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vritti

Edition 9 | September 2017



BLURB

MOBILUTION

Open Banking

**TECHNICALLY
SPEAKING**

Democratizing
Wealth Management

CHANGING LIVES

State of Mobile Financial
Services in WAEMU

TRENDING NOW

Blockchain bane or
boon for Banks

IN THE MEDIA

C O N T E N T S



Blurb

Dear readers,

FinTech is not exclusive to startups anymore. Leading financial institutions are embracing technology to grow their business and expand their reach. This edition of Vritti explores how the disruptive nature of FinTech is revolutionizing financial services ranging from financial inclusion to wealth management.

First up, we discuss what's driving banks to expose APIs and enable third party developers and applications to access their customer data in a secure manner in the article "Open Banking".

Further, we take a look at how Robo-advisors are transforming the financial advisory business in the article "Democratizing Wealth Management"

Next we turn the spotlight on West African Economic and Monetary Union (WAEMU) region and see how mobile money is accelerating financial inclusion in the region in the article "State of Mobile Financial Services in WAEMU"

Lastly, we analyze impact of Blockchain technology on banks in the article "Is Blockchain a Bane or a Boon for Banks"

I hope you enjoy reading our articles like we enjoy writing them for you.

Happy Reading!

Srinivas Nidugondi

SVP and Head of Mobile Financial Solutions
at Mahindra Comviva

OPEN BANKING



By adopting technology to deliver financial services, banks have always grown: be it credit/debit cards, ATMs, core banking systems or online commerce gateways. Both financial institutions' and their customers' lives have improved through faster and more convenient services, and banks were never threatened by technology, till recently.



— By Prasad Nilkod Shambhu

New age 'fintech' companies plan to change the way individuals and corporates buy and access financial services by offering improved customer experience, lesser fees, personalized financial management at their fingertips. But banks have taken solace in the fact that they enjoy the trust of masses, have a near monopoly of all sophisticated and high value financial services such as housing loans, coupled with exclusive access to customer data which enable cross-selling of a gamut of financial products to keep the competition at bay. Even today, employees get paid in a bank account, and fintech providers, in spite of their best efforts and rapid growth, are secondary accounts in the lives of a typical consumer.

“Open Banking” is an emerging trend which has quickly moved from being an idea to reality threatens to disrupt this state of affairs. Open Banking involves bank and other financial institutions enabling third party developers /

applications to access their customer's data through the use of Open APIs. It enables customers to share their banking data such as transaction history and account details with any other software application, in a secure manner in real-time.

When external parties have access to consumer's historical data, they can build a whole suite of applications around financial institutions, such as providing a better customer experience, aggregate account information spread across multiple financial institutions at a central place, combine customer's financial history and other personal data to generate more accurate credit profile, offer personalized saving advice, etc. It allows customers to gain a 360 degree view of their finances and manage their money and accounts wisely. With open banking, customers do not just consume the platform, but contribute to it.

The main driving forces behind “Open banking” becoming mainstream phenomenon are:



REGULATIONS

Quite a few regulators have begun mandating that banks open up the data held by them and share them with 3rd party applications. Initiatives such as PSD2 from EU and Open Banking Standards of UK will kick in from 2018, and banks operating in Europe will not have the luxury of not sharing data and allow customers greater control over what they want to share with whom. Even Australia has announced in its 2017-18 budget, a move towards open banking regime and has set up a committee to finalize the provisions. The head of competition Bureau has indicated that the Canadian government is looking at regulatory action to promote sharing of transactional data between banks and fintech companies.

