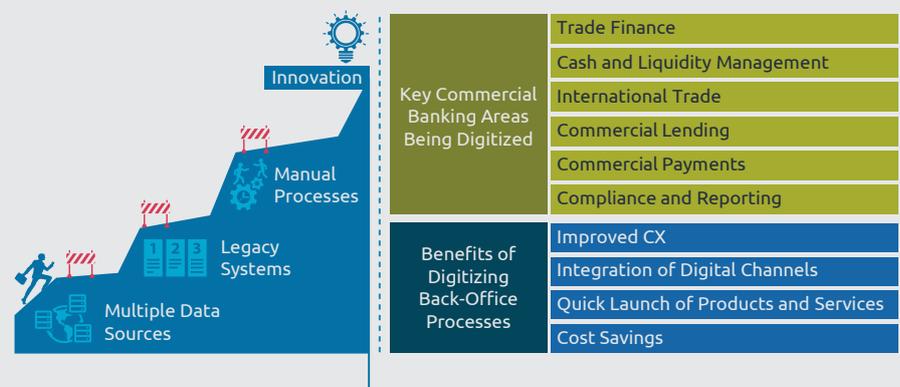
- Among the challenges faced by banks, archaic legacy systems and disconnected paper-based manual processes are limiting innovation, are impacting ability to respond quickly to changing market dynamics, and are resulting in a higher cost base
- Manual processing in the back office is costly and slow, and often leads to inconsistent results, higher error rates, and higher expense
- Emerging technologies have spurred customer expectations in functions across corporate banking, such as trade finance, liquidity management, corporate payments, and international trade



## Key Drivers

- Banks are focusing on agility, optimizing efficiency, and standardizing back-office operations for providing a fast and seamless customer experience
- Digitally-savvy customers seek access to information and assistance – regardless of channels, time, place, and device – which requires quick and agile back-office processes
- A digital and agile IT architecture is required to rapidly scale processes and to quickly launch new products and services
- Digital documentation exchange and automated credit analysis are reducing transaction processing time and costs, potentially paving the way for offering trade finance and corporate credit at lower rates

### Exhibit 1: Back-Office Processes Overview



Source: Capgemini Financial Services Analysis, 2017

## Trend Overview



- Banks across the globe cite digital transformation as a primary strategic priority, yet back-office digitalization hurdles are slowing the process:
  - Banks are moving toward connected systems and away from siloed data sources and manual processes
- Often when banks go digital, they end up improving the front-end customer experience but fail to address their back-office systems and processes
- With digital innovation being imminent, banks are now streamlining their processes by doing away with paper-based processes and digitizing back-office processes to improve liquidity management, credit collection, workflow management, settlements, and efficiently deploy working capital
  - Bank of America Merrill Lynch launched a centralized multicurrency netting solution for corporate and commercial clients. The solution centralizes inter-company payments, thereby reducing both the number and the total value of inter-company payments while simplifying tasks such as invoicing and reconciliation<sup>1</sup>
  - HSBC launched a solution for global supply chain finance wherein purchase orders and invoices can be automatically validated, processed, matched and approved, thereby eliminating paper-based processing and leading to a speedier working capital cycle and efficient processes<sup>2</sup>
  - Commerzbank launched an online multi-banking application - Global Payment Plus, which helps corporates manage all their global bank accounts in the relevant national format from a single application, by retrieving information on their accounts, process them centrally, and managing global transactions<sup>3</sup>

## Implications



- In an increasingly digital ecosystem fraught with various challenges, digitization of operations and back-office processes is now a necessity that banks cannot afford to overlook
- Banks focusing on digitizing only the front-office customer-facing channels will end up with a sub-optimal operating model and not deliver the required customer experience
- Digitizing back-office and manually-intensive processes will help achieve faster processing, better consistency, and reduce costs:
  - Banks that integrate data with back-office processes reduce front-end customer data entries and confirmations
- Efficient back-office transformation will also result in better compliance, conformity to regulations, and quick reporting of policy violations or breaches
- Banks that do not adequately invest in back-office processes risk a negative impact on customer experience, higher operating expenses and error rates, lower time to market, and lost productivity

1 "BoFA Merrill Helps Clients Reduce Costs With Multicurrency Netting", Oct 16, 2017, accessed October 2017 at

<http://newsroom.bankofamerica.com/press-releases/corporate-and-investment-banking-sales-and-trading-treasury-services/bofa-merrill-hel>

2 "HSBC to accelerate global supply chain finance with Matched electronic Purchase Orders", Oct 18, 2017, accessed October 2017 at

<https://www.treasury-management.com/news/1030/hsbc-to-accelerate-global-supply-chain-finance-with-matched-electronic-purchase-orders.html>

3 Commerzbank Global Payment Plus, accessed October 2017 at <https://www.firmenkunden.commerzbank.de/portal/en/gpp-hilfe/guided-tours/guided-tour.html>

# Trend 02: Tech-Powered Marketplaces Connect Borrowers and Lenders, Boost Lending Activity

*Lending marketplaces are gaining prominence as they target underserved segments through faster and competitive offerings*



## Background

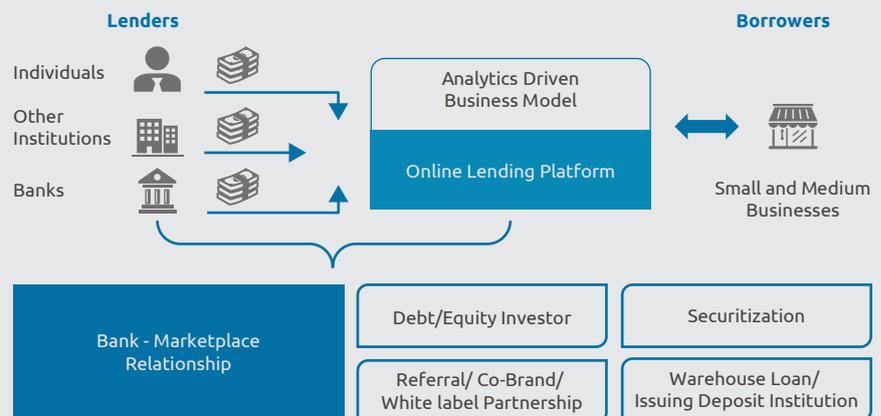
- Post the financial crisis; banks had become more stringent in their lending activities
- This trend was further reinforced by stringent regulations that required banks to maintain healthy, and relatively less risky balance sheets
- This led to market conditions that were ripe for the rise of new segment that enabled lending to firms that were in need of money



## Key Drivers

- Businesses' unfulfilled needs for faster and flexible credit access
- Emergence of advanced technology powered marketplace lending platforms have made it possible to bring stakeholders together and enable lending based on the customized requirements
- Firms are making use of a wide variety of data to move from predictive to prescriptive analytics, thus expediting decision-making
- Operations are run on online platforms and don't require much physical infrastructure and staff, resulting in lower operating costs and higher margins
- Prevailing low-interest rate environment will encourage banks and other institutions to invest more in marketplaces as they yield for higher returns

