

Digital Transformation and Finance: Issues & Risk Factors

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Abstract

Imagine the person in a rural area winning back the time spent traveling many miles on foot or by bus to a cash agent, and being able to work instead. Think of how many more small businesses might expand if they had access to credit. Picture the smallholder farmers who can finally get loans to buy the seeds, fertilizer, and farming tools needed to improve crop yields and boost incomes. Digitizing finance will be a multiyear effort for many countries but the sooner they start, the faster the rewards will come, in the form of higher growth, greater innovation, and more inclusion. Economic development is usually a long journey, but digital finance solutions can radically speed the progress, and at a relatively affordable cost. The digital infrastructure needed already exists and is being further improved. Billions of people across emerging economies possess the mobile handset that can connect directly into the national payments system. They are just waiting for governments and businesses to wire up the infrastructure and create the products they need. In this paper we discuss as to how the digital era is transforming the world and making finance easier and more reliable.

Keywords: Finance, Business, Digital, Era, Mobile, Development

Introduction:

Financial services are the lifeblood of an economy, enabling households and businesses alike to save, invest, and protect themselves against risk. Yet in many emerging economies today, the majority of individuals and small businesses lack access to even basic savings and credit products, which hinders economic growth and perpetuates poverty.

Digital technologies starting with a mobile phone have the potential to resolve this problem. Households and businesses can use digital payments and financial accounts to interact seamlessly and efficiently, unleashing large gains in productivity and investment, and prompting greater financial inclusion. The Government of India had launched “Pradhan Mantri Jan Dhan Yojna,” national financial inclusion mission which provided bank accounts to at least 140 million families till date.

Two billion individuals and 200 million businesses in emerging economies today lack access to savings and credit, and even those with access can pay dearly for a limited range of products. Rapidly spreading digital technologies now offer an opportunity to provide financial services at much lower cost, and therefore profitably, boosting financial inclusion and enabling large productivity gains across the economy. While the benefits of digital finance—financial services delivered via mobile phones, the internet or cards—have been widely noted, it is to be noted that how large the economic impact could be.

Digital finance has the potential to provide access to financial services for 1.6 billion people in emerging economies, more than half of them women. It could increase the volume of loans extended to individuals and businesses by \$2.1 trillion and allow governments to save \$110 billion per year by reducing leakage in spending and tax revenue.

The rapid spread of mobile phones is the game changer that makes this opportunity possible. In 2014, nearly 80 percent of adults in emerging economies had a mobile phone, while only 55 percent had financial accounts—and mobile phone penetration is growing quickly. Mobile payments can lower the cost of providing financial services by 80 to 90 percent, enabling providers to serve lower income customers profitably.

Businesses and government leaders will need to make a concerted effort to secure these potential benefits. Three building blocks are required: widespread mobile and digital infrastructure, a dynamic business environment for financial services, and digital finance products that meet the needs of individuals and small businesses in ways that are superior to the informal financial tools they use today.

Broadening access to finance through digital means can unlock productivity and investment, reduce poverty, empower women, and help build stronger institutions with less corruption—all

while providing a profitable, sustainable business opportunity for financial service providers. The benefits for individuals, businesses, and governments can transform the economic prospects of emerging economies.

Most people and small businesses in emerging economies today do not fully participate in the formal financial system. They transact exclusively in cash, have no safe way to save or invest money, and do not have access to credit beyond informal lenders and personal networks. Even those with financial accounts may have only limited product choice and face high fees. As a result, a significant amount of wealth is stored outside the financial system and credit is scarce and expensive. This prevents individuals from engaging in economic activities that could transform their lives. Economic growth suffers.

Banks, telecoms companies, and other providers are already using mobile phones and other readily available technologies to offer basic financial services to customers. Using digital channels rather than brick-and-mortar branches dramatically reduces costs for providers and increases convenience for users, opening access to finance for people at all income levels and in far-flung rural areas. For businesses, financial service providers, and governments, digital payments and digital financial services can erase huge inefficiencies and unlock significant productivity gains.

Capturing this opportunity will require concerted effort by business and government leaders. The rewards are substantial. Rather than waiting a generation for incomes to rise and traditional banks to extend their reach, emerging economies have an opportunity to use mobile technologies to provide digital financial services for all, rapidly unlocking economic opportunity and accelerating social development.

As per the McKinsey Global Institute Executive summary, “Digital finance means the financial services delivered over digital infrastructure—including mobile and internet—with low use of cash and traditional bank branches. Mobile phones, computers, or cards used over point-of-sale (POS) devices connect individuals and businesses to a digitized national payments infrastructure, enabling seamless transactions across all parties.”