COMPETITION

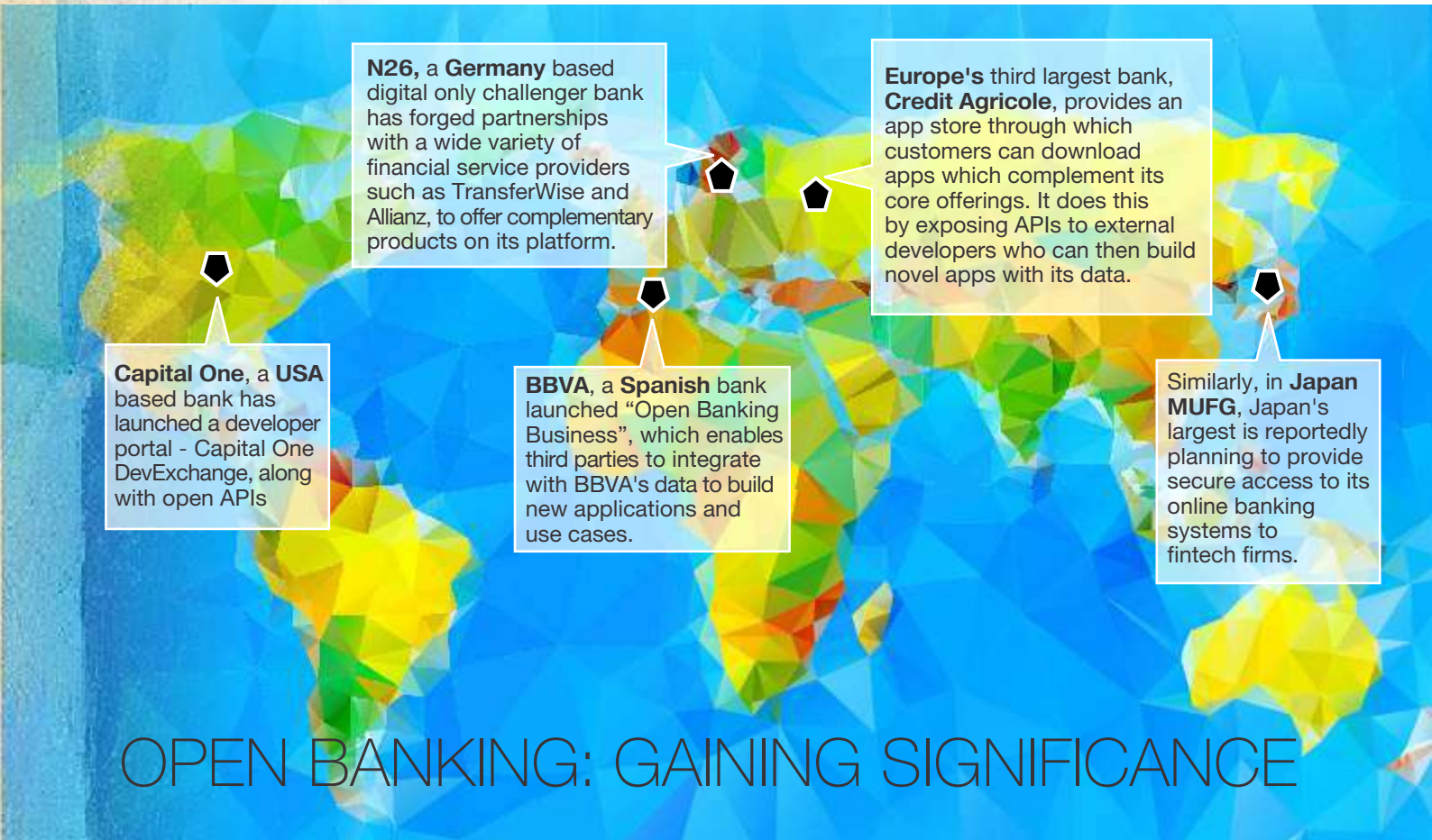
The bar for customer experience is being set by fintechs which offer frictionless digital banking experience through mobile phones for a lesser fee than traditional banks. Incumbents can lower their cost of operations by adopting technology to automate back end operations and decrease personnel required to service customers by offering low-cost self-service channels to their customers.



CUSTOMER EXPECTATIONS

Consumers are increasingly getting comfortable with digital only channels such as smartphones to meet their banking needs, and expect the banking experience to be similar to those offered by technology led organizations such as Uber or Starbucks. If incumbents fail to meet customers' expectations, they risk being disintermediated by fintechs, who will build relationship with consumers.

We can see the signs of shift towards open banking or platform banking as increasing number of financial institutions are voluntarily providing access to third party applications through APIs. Few of them are:



Capital One, a USA based bank has launched a developer portal - Capital One DevExchange, along with open APIs

N26, a Germany based digital only challenger bank has forged partnerships with a wide variety of financial service providers such as TransferWise and Allianz, to offer complementary products on its platform.

BBVA, a Spanish bank launched "Open Banking Business", which enables third parties to integrate with BBVA's data to build new applications and use cases.

Europe's third largest bank, **Credit Agricole**, provides an app store through which customers can download apps which complement its core offerings. It does this by exposing APIs to external developers who can then build novel apps with its data.

Similarly, in Japan **MUFG**, Japan's largest is reportedly planning to provide secure access to its online banking systems to fintech firms.