**Exhibit 2: Rise of Open Marketplace Lending**



Source: Capgemini Financial Services Analysis, 2017



## Trend Overview

- Marketplace lending refers to the use of data-driven online platforms to connect borrowers with lenders/investors
- Though earlier marketplaces were primarily focused on peer-to-peer lending, marketplace lending has witnessed a considerable uptake in institutional participation on both sides of lending
- The scope of loan types has also gone beyond personal loans to include short and long-term funding of various businesses loans such as term loans, lines of credit, equipment financing loans, etc.
- Marketplace firms have pioneered the use of data and technology to create new credit models that enable automated and faster processing with calculated risks
- Higher efficiency, transparency, and returns will continue to attract investors. However, marketplace lending is not fully mature and has yet to be fully tested for risks arising from liquidity, interest rates, credit scoring, and cyber security



## Implications

- Banks will face increased competitive pressure from marketplace lending firms.
- However, banks may consider investing in marketplaces to reap higher returns from the good portfolio spread and without much administrative burden
- Different partnership types: Under referral, partnership banks can mention select borrowers to the marketplace and in co-branded/white-label partnerships banks partner with marketplace lenders to outsource the complete loan process through integrated systems (but originate loans themselves):
  - JP Morgan Chase entered into a white-label partnership with OnDeck to offer small business loans to targeted customers. The loans were written on JPMC's balance sheet, but OnDeck handled all other activities<sup>4</sup>
- Though in its infancy, there is scope for a secondary loan market
- With more marketplace lending, increased regulatory oversight may be necessary to safeguard the interests of all parties and to enhance transparency
- Going forward, marketplaces are expected to command a significant chunk of the market as they attract more and more institutional lenders and also mature in compliance and due diligence processes

4 "Opportunities and Challenges in Online Marketplace Lending", U.S. Department of The Treasury, May 10, 2016, accessed Oct 2017 at [https://www.treasury.gov/connect/blog/Documents/Opportunities\\_and\\_Challenges\\_in\\_Online\\_Marketplace\\_Lending\\_white\\_paper.pdf](https://www.treasury.gov/connect/blog/Documents/Opportunities_and_Challenges_in_Online_Marketplace_Lending_white_paper.pdf)

## Trend 03: Banks Launch 'Adoption-Ready' Blockchain-Based Solutions

*Banks have started trusting blockchain to address pain points related to trade/supply chain finance, KYC/ AML, payments, and lending*

### Background



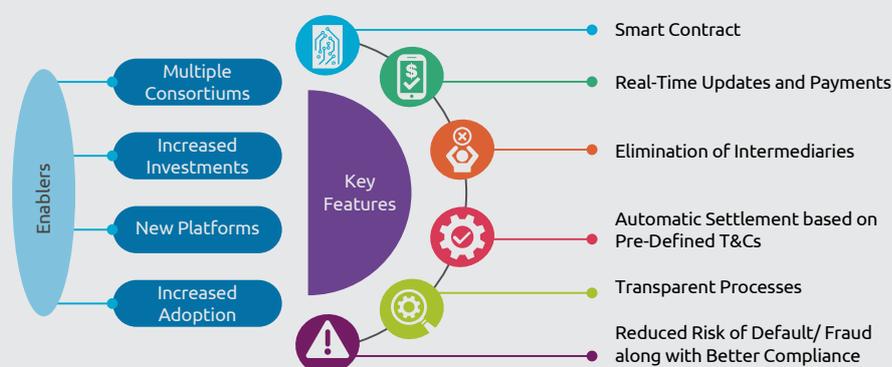
- The banking industry has always lacked a unified platform where all stakeholders could carry out transactions with speed and convenience without compromising on security
- With banks maintaining their systems in silos, interbank processing has been slow, complex, costly, error-prone, and in need of more supervision
- Although banks are allocating significant resources to meet regulatory and compliance requirements, they are still susceptible to breaches and frauds

### Key Drivers



- As of December 2016, there were approximately 25 global blockchain consortiums with 500+ member firms working on use-cases and standards<sup>5</sup>
- The need to reduce fraud, communication and settlement delays, auditability of end-to-end transactions, and operational costs, while increasing trust among stakeholders, automated processing, compliance, and transparency make a strong case for banks to experiment and adopt blockchain-based solutions
- Firms are providing blockchain platform-based supply chain finance options to corporates of all sizes:
  - 'Chained Finance,' China's first blockchain platform for supply chain finance aims to provide better financing possibilities to China's small and medium enterprises<sup>6</sup>

### Exhibit 3: Blockchain's Application in Trade Finance



Source: Capgemini Financial Services Analysis, 2017

5 "The State of Global Blockchain Consortia", William Mougayar, coindesk, Dec 11, 2016, accessed Oct 2017 at <https://www.coindesk.com/state-global-blockchain-consortia/>

6 "Chinese Fintech Firms Launch Blockchain Supply Chain Finance Platform", Samburaj Das, cryptocurrencies news, Mar 7, 2017, accessed Oct 17 at <https://www.cryptocoinsnews.com/chinese-fintech-firms-launch-blockchain-supply-chain-finance-platform/>



## Trend Overview

- Blockchain is a distributed online database that validates and stores immutable, auditable records in real-time that are accessible to the participants of the network
- Blockchain is expected to benefit corporate banking in the areas of syndicated loans, cross-border payments, KYC/ AML, digital identities, supply chain finance:
  - Seven global banks including BNP Paribas, BNY Mellon, and ING have partnered with R3 and Finastra to develop Fusion LenderComm, a blockchain technology-based marketplace for syndicated loans<sup>7</sup>
- Blockchain can also transform heavily paper-based trade finance processes through transparent processes, smart contract management, near real-time payments, which helps to reduce counter-party risks while avoiding the need for intermediaries such as correspondent banks:
  - Seven of Europe's biggest banks (Deutsche Bank, HSBC, KBC, Natixis, Rabobank, Société Générale and UniCredit) are collaborating to develop a new product called Digital Trade Chain (DTC), a shared cross-border trade finance platform for small- and medium-sized enterprises using blockchain technology<sup>8</sup>
- Despite all its benefits, blockchain is not foolproof, and hence regulators, central banks, the FS community, and developers must work together for acceptable solutions



## Implications

- Blockchain-enabled digital identity solutions will help banks fulfill KYC requirements of firms, assets, and associated individuals
- Blockchain will also reduce AML and other regulatory compliance burdens as it is inherently more transparent and secure
- As blockchain nurtures trust among all stakeholders, financing may be accessible to a broader range of firms
- The industry will witness increased operational (quick processing with lesser need of reconciliation) and financial (faster settlements free up capital) efficiency
- With feasible solutions in place, Internet of Things (IoT) adoption may pick up fast in the trade finance area for real-time tracking of consignments
- As standards and protocols evolve, diverse blockchain networks will converge, setting the stage for widespread adoption of blockchain-based applications in corporate banking

7 "7 Global Banks Partner Up to Develop Blockchain-based Syndicated Loan Market", Joshua Althausser, THE COINTELEGRAPH, Oct 7, 2017, accessed Oct 17 at <https://cointelegraph.com/news/7-global-banks-partner-up-to-develop-blockchain-based-syndicated-loan-market>

8 "Blockchain: accelerated activity in trade finance", Carlo R.W. De Meijer, Finextra, Jan 26, 2017, accessed Oct 17 at <https://www.finextra.com/blogposting/13593/blockchain-accelerated-activity-in-trade-finance>