This explanation is generally broad as it includes

1. All types of financial services (such as payments, savings accounts, credit, insurance, and other financial products)
2. All types of users (including individuals at all income levels, businesses of all sizes, and government entities at all levels)
3. All types of providers of financial services (including banks, payment providers, other financial institutions, telecoms companies, financial technology (fintech) start-ups, retailers, and other businesses)

We also use a number of related, but slightly different, terms that are frequently used in policy discussions and other publications. By “digital wallets”, we refer to a store of value that people can access using a mobile phone or a computer and that provides an easy way to make payments, ranging from person-to-person transfers to e-commerce transactions, to purchases at a store. A digital wallet may be linked to a traditional bank account. “Mobile money” refers to mechanisms allowing people to make payments using their mobile phones without having a traditional bank account. We use “digital financial inclusion” to mean providing people with digital financial services. This can be providing services to those who are currently unbanked as well as giving currently underserved individuals and businesses access to a wider and more appropriate set of digital finance products.

Financial exclusion affects the middle class, not only the poor:

In emerging economies as a whole today, 45 percent of adults—or two billion individuals—do not have a financial account at a bank or another financial institution, or with a mobile money service. The share is higher in Africa, the Middle East, Southeast Asia, and South Asia, and is particularly high among poor people, women, and those living in rural areas— but many middle class people are also affected . Even those people who do have basic financial accounts lack access to the broad range of financial services that those in developed countries take for granted, such as different types of savings accounts, loans, and insurance products. As a result, the majority of people in emerging economies rely on informal financial solutions that are often less flexible and more expensive than formal alternatives—and frequently fail to deliver when needed the most. These include saving in the form of livestock, gold, or through informal savings groups, and borrowing from family, employers, or money lenders.

Individuals. Digital finance could give 1.6 billion individuals access to a financial account for the first time, 45 percent of whom would come from the poorest two quintiles of the income distribution. More than half of the total—880 million—would be women. Previous research has found that when women have financial accounts, they tend to spend more than men on food, education, and health care, increasing the welfare and productivity of their family. For all individuals, convenience, cost, and the range of financial products available would dramatically improve. People in towns and cities would no longer have to spend valuable business hours in line at a bank; rural households could forgo trips to nearby towns and spend more time on income-generating activities. One study, in rural Niger, showed that payments made via digital means saved an average of one hour travel time and more than three hours of waiting time per transfer. Across society, people could improve their management of income and expenses, save for big-ticket items like durable goods, invest in their farms and businesses, and put money aside for unexpected economic shocks. Digital finance can help to reduce poverty and hunger, raise gender equality, and improve access to education and health care.

Digital payments create an electronic record of sales and expenses, enabling businesses to improve their tracking and analysis of cash flow, streamline management of suppliers, and enhance their understanding of operations and customers. One example is iZettle, a payment processor operating in Brazil, Mexico, and 11 other countries. Through a smartphone app, it enables small businesses to process digital payments, track and evaluate their sales data, and monitor profitability, raising their productivity and profitability. Digital records for revenue and expenditure also enable businesses to demonstrate their credit quality to lenders.

Digital finance offers significant benefits—and a huge new business opportunity—to providers. By improving efficiency, the shift to digital payments from cash could save them \$400 billion annually in direct costs. To unleash the full range and potential of new forms of digital finance, however, a much wider variety of players than banks will likely be involved. These may include telecoms companies, payment providers, financial technology startups, microfinance institutions (MFIs), retailers and other companies, and even handset manufacturers.

Governments in emerging economies could collectively save at least \$110 billion annually as digital payments reduce leakage in public expenditure and tax revenue. Of this, about \$70 billion would come from ensuring that government spending reaches its target. This effectively would

increase public investment in critical areas such as education, infrastructure, and health care. In addition, governments could gain approximately \$40 billion annually from ensuring that tax revenue that is collected makes its way into government coffers, money that could be used to fund other priorities. Governments could also enjoy other benefits that we did not quantify. Digital payments could further enhance revenue by reducing the size of the informal economy where businesses do not register, pay taxes, or comply with product- and labor market regulations. Digital operations within government can create large efficiency improvements and therefore cost savings. Shifting social programs from cash to digital payments can also improve outcomes through better targeting of recipients.