OPEN BANKING: GAINING SIGNIFICANCE

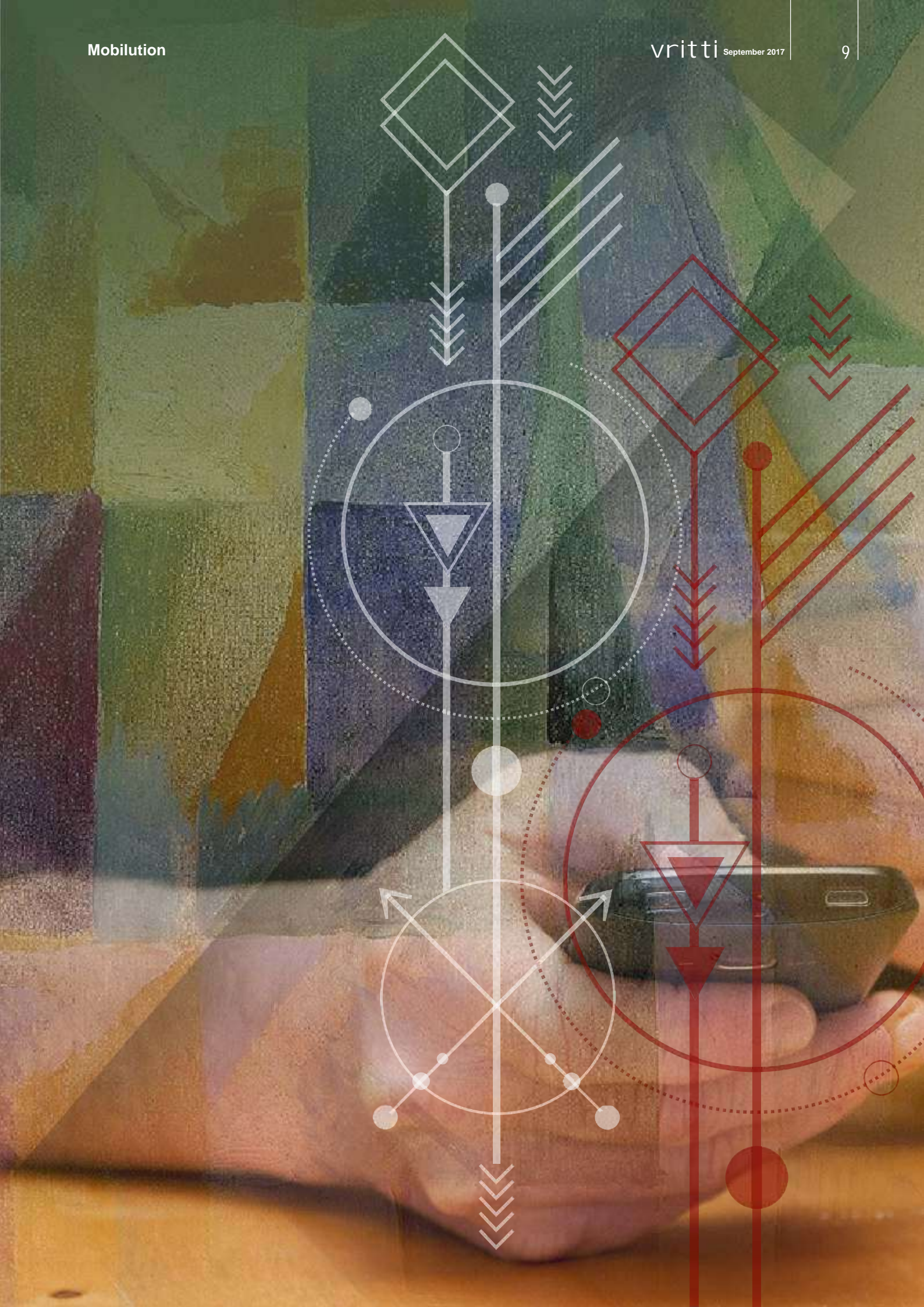


Although there is a definite shift towards open banking with push coming from both enlightened regulators across the globe as well as incumbent banks who have realized that the bank of the future will be as much of a technology company as a financial institution, there are few challenges on this path. Without a standard for data sharing or standardized APIs for banking services, each bank will develop its own proprietary API format and integrating all these various formats will be cumbersome and erode some of the benefits of open banking such as easier sharing of data between any two financial institutions or fintech companies. Also, it would be hard for the regulators to evaluate and judge the quality of data shared by a bank through its APIs, and even enforcing the spirit of the regulations which envisages truly open transfer of one's financial data between financial service providers through customer's consent in a seamless manner. Moreover, smaller banks which do not have the technology muscle and capital required to upgrade their IT systems to an open API system will lose out, and their

customers who are typically rural or low income customers will be left with lesser choice, and it might create a winner takes all kind of situation where a few large banks only survive.