# Trend 04: Banks Leverage Automation to Streamline Operations

*Banks are reengineering their systems and investing in automation to generate significant productivity and customer experience improvements*



## Background

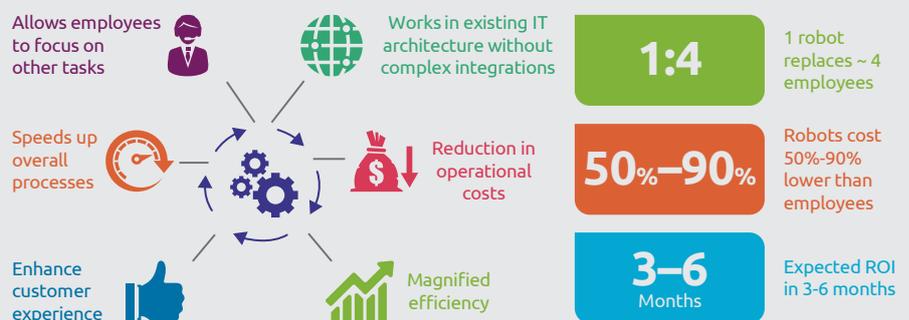
- Since the global financial crisis, commercial banking has transformed with banks focusing on managing operational risk, improving compliance, preventing fraudulent transactions, and improving processes and efficiencies by saving time and costs on repetitive tasks
- FinTechs and challengers have started to disrupt the commercial banking sector and drive banks to innovate and improve agility
- Commercial banks are looking at ways for faster processing and customer onboarding, improved response time, higher customer satisfaction, and optimizing routine and manual processes



## Key Drivers

- Banks' have a high focus on digitization to augment customer experience, quicken processes, increase productivity, and reduce overall operational costs:
  - Manual processing of the huge volume of documentation in financial transactions slows down the overall process and is prone to high error rates
- Commercial lending processes are highly manual and labor intensive, thus necessitating the need for automation
- The need for seamless interoperability of back-end and front-end systems with faster data sharing is driving automation

### Exhibit 4: Benefits of Automation



Source: Capgemini Financial Services Analysis, 2017; "Robotic process automation (RPA) - The next revolution of Corporate Functions," Capgemini Consulting, 2016

## Trend Overview



- By reducing human intervention in manually-intensive processes, automation is being leveraged to improve speed and accuracy of core business functions:
  - Within corporate banking, a major beneficiary of automation is the credit process that constitutes a significant proportion of the total operational costs
- Banks are looking at automation for optimizing operations and improving efficiencies in their processes:
  - JP Morgan is leveraging automation and launched a program - COIN (Contract Intelligence), which interprets commercial loan agreements and reviews documents in seconds, has a high consistency, and has helped the bank reduce the loan-servicing mistakes that occurred as a result of manual errors<sup>9</sup>
  - Bank of NY Mellon implemented automation for operational processes such as data reconciliation and other back-office tasks. It has been able to achieve 100% accuracy in account-closure validations, 88% improvements in processing time, 66% improvement in trade-entry turnaround time, and 0.25-second robotic reconciliation of a failed trade, as compared with more than five minutes spent manually<sup>10</sup>
- Process automation and digital adoption is expected to deliver US\$15 billion–US\$20 billion in cost savings to the wholesale banking sector from 2016–2020<sup>11</sup>

## Implications



- New digital capabilities enable greater process automation and highly automated processes will propel commercial banks into a position of competitive advantage
- Automation will allow anomalies to be identified easily and quickly, thereby reducing money laundering and fraud
- Automation will provide more than 25% in cost savings by automating data intensive and repetitive tasks
- Commercial banks' back-office functions will continue to see a rise in automation:
  - Presently, back-office employees spend ~80% of their time<sup>12</sup> on repetitive manual tasks, a significant proportion of which will be replaced by automation
- Automation will be used for high-volume and low-value tasks for corporate banks

9 "JP Morgan's Software COIN To Cover 3.6 Lakh Hours Of Lawyer's Work In Seconds", Vidhushi Sahani, Mar 2, 2017, accessed October 2017 at <http://www.livelaw.in/jp-morgans-software-coin-cover-3-6-lakh-hours-lawyers-work-seconds/>

10 "The Rise of Robots", BNY Mellon, Mar 2017, accessed October 2017 at <https://www.bnymellon.com/us/en/who-we-are/people-report/innovate/the-rise-of-robots.jsp>

11 "The World Turned Upside Down", Morgan Stanley Research and Oliver Wyman, 2017, accessed October 2017 at <http://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2017/mar/Oliver%20Wyman%20Morgan%20Stanley%202017.pdf>

12 "Robotic process automation (RPA) - The next revolution of Corporate Functions", Capgemini Consulting, 2016, accessed October 2017 at [https://www.capgemini.com/consulting-fr/wp-content/uploads/sites/31/2017/08/robotic\\_process\\_automation\\_the\\_next\\_revolution\\_of\\_corporate\\_functions\\_0.pdf](https://www.capgemini.com/consulting-fr/wp-content/uploads/sites/31/2017/08/robotic_process_automation_the_next_revolution_of_corporate_functions_0.pdf)

# Trend 05: Banks Provide Transparent, Convenient Corporate Payments Services in Real Time

*Fast-paced change in technology, rising corporate expectations, and evolving regulations have led banks to innovate within the corporate payments space*



## Background

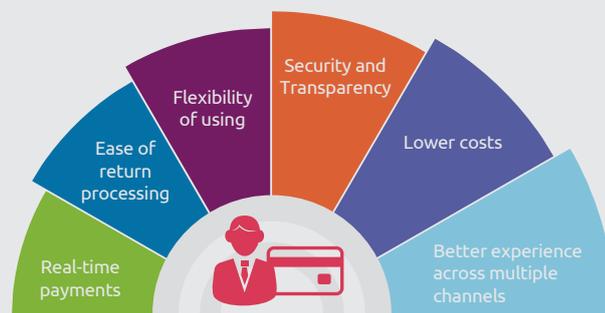
- Rapid advancements in technology are reshaping corporate customers' expectations
- Basic processing of corporate payments continues to remain a commodity business for banks, with very little revenue from domestic payments
- The corporate payments industry is still facing a challenge of non-standardized formats across banks, as well as a diverse set of payments methods across different geographies and markets



## Key Drivers

- Entry of FinTechs into corporate payments, evolving regulations (such as SEPA and Faster Payments Initiative), and the need for speed in transaction processing is pushing the case for frictionless corporate payments:
  - Corporates are seeking better fraud management and higher transparency in payments for better budgeting and financial control
- Banks' focus on automation and straight through processing (STP) is driving innovation within the corporate payments space:
  - Corporates are demanding STP for a faster processing of transactions, and to be able to transact in a self-service mode