It is found in a study that digital finance could raise the level of GDP of emerging economies by a total of 6 percent, or \$3.7 trillion, by 2025 (Exhibit E6). Achieving this would require all emerging economies to meet two ambitious, but achievable, goals, based on the historical experience of some advanced economies. First, they would need to increase digital payments over the next ten years at the same rate that the top quartile of developed countries achieved over the long term. Depending on where a country starts, this means that digital payments would grow to between 25 and 50 percent of total transactions by volume. Reaching this goal would put emerging economies well within reach of the second goal: ensuring that at least 91 percent of adults gain access to financial services, the average of high-income countries.

Nearly two-thirds of the additional GDP would likely come from improved productivity enabled by digital payments. Businesses, financial-services providers, and government organizations all reap large efficiency gains in the shift from cash to digital payments and from paper to electronic record keeping. This results in less time spent performing manual processes and traveling to and from bank branches. Governments obtain further productivity gains by reducing leakage in their spending and tax collection. One-third of the GDP estimate would come from increased investment as individuals and businesses are brought into the formal financial system, shifting informal savings into digital accounts and unlocking more credit that can be used for investment in businesses and durable goods. The remainder of the GDP impact would come from individual time savings that enable additional hours of work.

The potential impact on GDP for each country depends on its starting point. Lower-income countries such as Ethiopia, India, and Nigeria have the largest potential, given their low levels of

financial inclusion and digital payments today. Pakistan currently has a less developed financial system requiring greater upfront investment, and thus would not have as large an increase in productivity as some of its lower-income peers. Middle-income countries such as Brazil, China, and Mexico can potentially boost GDP by more modest— but still substantial—amounts, reflecting their higher levels of financial inclusion and digital payments. China, at 4.2 percent, has the lowest additional GDP potential of our seven countries because its debt levels are relatively high today and it has less room to grow credit further in a sustainable manner.

Based on the historical relationship between GDP growth and job creation, we calculate that the additional GDP gains from digital finance would expand aggregate demand and create nearly 95 million new jobs across sectors, a 3.5 percent increase from current levels. Two thirds of these new jobs are likely to be full-time salaried or wage-paying positions that are in short supply in the developing world.

The economic gains from digital finance are likely to be far larger than the estimates we provide here, because we have not attempted to quantify the impact of many important dynamics. One is the potential impact on growth from raising the quality of human capital in the economy. As more women gain access to financial accounts, they have been shown to spend more on nutrition, education and health care. In addition, regularly paying wages of teachers and health-care workers digitally reduces absenteeism. In India, for example, one study found that attendance rate of teachers is 90 percent in states with reliable digital salary payments, but only 60 to 80 percent in other states. Fewer missed days of work improve the quality of education and health care, enhancing human capital. Second, digital payments can help governments improve targeting of services and subsidies to the poor, and therefore better meet social needs. Third, digital payments create transparency about who is evading taxes. If accompanied by stronger government enforcement efforts, this can reduce the size of the informal economy and boost overall productivity. Fourth, digital payments have already shown their potential to unlock a wide range of new business models in finance and beyond, including e-commerce and on-demand services. Taken as a whole, digital finance can accelerate progress toward meeting many of the UN's Sustainable Development Goals, leading to important societal benefits.

Building blocks essential for capturing the benefits of digital finance :

To capture the potential value of digital finance, three building blocks need to be in place: widespread digital infrastructure, dynamic and sustainable financial-services markets, and products that people prefer to existing, often informal, alternatives. Addressing all three can enable broad—and rapid—adoption of digital finance by the majority of individuals and businesses in emerging economies.

1. Building a robust and broad digital infrastructure: The infrastructure needed to provide digital finance can either piggyback on existing stock or can be implemented at less cost and more quickly than other types of infrastructure, such as power or transportation. Three primary components are vital.
 - First is the establishment of widespread mobile connectivity and ownership. To open up broad access to a wide range of financial services, everyone—rich and poor—must own a mobile phone and have access to affordable data plans. Across emerging economies, network coverage, phone subscriptions, and Smartphone ownership are either already high or growing fast. However governments, non-governmental organizations (NGOs), and the private sector may need to intervene in rural areas and other “edges” of the network where markets are not delivering due to low returns.
 - A national digital-payment infrastructure is the second essential element. A robust payments “backbone” should support safe, low-cost transactions between any two parties while accommodating innovation by providers. This must be supported by wide networks of cash-in, cash-out (CICO) points—often simple agent networks—to allow people access to cash when they need it, and by a broad set of merchants and businesses that accept digital payments. Most emerging economies lag behind advanced economies in their payment systems infrastructure, although some are taking the lead. For example, Jordan and Peru are leading the way in building payments architecture that is faster and less costly than many payment systems in advanced economies today.
 - The third necessary component is the existence of a well-disseminated personal ID system. Individuals need some form of ID that financial-services providers can easily verify. Yet one in five individuals in emerging economies remains unregistered, compared with one in ten in advanced economies. IDs need to have easily fulfilled application requirements, a far reaching physical registration network, and low prices for registration and issuance. National digital IDs with chips or biometric identification, such

as those in India or Estonia, are one way to close this gap. Voter ID cards, passports, and driver licenses are other options.