Banks have always made use of APIs in their banking software; but transition from private and closed APIs to public and open APIs is afoot. The drivers for this change are regulatory pressure, elevated customer expectations and cost pressures. APIs let fintech and banks collaborate with each other; banks find new distribution channel and greater access to customers, help incumbents innovate quickly and reduce time to market for new financial products. Customers' adoption of fintech has been slower than anticipated, but advent of Open Banking can upend some of the competitive advantages that banks have by decoupling the value chain, usurping customer relationships and enable merchants and customers to interact directly with each other. Europe is the clear leader in this transformation, but rest of the world is slowly waking up to the benefits of sharing of customers' financial data.

About the author: Prasad is Product Manager of mobiquity® Money at Mahindra Comviva. He has 5 years of experience in building software products form the backbone to enable financial services organizations to effectively serve their customers. He is amazed by the impact access to formal financial services has on lives of people all around the globe and believes financial inclusion will not be possible without technology led solutions.





DEMOCRATIZING WEALTH MANAGEMENT

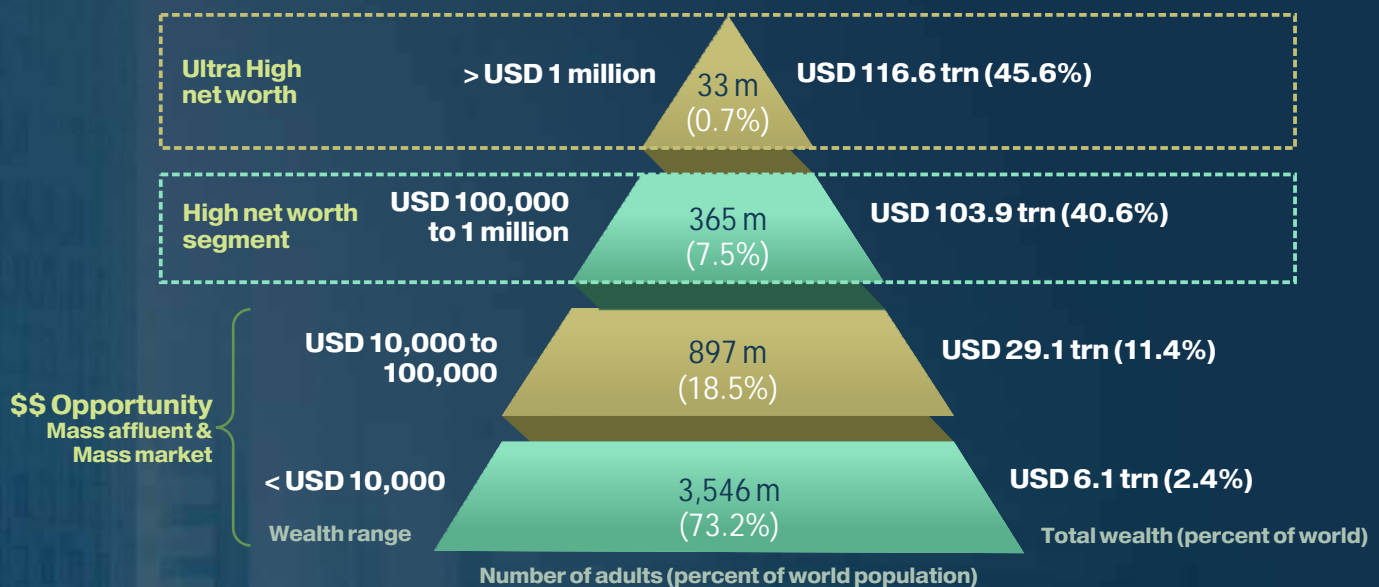
Why financial advisory is only for the privileged?

If we look at the Global wealth pyramid, ~86% of the wealth is owned by the High net worth and above segment which is just 8.2% of eligible adult population. The people in these segments are the ones who can afford to get personalized advisory and wealth management services. The remaining 97.8% of the population consisting of the mass affluent and mass market segment remain underserved due to number of reasons such as high threshold levels for investment, high service cost, low transparency etc.