## Exhibit 5: Corporates' Payments Needs



Source: Capgemini Financial Services Analysis, 2017

## Trend Overview



- Banks have started investing to innovate within the corporate payments landscape to enhance the customer experience for digital transactions:
  - BNP Paribas is exploring blockchain technology for real-time corporate payments, and in a pilot project, it successfully processed and cleared payments for its corporate clients (Amcor and Panini Group) in various currencies between BNP Paribas bank accounts located across three different countries<sup>13</sup>
  - DBS launched a mobile payments solution called IDEAL for corporates and small businesses that turns mobile devices into virtual tokens for authorization, with DBS being the first Asian bank to offer an integrated corporate payment solution on a single mobile platform<sup>14</sup>
- Regulations and directives such as SEPA in Europe and the Faster Payments initiative in the UK are driving a number of technological changes in corporate banking, and banks are spending for changing their payment operations
- SWIFT launched their global payments innovation (GPI) initiative for enhancing B2B cross-border payments in December 2015, by combining real-time payments tracking with the speed and certainty of same-day settlement for international payments<sup>15</sup>:
  - Over 110 transaction banks across Americas, Europe, Asia-Pacific, and Africa are a part of GPI, which offers a higher accuracy in reconciliation of payments and invoices by suppliers, better optimization of liquidity with improved cash forecasts, and reduces exposure to FX risks<sup>15</sup>
- Corporates typically have relationships with multiple banks and service providers, and different global data standards in payments have created a complex environment for corporates operating internationally, thus necessitating banks to innovate and provide frictionless payments to corporates
- Banks are also implementing payment hubs to bring different payment system elements together to provide higher flexibility in payment flows, thereby increasing bank agility

## Implications



- Banks will continue to balance innovation with risk and focus on corporate payments standardization
- Banks will look to leverage emerging technologies (such as distributed ledger technology) and provide customer-focused and integrated payments corporate solutions
- Banks will look to innovate beyond STP for more intelligent payment processing
- Fully functional payment services hubs enabling agile payments processing will likely see a higher adoption within the wholesale and corporate banking space
- Emerging regulations will continue to reshape the corporate payments market which will drive banks to augment their corporate payments capabilities and move toward faster real-time payments

13 "BNP Paribas completes its first real-time Blockchain payments", Dec 21, 2016, accessed October 2017 at <https://group.bnpparibas/en/press-release/bnp-paribas-completes-real-time-blockchain-payments>

14 "DBS Tokenizes The Smartphone For Corporate Payments", Oct 13, 2016, accessed October 2017 at <https://www.pymnts.com/news/b2b-payments/2016/dbs-bank-token-tokenization-smartphone-mobile-app-physical-corporate-banking-payments-transaction/>

15 "SWIFT global payments innovation (GPI)", SWIFT, 2016, accessed October 2017 at <https://www.swift.com/our-solutions/global-financial-messaging/payments-cash-management/swift-gpi>

# Trend 06: Banks Use Predictive Analytics for Credit Scoring Institutions and Risk Management

*Banks are leveraging predictive analytic risk models to find new lending opportunities and improve risk detection and prevention*

## Background



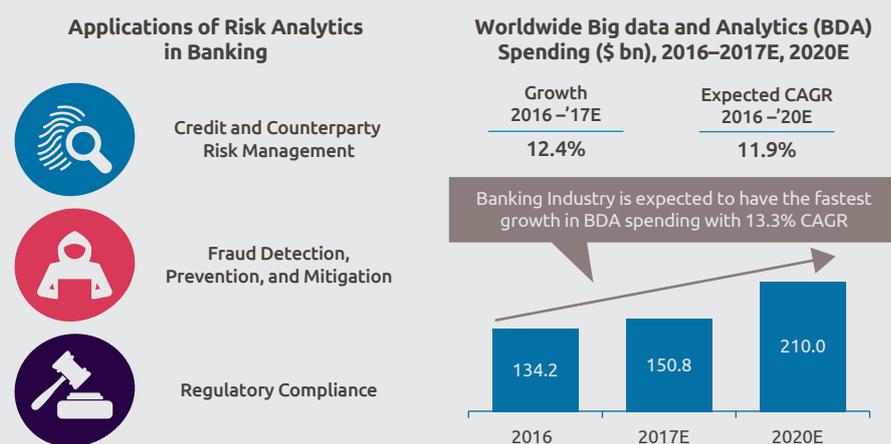
- In the aftermath of the financial crisis, risk concerns continue to remain top-of-mind for bankers, and banks are still focusing on risk management, ensuring compliance with stringent capital adequacy regulations
- Low yields, relaxed underwriting standards, and an uptick in commercial and industrial lending are increasing risks for banks
- With the impending competition in the market and profits on loans narrowing, there is a tendency for banks to loosen these restrictions and underwrite more loans

## Key Drivers



- The economic and regulatory environment has become challenging, and with the increase in complexity of data systems, traditional risk management processes have become inefficient
- Some of the regulatory requirements implicitly necessitate the use of predictive analytics

**Exhibit 6: Analytics for Risk Management**



Source: Capgemini Financial Services Analysis, 2017; "Big Data and Business Analytics Revenues Forecast to Reach \$150.8 Billion This Year, Led by Banking and Manufacturing Investments, According to IDC", IDC, March 14, 2017

- Banks are unable to accurately check the creditworthiness of the credit-invisible institutions that lack credit history
- With an increase in fraudulent cases, there is a need for banks to detect and predict suspicious activities
- With customer data spread across different channels and among different business lines, information pooling and analysis is necessary to give banks a complete view of their customers

## Trend Overview



- Digital Banks have been using predictive analytics models in corporate banking for treasury, financial crime and intelligence, governance, risk and compliance
- Predictive analytics helps to create new lending opportunities by accurately evaluating the creditworthiness of an institution requesting secured or unsecured loans:
  - State Bank of India's E-Smart SME is using data analytics gathered by ecommerce player Snapdeal to assess the credit worthiness of sellers<sup>16</sup>
  - Banks such as ING, Scotiabank, and Santander are partnering with Kabbage, where Kabbage analyzes large amounts of data from private and public sources to gauge the risk and creditworthiness of the business seeking the loan<sup>17</sup>
- Banks are using analytics based risk models to handle billions of records and to flag anomalous activities in real time, which can help to prevent potential security attacks or fraud:
  - Danske Bank is using advanced analytics fraud platform to score live transactions such as e-banking, credit card, and mobile payments and reduce false positives by at least 20-40%<sup>18</sup>
- Banks are building accurate risk models to comply with banking regulatory requirements such as stress testing, Basel, and CCAR compliance

## Implications



- Banks can make more intelligent and data-driven decisions to mitigate enterprise risk
- Banks are using alternate data to accurately score institutions, leading to profitable loans and lower lending costs
- Banks can open up new revenue streams, by tapping into new market segments for Small to Medium Enterprise (SME) lending
- Banks will be able to fight sophisticated frauds and keep the false positive level to a bare minimum by leveraging analytics
- Predictive analytics can enable banks to measure, quantify, and predict risks:
  - Banking executives can now create a consistent methodology based on data-driven insights

<sup>16</sup> "SBI partners Snapdeal to offer loans to ecommerce sellers", The Economic Times, Jan 15, 2016, accessed October 2017 at <https://economictimes.indiatimes.com/industry/services/retail/sbi-partners-snapdeal-to-offer-loans-to-ecommerce-sellers/articleshow/50594157.cms>

<sup>17</sup> "Alternative Data Transforming SME Finance", International Finance Corporation, May, 2016, accessed October 2017 at <https://www.gpfi.org/sites/default/files/documents/GPFI%20Report%20Alternative%20Data%20Transforming%20SME%20Finance.pdf>