2. Ensuring dynamic and sustainable financial-services markets: Once a digital infrastructure is in place, it needs to be supported by a sustainable business environment that includes banks and other financial institutions, and also telecoms companies, handset manufacturers, fintech companies, and other businesses such as retailers.

One requirement is risk-proportionate financial-services regulation. Financial regulation needs to strike a careful balance between protecting investors, consumers, and governments; avoiding costly and disruptive banking crises; and giving financial-services provider's space to innovate and compete. Prudential regulation should ensure that providers remain healthy and hold enough capital to avoid losses from over-exuberant lending or operational issues such as fraud, cyber risk, and other systemic information technology (IT) failures. Protection of consumers is also needed, particularly those who are most vulnerable and least economically valuable to the provider. Regulation should also support other financial or policy aims—anti-money laundering is an example—by using risk proportionate measures such as tiered know-your-customer (KYC) stipulations.

Beyond issues of regulation, countries also need to create an environment that is conducive to competition and encourages providers to offer a broad range of new products and financial services. Among the elements needed to stimulate innovation are a competitive market structure, business-friendly regulation for new entrants, financial markets open to foreign investment and talent, and financial capital available for innovation. In some countries, incumbents may seek to shut out new players or tilt the playing field to their own advantage.

3. Offering financial products people prefer to existing alternatives: People will adopt digital financial services only if they prefer them to existing alternatives, or have incentives to do so. Today, individuals and small businesses use cash and a variety of informal financial arrangements for good reason, and these mechanisms sometimes play a cultural and social role in addition to a financial one. For instance, purchases of gold in India may be a cultural preference, while rotating savings clubs in Nigeria have an important social component. New digital products need to offer true advantage on cost and utility for people.

This will require smart product design and may require well-tuned incentives. Strong, trusted brands should be encouraged to launch affordable, easy-to-use products that are significantly more attractive than current options and require minimal behavioral change by customers. Governments may need to step in with incentives or other measures to promote adoption in the early stages of market development.

The next horizon: digital finance unlocks new business models:

In the long term, the benefits of digital finance go far beyond expanding access, driving down costs, and increasing the convenience of transactions. Like electricity or roads, a digital-payment network is part of the basic infrastructure of an economy that enables individuals and businesses to transact with one another seamlessly. It also can underpin broader and more innovative business activities. But at least three types of new business innovations are already apparent and could further transform the lives of individuals in, and economic prospects of, emerging economies.

First, the increased transparency array of and information about users generated by digital payments can spawn new types of financial services. New credit-scoring models that assess user data can help lenders assess the credit risk of a broader set of customers. Peer-to-peer (P2P) lending platforms can also emerge. Second, digital payments allow people to transact in small amounts. This creates new business opportunities based on so-called micro-payments. Examples already in existence include pay-as-you-go solar power for households, irrigation systems purchased on layaway plans, and school tuition fees broken into small, frequent payments.

Over the longer term, digital payments can enable development of e-commerce and on-demand services. Today, most e-commerce in emerging economies relies on cash payment on delivery. But digital payments can unleash more rapid growth, given their greater convenience. In turn, e-commerce can unlock consumer spending, particularly in areas where retail options are limited. On-demand services can enable individuals to tap directly into the labor market to find out where their services are most valued.

Risks in digital finance:

The phantom of disintermediation: The Fintech hype has raised concerns that the financial services sector is about to experience widespread disruption. Disruption has already happened in

niche areas where FIs were too slow, not sufficiently customer-friendly, too expensive or simply non-existent. Now FIs fear that the rise of new players from outside the industry in payments, peer lending, robo-advisors and financial management tools will make the disintermediation threat real.

Those wanting to avoid the risk of disintermediation have plenty of options. With massive capital reserves, the financial services industry is well-positioned to invest in new ideas, technologies, and partnerships. The challenge will be to innovate for the right reasons to improve the customer experience and to explore new business revenue models. Unfortunately, the hype around Fintech and digital has triggered a herd mentality, often forcing FIs to act without a clear strategy or understanding of how it will affect value for customers or the organization.