— By Deepak Mylapalli

The global wealth pyramid



The people from the mass affluent and mass market segments can be further categorized in four primary segments basis the type of investments:

People having investments into:



Type I

Only Financial assets
(Deposits, mutual funds,
capital markets)



Type II

Only Physical assets
(Gold, Land, Properties)



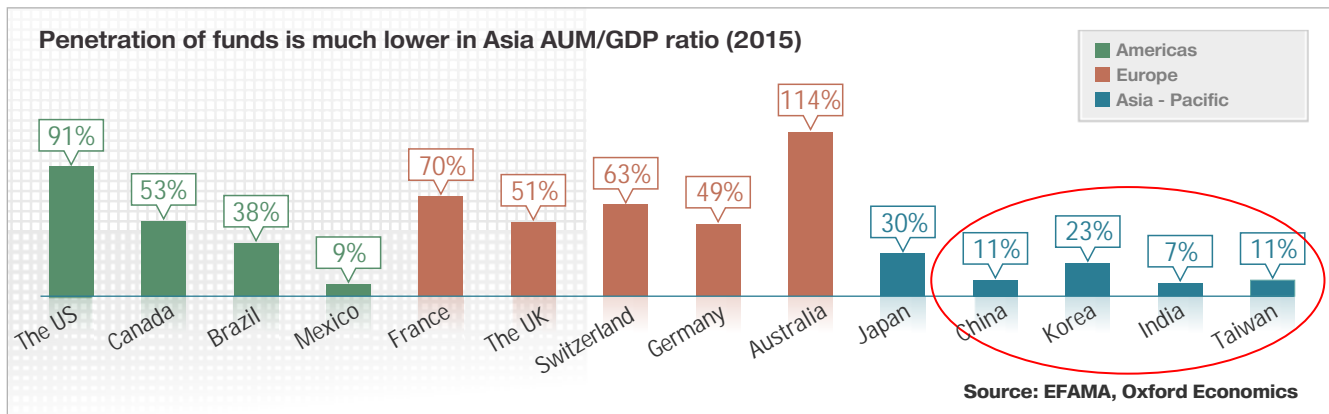
Type III

Both Physical &
Financial assets



Type IV

No investments



In the context of India experiencing rapid economic growth, and with the regulatory & financial sector reforms, there has been a shift in consumer spend from physical assets to financial assets. However, majority of this shift is funneling as investments/savings in to Bank deposits.

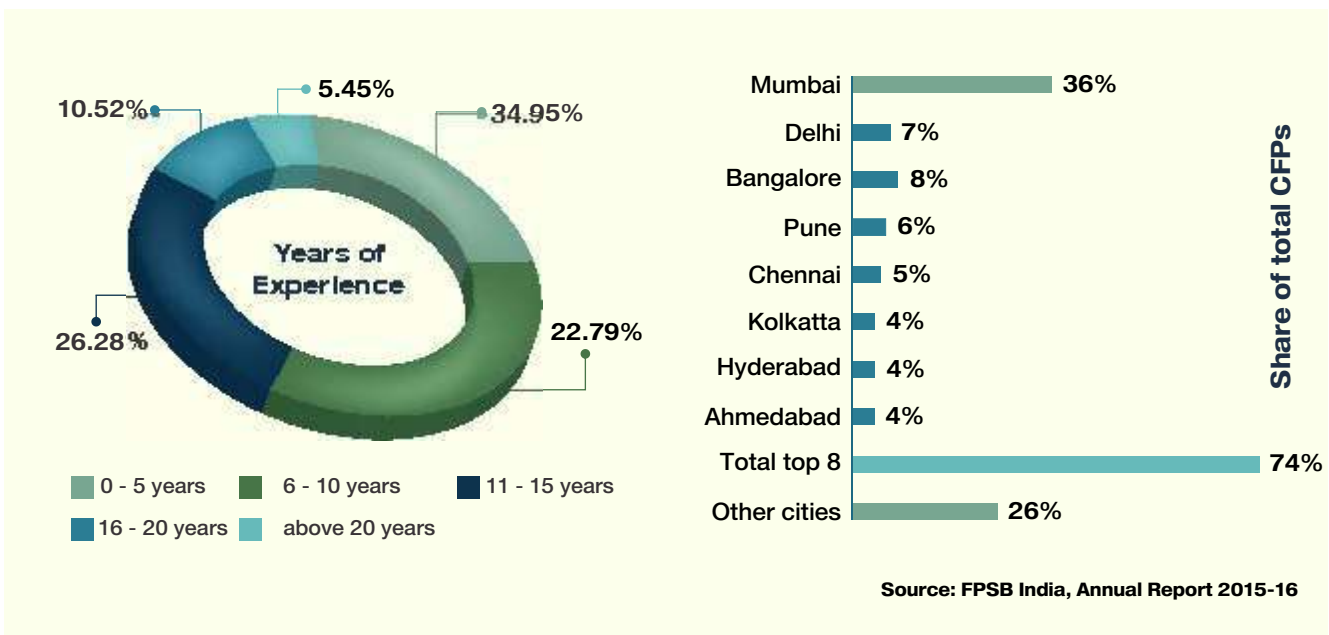
Bank Deposits	100 lakh crores
Insurance linked products	40-45 lakh crores
Mutual funds	~6 lakh crores