<sup>18</sup> "Fighting Financial Fraud with Artificial Intelligence", Danske Bank, accessed October 2017 at <https://cdn.oreillystatic.com/en/assets/1/event/258/Fighting%20financial%20Fraud%20at%20Danske%20Bank%20with%20artificial%20intelligence%20Presentation.pdf>

# Trend 07: Banks Use APIs to Partner with FinTechs, Meet Unique Needs of Corporate Customers

*Banks are using APIs as a competitive tool to partner with FinTechs to meet their corporate customers' specific needs*



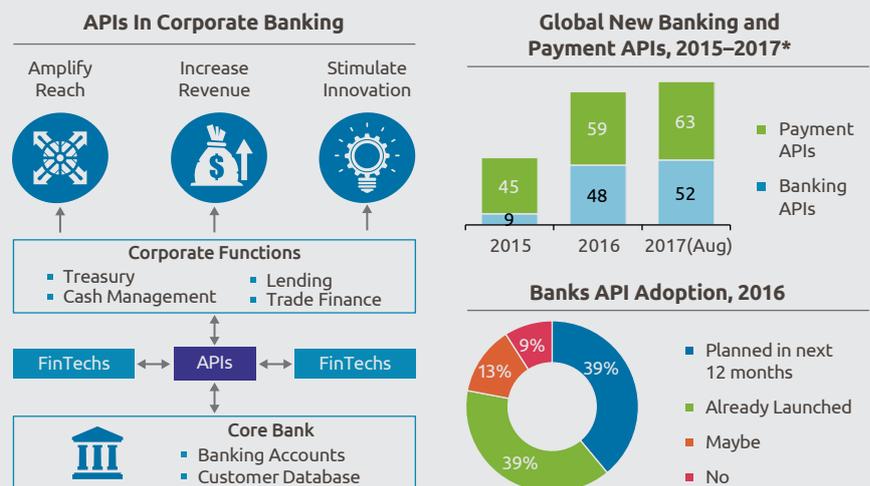
## Background

- Corporate banks are often not able to meet the desired customer satisfaction levels, as they are not able to provide a seamless way of integrating services into customers digitized supply chains
- However, with a push from regulations and entry of FinTechs, the industry is witnessing increased competition and data aggregation among banks which is leading to improved banking services

## Key Drivers

- Regulations across the globe are encouraging API adoption:
  - European Union's Payments Services Directive 2 (PSD2) is leading the way of opening up banking systems and pushing banks to adopt APIs<sup>19</sup>
  - The regulators in Singapore<sup>20</sup>, Australia<sup>21</sup>, and South Korea<sup>22</sup> are also encouraging their banks to open up their banking systems via APIs

**Exhibit 7: Bank Leveraging APIs**



Source: Capgemini Financial Services Analysis, 2017; Celent, Inc.: "Open Banking APIs: Driving Developer Adoption," Patricia Hines, Aug 29, 2017; "Banking APIs State of the Market," Bank Innovation - Open Bank Project, October 2016

19 Capgemini World Retail Banking Report, 2017

20 "Application Programming Interfaces (APIs)", MAS-GOV, 2016, accessed October 2017 at <http://www.mas.gov.sg/Singapore-Financial-Centre/Smart-Financial-Centre/Application-Programming-Interfaces.aspx>

21 "Australian banks told to build APIs to share data by 2018", ITNews, November 25, 2016, accessed October 2017 at <https://www.itnews.com.au/news/australian-banks-told-to-build-apis-to-share-data-by-2018-442562>

22 "South Korea is launching an open banking platform", Business Insider, August 23, 2016, accessed October 2017 at <http://www.businessinsider.com/south-korea-is-launching-an-open-banking-platform-2016-8?IR=T>

- Corporate customers expect to have instant access to banking facilities via their ERP or legacy systems in a secure manner
- Banks are compelled to minimize turnaround time and ensure immediate payments

## Trend Overview



- Corporate banks have been focusing on improving their different business processes as around various areas of the corporate business such as treasury, cash management, trade finance, and Small to Medium Enterprise (SME) lending by partnering with various FinTechs with the help of APIs
- Banks are collaborating with FinTechs for credit scoring, to improve their SME business-lending process, to provide a real-time view of accounts to SMEs, and to enable faster payments:
  - In partnership with Xero, Wells Fargo created an API through which SMEs can directly upload their bank account data into Xero’s accounting software, which will enable SMEs to see their real-time, up-to-date cash flow, and to receive payments faster. It also will help banks improve credit decision-making<sup>23</sup>
- Banks are using API-based integration with FinTechs and corporate clients for treasury processes and transaction banking to track real-time, up to date payment status, and deliver faster payments:
  - Citi has launched an API solution for treasury services, which allows clients to integrate Citi’s APIs into their treasury processes to deliver payments in real time, and collect information on the status of their payments<sup>24</sup>
  - Standard Chartered has launched an open banking API developer portal for transaction banking, which will enable third-party developers to integrate with the bank to consolidate account balance in real time and optimize working capital management<sup>25</sup>

## Implications



- The partner ecosystem that APIs create will enable banks to expand their digital footprint and amplify their reach, giving them a competitive edge over their peers
- SME lending will receive a huge boost, as banks will be able to use FinTechs to score the credit invisibles and extend offerings to untapped markets
- It gives banks an opportunity to become platforms, where they continue to own the corporate clients while delivering to them the best possible financial products and services with the help of FinTechs
- Corporate clients also stand to gain due to the collaboration between banks and FinTechs, as they will receive best in business products and services
- With an increase in adoption of APIs across corporate banking businesses, early mover banks stand to gain mindshare of both clients and the wider application developer community

<sup>23</sup> “Alternative Data Transforming SME Finance”, International Finance Corporation, May, 2016, accessed October 2017 at

<https://www.gpfi.org/sites/default/files/documents/GPFI%20Report%20Alternative%20Data%20Transforming%20SME%20Finance.pdf>

<sup>24</sup> “Citi launches treasury services API”, GTR, March 01, 2017, accessed October 2017 at <https://www.gtreview.com/news/global/citi-launches-treasury-services-api/>

<sup>25</sup> “StanChart launches open cash management platform”, GTR, February 22, 2017, accessed October 2017 at <https://www.gtreview.com/news/global/stanchart-launches-open-cash-management-platform/>

# Trend 08: Banks Develop Agile and Open Systems to Enable Non-Standardized Third-Party Integrations

*Banks are incorporating elements of agility and openness to support flexibility, interoperability, and partnership requirements with third parties*



## Background

- Internal systems of most banks operate in silos and are not very well integrated with other systems
- The situation is even more challenging if banks have to integrate their systems with external parties such as other banks, FinTechs, etc.
- For any new functionality, banks were generally following a sequential or waterfall approach to develop, test, and deploy the software



## Key Drivers

- Need of greater efficiency in obtaining buy-in from various business stakeholders for any new development as multiple short iterations of agile methodology take care of changing requirements on the go
- Need of flexibility in the systems to quickly adapt to changing industry needs
- Availability and increased acceptance of cloud services (especially hybrid cloud) that enables quick provisioning, agility, and scalability
- Increased openness in the industry is paving the way for new avenues such as marketplaces, banks need to be a participant in these
- Banks are increasingly partnering with other firms to drive innovation, enhance customer experience, and generate new business revenues
- Widespread adoption of Application Programming Interfaces (APIs) that enable communication between banks and external systems