Cybercrime the new number one priority: As digitalization intensifies FI vulnerabilities, cybercrime is an increasing threat. The financial industry is threatened by a range of increasingly sophisticated and organized attackers, from profit seeking criminals, to activists with a political or social agenda, to state-sponsored hackers with the objective of compromising customer data or even damaging the integrity of the financial system. FIs are now being attacked by intrusion technologies and techniques, leveraging multiple attack vectors and multiple types of malware to disguise an attack and confuse security analysts.

It is no longer a question of how to avoid being hacked, but how to react to it once it has happened. Although perimeter defenses are crucial to keep attackers out, FIs need to go further to identify, prevent and eliminate the attacks in near real-time as they occur.

This means FIs need new methods of threat detection, analysis, and elimination as well as clear frameworks and action plans that govern the reaction in case of a breach. Keeping pace with cyber threats will require organizations to be more proactive and collaborative and start to think not just beyond the known and unknown risks of today, but also those appearing on the horizon.

The challenge is to find the right balance between security and customer convenience. Eventually, biometrics is widely anticipated to end the insecure yet very common practice of password/PIN authentication. In future, security will not just include checking an individual's fingerprints, face, retina, iris and hand — but their voice patterns, handwriting and keystroke dynamics as well. This combination of physiological and behavioral features is considered the best means of reducing fraud. Although the technology has been around for years, FIs are just

beginning to take baby steps. For instance, banks in Australia, Malaysia and Singapore are using smart phone fingerprint sensors to authenticate payments or online banking access.

Reputational risk an uphill battle: In recent years, we have seen established, reputable service providers facing crises caused by system outages and stolen customer data. Any FI in this type of situation will quickly find themselves in the headlines, with the potential for massive damage to their brand and customer trust.

Digital transformation also comes with an intrinsic reputational risk. Moving towards virtual organization will force FIs to restructure their workforce, resulting in high profile and unpopular retrenchments. Likewise, once branch networks start to consolidate, as we have seen in many mature Western economies, banks will face opposition from customers. Also, now social media is the megaphone for unhappy customers, the reputational damage of complaints going viral is a growing area of risk.

A good reputation must be actively built and managed to achieve resiliency in the face of adverse events. This means transparency and presence in social media and the mainstream media before disaster strikes. Strong cyber security governance, robust incident resolution plans and simplified communications also play a significant role in damage mitigation.

What organizations must do?

Who is it for and what is needed?

Organizations need to develop a much deeper understanding of their customers and build a value proposition that addresses the needs of the target audience. Demographics cannot deliver this, FIs needs deep understanding of behaviors, attitudes and perspectives. Every new design and development should start with the customer and work back, focusing on their experience, needs and satisfaction.

How can digital be monetized?

Digital channels should not be cost centers. Every interaction or initiative must drive value in the form of a better customer experience, revenue growth or both. This requires a new approach to product development, distribution, staff capabilities and organizational culture. Existing products and business models cannot deliver a rich digital experience — simply making them available online is just a cosmetic change. True digital transformation is much more disruptive.

How can we deliver a digital experience in the most efficient and productive way?

The future is real-time, relevant, personalized, and interactive. Delivering this experience requires a modernized organization with fully automated processes and driven by data — geared for speed and customer centricity. New methodologies will accelerate the conceptualization, design, and testing of digital solutions, but common sense and proper control policies will safeguard the process.

How do FIs manage risk and compliance in the process?

Regulation will continue to move at a slower pace, as it lacks the resources, expertise, and mandates to stay on top of every new emerging technology. The challenge for FIs is to revise the role of internal legal, risk, and compliance teams to be innovation partners and ensure digital initiatives can move forward in a balanced way.

Conclusion:

Services including everything from driving taxis to day labor to specialized work in technology. As the global digital economy grows rapidly, digital payments provide a more convenient, low cost way for individuals and businesses to take advantage of new opportunities. The spur to innovation that digital finance can give is one argument among many for adopting it, and its rapid adoption. Examples are mounting of the countries that have benefited from harnessing digital finance. As a developmental tool, it seems indispensable, a means to securing many ends from reducing poverty and hunger, to improving health, creating good jobs and inclusive economic growth, and reducing inequalities. Digital finance is not a miracle cure for all the world's ills, but it is within reach, and available now to emerging economies willing and ready to seize its many benefits.

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