The lack of affinity for investment classes other than Bank deposits is primarily two-fold:

a Lack of awareness on the investors front

- Most investors find them complicated due to lack of complete understanding
- Past generations preferences towards low-return, risk-free deposits

b Lack of supply - current distribution is heavily biased in major metro cities





Opportunity – Huge untapped mass market

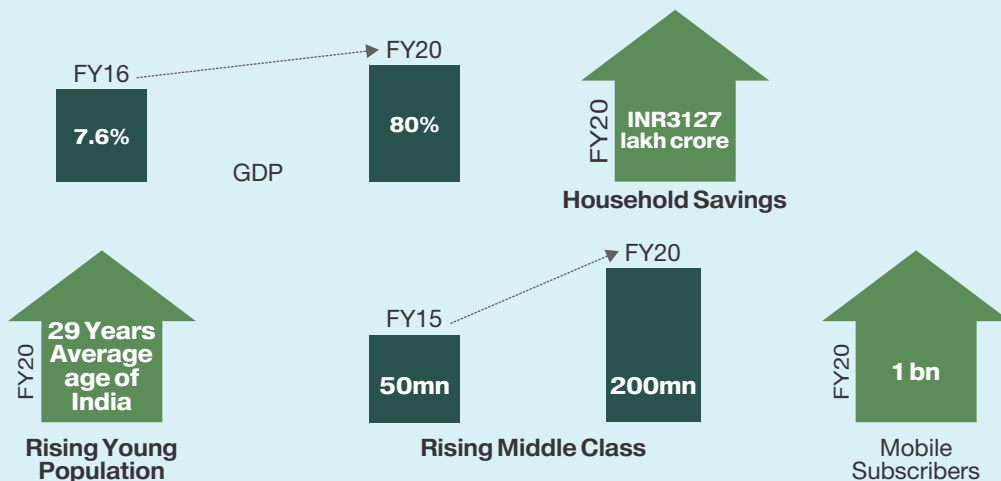
The low penetration of mutual funds in India compared to global markets, plus the favorable demographic of young & tech savvy consumers getting in to investment purview first time, plus the increasing trust to transact on digital platforms combined together creates a great opportunity for a 10x growth in this segment in the next 4-5 years. And the front-runners that would be leading this accelerated growth would be two major elements:

- Investment in educating the investors to increase the awareness

- Advent of new-age Digital platforms (especially for first-time investors)

This is where the digital platforms can clearly make a difference & disrupt the distribution. However, the real adoption for these channels would be only when these platforms take away the complexities involved & make the experience of investing simple & super easy. And here comes the new-age class of digital platforms called Robo-advisors!

Rising Potential and Changing Consumer Behavior





So, what are Robo – Advisors?

“A class of financial adviser that provide financial advice or portfolio management online with minimal human intervention based on mathematical rules or algorithms”

Need for Robo - advisors

Until recently, there were only two options for aspiring investors:

a Do it yourself (DIY)

b Hire a financial advisor

While DIY is not an option for an average first-time investor since there are too many confusing, marketing messages out there in the market & the actual decisions would need a significant amount of time to be invested in research.

And the latter option of hiring an advisor has some imminent problems:

Reachability – Minimum requirement of corpus investment which keeps the advisors out of reach for the young (or) low value investors

Cost of service

Threat of biased advice – The advice might be biased especially if the advisor gets distributor commissions and would likely to benefit the advisor more than the investor

With robo-advisors, most of these issues can be elegantly tackled and if designed properly, they can help the investors answer the three fundamental questions of investing – why to invest, how much to invest & where to invest. Though the term robo-advisory is used loosely, in general a robo-advisor is expected to help the investor with the minimum of following:

Investor profiling – Assess the financial goals, liquidity preference & risk appetite

Asset Allocation – Determine the investment class mix

Portfolio selection – Recommending the actual funds to invest in



* Functionally typical in financial professional and client facing digital investment advice tools

** Functionally typical in financial professional facing tools only

Source: FINRA 2016 Report





How does it work?

The general principle behind Robo – Advisory is that the markets are efficient and a diversified and disciplined approach to investing is necessary for long term growth.

The first step is to understand the customer's risk profile through inputs like age, salary, investment goals, and tolerance for volatility. This is accomplished with the help of surveys, questionnaires, and phone consultations prepared by the experts in behavioral finance.

On the basis of this information, the funds are allocated into a diversified portfolio of exchange traded funds that reflect an asset mix that is customized to the customer's risk appetite and needs. Portfolio compositions are overseen by professionals and are broadly

diversified according to sound investment principles based on Market Portfolio Theory, the Black Litterman Model, the Fama – French Three-Factor model and so on.