## Exhibit 8: Agile and Open Architecture Requires Focus on Multiple Areas



Source: Capgemini Financial Services Analysis, 2017



## Trend Overview

- Banks are leveraging APIs and Service Oriented Architecture (SOA) to integrate their services with clients' diverse range of systems so that transactional banking processes can be initiated and reconciled with ease
- This new architecture will help banks in forging partnerships with FinTechs for collaborative offerings/development that can be easily rolled out to customers
- To accelerate agile project implementation, banks must undergo a cultural change that encourages better and faster collaboration across teams and functions
- Banks need to obtain executive leadership buy-in to implement and maintain agile methodologies as the new approach will likely change the IT and business processes, thus causing resistance from staff



## Implications

- With enhanced integrations within banking ecosystem, banks will have to be more careful in their control of IT and data as their systems will no longer operate in silos
- Banking systems will become more modular to support flexibility
- Plug and play modules will enhance banks' capability to enter into partnerships with third-parties
- As banks integrate with other firms and also leverage APIs, customers will not have to be dependent only on the channels that are maintained by banks; rather they can avail banks' services through third parties as well
- Banks will have to incorporate organizational changes as agile teams will consist of cross-function team members and won't be bound by rigid structures
- An agile and open architecture will enable banks to be more responsive to the disruption that commercial banking is beginning to witness

# Trend 09: New Banking Industry Regulations Spur Competition, Innovation

*New regulations aimed at increasing competition and openness in the industry are pushing banks to innovate and improve their offerings*



## Background

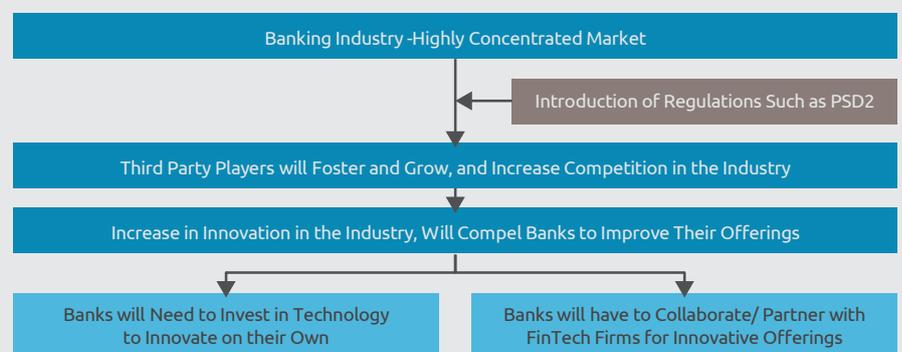
- Following the sub-prime crisis, there was an upsurge in stringent regulations, which resulted in increased scrutiny on banks and had a cascading impact on their business models
- This increase in regulations led to a huge workload for banks, and stifled up innovation by increasing the cost of doing business
- Most of the resources were spent on mere complying with these regulations, and less available that could be used to innovate
- However, we are witnessing some regulators minimizing entry barriers for new players, and driving inclusion as they entice more and more companies to enter market and compete



## Key Drivers

- The banking industry has been a highly concentrated market globally, there was a need to increase competition in the industry
- With new third-party players entering the industry, it was necessary for removal or relaxation of entry barriers and fostering their growth by giving them a safe environment to innovate
- There was a need for improvement in quality, variety, and access to new financial products and services
- A requirement of developing larger markets thereby increasing the choices for customer

### Exhibit 9: Regulation Fostering Innovation in the Banking Industry



Source: Capgemini Financial Services Analysis, 2017

## Trend Overview



- Regulators around the world are now inculcating innovation through openness, and are exerting tremendous pressure on banks to open up their closed systems to external third-party players, creating an opportunity to build and distribute innovative products, while offering customers transparency and security:
  - European Union’s Payments Services Directive 2 (PSD2) has mandated banks to allow access to Account Information Service Providers (AISPs) that can retrieve information from bank accounts, as well as Payment Initiation Service Providers (PISPs) that can initiate payment transactions<sup>26</sup>
  - In Australia, the lower house’s economics committee released a report suggesting that banks should be forced to use APIs to facilitate the sharing of customer and small business data<sup>27</sup>
- Regulators have been building innovation labs, FinTech sandboxes, and platforms for providing an environment for FinTechs to innovate:
  - In Singapore, the Monetary Authority of Singapore (MAS) has built a FinTech Innovation Lab, and it would be relaxing some regulatory requirements to give FinTechs the flexibility to innovate in a responsible environment<sup>28</sup>
  - In Australia, the regulators are relaxing the ownership cap, removing restrictions on use of the word ‘bank,’ and introducing an enhanced regulatory sandbox<sup>29</sup>
- With increased openness and sharing of data, cybersecurity and data protection are also witnessing a renewed focus, especially within the EU through regulations such as GDPR and NIS directives<sup>30</sup>

## Implications



- Banks are investing in innovation, and they are looking to collaborate/partner with third-party players for innovative products and services, to improve upon their digital offerings, and extend their reach to capture untapped markets
- Banks are acquiring or investing stakes in FinTechs and digital-only challenger banks
- Many challengers and neo banks are thriving in this environment becoming platforms and marketplaces
- Customers are expected to gain in every aspect, with improved variety of offerings, improved data privacy, and security
- These regulations are expected to bring about a sea of changes in the banking industry, promoting greater competition and ultimately leading to shorter innovation cycle

26 “How can Application Programming Interface standardization be achieved in the context of the revised Payment Services Directive?”, European Council, March 17, 2017, accessed October 2017 at <https://www.europeanpaymentscouncil.eu/news-insights/insight/how-can-application-programming-interface-standardisation-be-achieved-context>

27 Ibid.

28 “How Regulators Can Help Drive Innovation”, Ripple, July 27, 2017, accessed October 2017 at <https://ripple.com/insights/regulators-can-help-drive-innovation/>

29 “Australian government announces several measures for promoting FinTech innovation and growth”, Open Gov, Prinyankar Bhunia, May 10, 2017, accessed October 2017 at <http://www.opengovasia.com/articles/7586-australian-government-announces-several-measures-for-promoting-fintech-innovation-and-growth>

30 “The Directive on Security of Network and Information Systems (NIS Directive)”, IT Governance, accessed October 2017 at <https://www.itgovernance.eu/nis-directive>

# Trend 10: Banks Migrate Data, Processes, and Infrastructure to Hybrid Clouds

*More and more banks are migrating their data, processes, and infrastructures to hybrid clouds<sup>31</sup> to benefit from both on-premise and off-premise cloud implementations*