The customer is charged a small fee for these services which may vary from .25% to .8% of AUM. The markets are tracked 24/7, and when the market shifts, the robo advisor automatically rebalances the portfolio according to the risk appetite of the customer. For example, if the market shifts and a portfolio that has 70% equity ends up with more, some portion of the equity is sold and the proceeds are invested in other asset classes. This is to ensure that the risk is according to the customer's comfort level.

Growing acceptance across all age groups and classes

1 Millennials and digital natives

Robo advisory service, with their minimal thresholds, appeal to millennial who want to save money but don't have the wealth to warrant the attention of human advisors. Low barrier to entry is definitively encouraging to young people looking to invest. The millennials and the digital natives have been raised on technology, which is integral to their daily lives. They trust technology enough to delegate important things in their lives, such as financial planning. They are also keen on self-learning through digital tools. As a result, robo advisors have targeted this segment as large segment of the millennial population simply don't trust human advisors.

2 Baby boomer

As the millennials grow older, they will encounter more financial complexity in their day to day life, for example, planning for the education of their child. Millennials will keep their robo account, but turn to financial advisers for more complex financial planning.

3 Retirees

Robo advisors are watching the markets all the time. So when the stock prices goes up, the robo advisor sells some of the equity and spreads the funds in other asset classes, which is a great help for retirees who want to mitigate risks. A hybrid wealth management system, with a mix of robo advisory services for 24/7 services, and financial advisor for more complex financial planning will become necessary.

What is next?

The development of cognitive computing, AI and machine learning tools, will help robo advisors to provide more complex services in the future. These tools will help in gathering information about the customer, understand need and preferences, assess risk tolerance, and follow up and probe based on experiences. In the future robo advisors will be able to reassure clients through difficult markets, persuading clients to action, synthesizing solutions that cater to client's changing needs, which will help to provide a human touch for a more end-to-end wealth management and financial service.

Concluding thoughts – uptake for Robo-advisors

This space is very nascent in India currently & a good number of fintech startups are offering robo-advisory (or evolved digital platforms) solutions for tech-savvy investors, with the early-adopters reacting positively to

these platforms. However, the adoption on wide-scale can be accelerated once the major entities like banks or traditional wealth management companies embrace & launch robo-advisory offerings.



R E F E R E N C E S

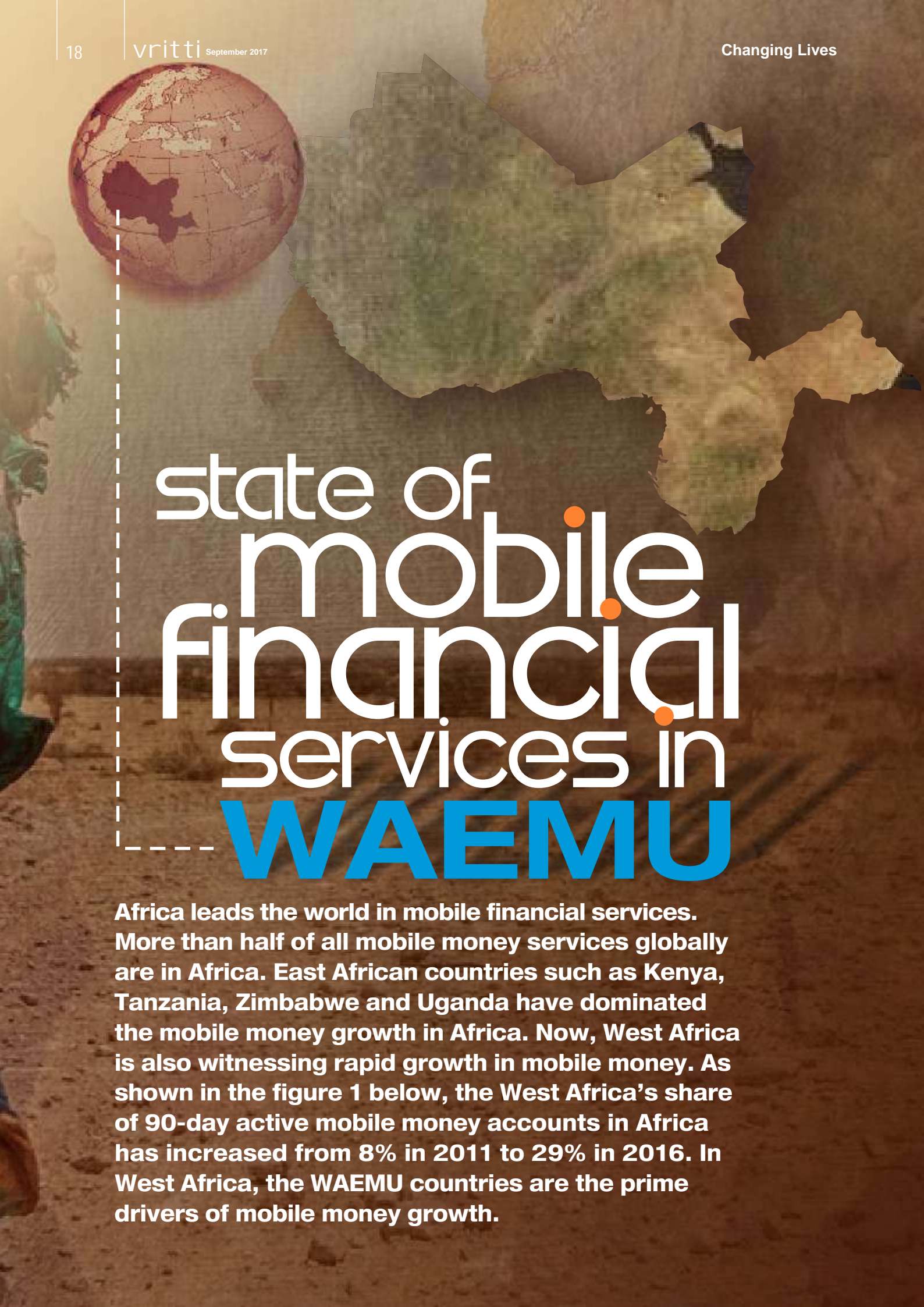
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<https://www.cgi.com/sites/default/files/white-papers/robo-advisor-automated-advice-platform-cgi-patpatia-white-paper.pdf>