## Background



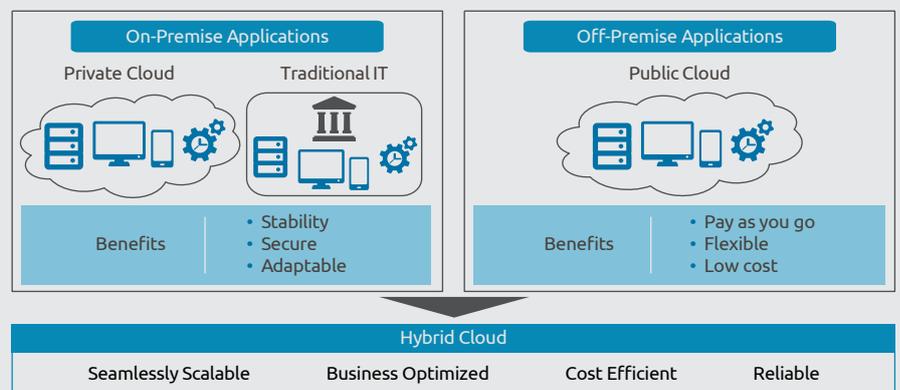
- In this digital age, with the proliferation of data, banks have been facing a growing demand for innovative digital products and services that can meet their corporate customers' needs and expectations
- With growing acquisition costs and increasing margin pressures squeezing profits, commercial banks are searching for new ways to increase profitability by reducing costs and increasing efficiency
- These business requirements have introduced new challenges on banks' IT infrastructure:
  - Using the legacy systems that banks possess, they are required to be agile, flexible, maintain a capacity to process large volumes of data in real-time, along with ensuring secure and economical storage

## Key Drivers



- The banking industry's cloud-based solutions' learning curve has led to increased maturity and acceptance
- Banks running on huge legacy system overheads and thin profit margins are under tremendous pressure to cut costs
- As a true partner of their corporate clients, banks need to be flexible to adapt to evolving client requirements and agile enough to deliver rapid changes and responses
- The threat of cybersecurity, which was hindering wider cloud adoption is receding

### Exhibit 10: Banking on Cloud



Source: Capgemini Financial Services Analysis, 2017

<sup>31</sup> 'Hybrid cloud' is a cloud computing environment which combines public clouds and private clouds by allowing data and applications to be shared between them



## Trend Overview

- Public cloud grew from 10% in December 2014 to 16% in 2017, while hybrid cloud grew from 20% to 31% in the same period<sup>32</sup>
- Many banks are migrating their non-critical workload to the public cloud, but are still hesitant to migrate their core services because of security concerns
- Banks that have already migrated their core services are using private cloud or hybrid clouds with one of the big service providers (Amazon Web Service (AWS), Google, and Microsoft) as they keep sensitive data within firewalls which allows them to fulfill client confidentiality requirements and local regulations<sup>33</sup>
- With banks increasingly adopting hybrid cloud approach, banks are expected to gain more stability and security from an on-premise cloud implementation (private cloud), and at the same time incur huge cost savings along with increased speed and agility from off-premise cloud implementation (public cloud)
- Hybrid cloud offers a blended approach that can help banks with increased operational efficiency, innovation, revenue growth, and ecosystem collaboration:
  - Santander's Openbank is using a hybrid model of private and public cloud to improve the provisioning of resources for running its machine learning capabilities in real-time<sup>34</sup>
  - DBS is collaborating with AWS to create a hybrid cloud environment which is optimized for rapid changes of capacity and functionality<sup>35</sup>



## Implications

- There will be a shift from capital expenditure to operational expenditure, giving banks more options of budget allocation
- Reduced maintenance compared with costs to upgrade legacy systems, ultimately mean an overall decrease in costs
- Adoption of cloud creates an agile and scalable platform for banks, which can support business during rapid change and growth
- It will enable banks to experiment in a digital way, delivering innovative products and services, while adhering to high standards of security
- Increased adoption of standard cloud services will facilitate smoother collaboration with other stakeholders, e.g., FinTechs
- Hybrid cloud provides an opportunity for banks to incorporate the benefits of multiple deployment models while mitigating their limitations

32 Gartner, Inc.: "Cloud Heat Map for Banking 2017," Pete Redshaw, Vittorio D'Orazio, May 4, 2017

33 "Cloud banking or banking in the clouds?," BBVA Research, April 29, 2016, accessed October 2017 at [https://www.bbva.com/wp-content/uploads/2016/04/Cloud\\_Banking\\_or\\_Banking\\_in\\_the\\_Clouds1.pdf](https://www.bbva.com/wp-content/uploads/2016/04/Cloud_Banking_or_Banking_in_the_Clouds1.pdf)

34 "Santander's Openbank relaunched as 100% digital bank", Finextra, June 16, 2017, accessed October 2017 at <https://www.finextra.com/newsarticle/30697/santanders-openbank-relaunched-as-100-digital-bank>

35 "DBS to leverage Amazon Web Services Cloud", DBS Newsroom, July 27, 2016, accessed October 2017 at [https://www.dbs.com/newsroom/DBS\\_to\\_leverage\\_Amazon\\_Web\\_Services\\_Cloud](https://www.dbs.com/newsroom/DBS_to_leverage_Amazon_Web_Services_Cloud)

## References

1. "Digital Maturity Means Integrating These Two Things," Daniel Schmidt, Document Strategy, Sep 22, 2017, accessed at <http://documentmedia.com/article-2714-Digital-Maturity-Means-Integrating-These-Two-Things.html>
2. "Why Banks Can No Longer Put Digital Transformation on Hold," Nigel Armstrong, Kofax Advisor, Apr 17, 2017, accessed at <http://advisor.kofax.com/index.php/why-banks-can-no-longer-put-digital-transformation-on-hold/>
3. "Digitalising Trade Finance: the time to act is now," Richard Davies, Finextra, July 14, 2017, accessed at <https://www.finextra.com/blogposting/14291/digitalising-trade-finance-the-time-to-act-is-now>
4. "How a rise in institutional funds has changed the P2P lending landscape", Michael Lynn, Bridging and Commercial, Mar 21, 2017, accessed Oct 2017 at [http://bridgingandcommercial.co.uk/article-desc-11718\\_how-a-rise-in-institutional-funds-has-changed-the-p2p-lending-landscape](http://bridgingandcommercial.co.uk/article-desc-11718_how-a-rise-in-institutional-funds-has-changed-the-p2p-lending-landscape)
5. "Opportunities and Challenges in Online Marketplace Lending," U.S. Department of The Treasury, May 10, 2016, accessed Oct 2017 at [https://www.treasury.gov/connect/blog/Documents/Opportunities\\_and\\_Challenges\\_in\\_Online\\_Marketplace\\_Lending\\_white\\_paper.pdf](https://www.treasury.gov/connect/blog/Documents/Opportunities_and_Challenges_in_Online_Marketplace_Lending_white_paper.pdf)
6. "Blockchain use cases for corporate banking," Patricia Hines, BANKNXT, Aug 11, 2016, accessed Oct 2017 at <https://banknxt.com/57578/dlt-blockchain-corporate-banking/>
7. "The State of Global Blockchain Consortia," William Mougayar, coindesk, Dec 11, 2016, accessed Oct 2017 at <https://www.coindesk.com/state-global-blockchain-consortia/>
8. "Chinese Fintech Firms Launch Blockchain Supply Chain Finance Platform," Samburaj Das, cryptocurrencies news, Mar 7, 2017, accessed Oct 17 at <https://www.cryptocoinsnews.com/chinese-fintech-firms-launch-blockchain-supply-chain-finance-platform>
9. "7 Global Banks Partner Up to Develop Blockchain-based Syndicated Loan Market", Joshua Althaus, THE COINTELEGRAPH, Oct 7, 2017, accessed Oct 17 at <https://coindotelegraph.com/news/7-global-banks-partner-up-to-develop-blockchain-based-syndicated-loan-market>
10. "Blockchain: accelerated activity in trade finance," Carlo R.W. De Meijer, Finextra, Jan 26, 2017, accessed Oct 17 at <https://www.finextra.com/blogposting/13593/blockchain-accelerated-activity-in-trade-finance>
11. "BoFA Merrill Helps Clients Reduce Costs With Multicurrency Netting," Oct 16, 2017, accessed October 2017 at <http://newsroom.bankofamerica.com/press-releases/corporate-and-investment-banking-sales-and-trading-treasury-services/bofa-merrill-hel>
12. "HSBC to accelerate global supply chain finance with Matched electronic Purchase Orders," Oct 18, 2017, accessed October 2017 at <https://www.treasury-management.com/news/1030/hsbc-to-accelerate-global-supply-chain-finance-with-matched-electronic-purchase-orders.html>

13. Commerzbank Global Payment Plus, accessed October 2017 at <https://www.firmenkunden.commerzbank.de/portal/en/gpp-hilfe/guided-tours/guided-tour.html>
14. "JP Morgan's Software COIN To Cover 3.6 Lakh Hours Of Lawyer's Work In Seconds", Vidhushi Sahani, Mar 2, 2017, accessed October 2017 at <http://www.livelaw.in/jp-morgans-software-coin-cover-3-6-lakh-hours-lawyers-work-seconds/>
15. "The World Turned Upside Down," Morgan Stanley Research and Oliver Wyman, 2017, accessed October 2017 at <http://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2017/mar/Oliver%20Wyman%20Morgan%20Stanley%202017.pdf>
16. "Robotic process automation (RPA) - The next revolution of Corporate Functions," Capgemini Consulting, 2016, accessed October 2017 at [https://www.capgemini.com/consulting-fr/wp-content/uploads/sites/31/2017/08/robotic\\_process\\_automation\\_the\\_next\\_revolution\\_of\\_corporate\\_functions\\_0.pdf](https://www.capgemini.com/consulting-fr/wp-content/uploads/sites/31/2017/08/robotic_process_automation_the_next_revolution_of_corporate_functions_0.pdf)
17. "BNP Paribas completes its first real-time Blockchain payments," Dec 21, 2016, accessed October 2017 at <https://group.bnpparibas/en/press-release/bnp-paribas-completes-real-time-blockchain-payments>
18. "DBS Tokenizes The Smartphone For Corporate Payments," Oct 13, 2016, accessed October 2017 at <https://www.pymnts.com/news/b2b-payments/2016/dbs-bank-token-tokenization-smartphone-mobile-app-physical-corporate-banking-payments-transaction/>
19. "SWIFT global payments innovation (GPI)," SWIFT, 2016, accessed October 2017 at <https://www.swift.com/our-solutions/global-financial-messaging/payments-cash-management/swift-gpi>
20. "Big Data and Business Analytics Revenues Forecast to Reach \$150.8 Billion This Year, Led by Banking and Manufacturing Investments, According to IDC", IDC, March 14, 2017
21. "SBI partners Snapdeal to offer loans to ecommerce sellers," The Economic Times, Jan 15, 2016, accessed October 2017 at <https://economictimes.indiatimes.com/industry/services/retail/sbi-partners-snapdeal-to-offer-loans-to-ecommerce-sellers/articleshow/50594157.cms>
22. "Fighting Financial Fraud with Artificial Intelligence," Danske Bank, accessed October 2017 at <https://cdn.oreillystatic.com/en/assets/1/event/258/Fighting%20financial%20fraud%20at%20Danske%20Bank%20with%20artificial%20intelligence%20Presentation.pdf>
23. Capgemini World Retail Banking Report, 2017
24. "Application Programming Interfaces (APIs)," MAS-GOV, 2016, accessed October 2017 at <http://www.mas.gov.sg/Singapore-Financial-Centre/Smart-Financial-Centre/Application-Programming-Interfaces.aspx>
25. "Australian banks told to build APIs to share data by 2018", ITNews, November 25, 2016, accessed October 2017 at <https://www.itnews.com.au/news/australian-banks-told-to-build-apis-to-share-data-by-2018-442562>

26. "South Korea is launching an open banking platform," Business Insider, August 23, 2016, accessed October 2017 at <http://www.businessinsider.com/south-korea-is-launching-an-open-banking-platform-2016-8?IR=T>
27. "Alternative Data Transforming SME Finance," International Finance Corporation, May 2016, accessed October 2017 at <https://www.gpfi.org/sites/default/files/documents/GPFI%20Report%20Alternative%20Data%20Transforming%20SME%20Finance.pdf>
28. "Citi launches treasury services API," GTR, March 01, 2017, accessed October 2017 at <https://www.qtreview.com/news/global/citi-launches-treasury-services-api/>
29. "StanChart launches open cash management platform," GTR, February 22, 2017, accessed October 2017 at <https://www.qtreview.com/news/global/stanchart-launches-open-cash-management-platform/>
30. "PSD2 - What changes?," Finextra, May 30, 2016, accessed October 2017 at <https://www.finextra.com/blogposting/12668/psd2---what-changes>
31. "How can Application Programming Interface standardization be achieved in the context of the revised Payment Services Directive?," European Council, March 17, 2017, accessed October 2017 at <https://www.europeanpaymentscouncil.eu/news-insights/insight/how-can-application-programming-interface-standardisation-be-achieved-context>
32. "How Regulators Can Help Drive Innovation," Ripple, July 27, 2017, accessed October 2017 at <https://ripple.com/insights/regulators-can-help-drive-innovation/>
33. "Australian government announces several measures for promoting FinTech innovation and growth," Open Gov, Priyanka Bhunia, May 10, 2017, accessed October 2017 at <http://www.opengovasia.com/articles/7586-australian-government-announces-several-measures-for-promoting-fintech-innovation-and-growth>
34. "The Directive on Security of Network and Information Systems (NIS Directive)," IT Governance, accessed October 2017 at <https://www.itgovernance.eu/nis-directive>
35. Gartner, Inc.: "Cloud Heat Map for Banking 2017," Pete Redshaw, Vittorio D'Orazio, May 4, 2017
36. "Cloud banking or banking in the clouds?," BBVA Research, April 29, 2016, accessed October 2017 at [https://www.bbva.com/wp-content/uploads/2016/04/Cloud\\_Banking\\_or\\_Banking\\_in\\_the\\_Clouds1.pdf](https://www.bbva.com/wp-content/uploads/2016/04/Cloud_Banking_or_Banking_in_the_Clouds1.pdf)
37. "Santander's Openbank relaunched as 100% digital bank", Finextra, June 16, 2017, accessed October 2017 at <https://www.finextra.com/newsarticle/30697/santanders-openbank-relaunched-as-100-digital-bank>
38. "DBS to leverage Amazon Web Services Cloud," DBS Newsroom, July 27, 2016, accessed October 2017 at [https://www.dbs.com/newsroom/DBS\\_to\\_leverage\\_Amazon\\_Web\\_Services\\_Cloud](https://www.dbs.com/newsroom/DBS_to_leverage_Amazon_Web_Services_Cloud)
39. "BBVA explains scrum culture initiative," Finextra, Jul 1, 2016, accessed Oct 17 at <https://www.finextra.com/newsarticle/29120/bbva-explains-scrum-culture-initiative>

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