About the author: Deepak Mylapalli is a senior product manager in Mobile Financial Solutions of Mahindra Comviva. He has been working for past 5 years in various product lines, right after completing his PGDM from IIM Ahmedabad. He is interested in fintech, payments & commerce.





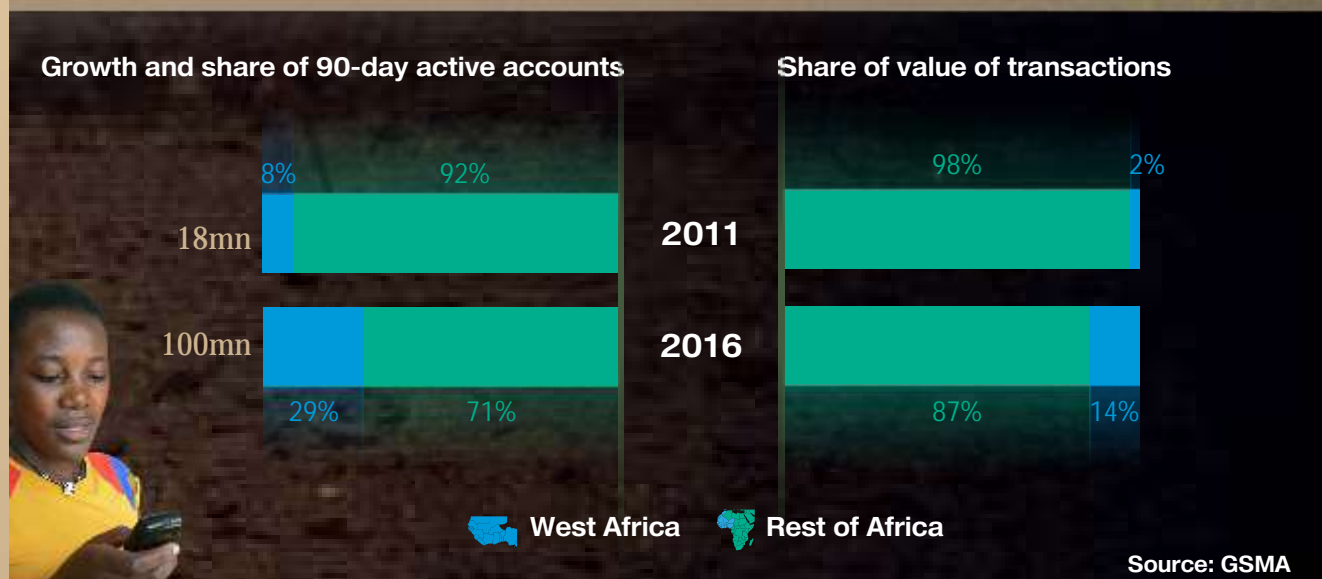
state of mobile financial services in **WAEMU**

Africa leads the world in mobile financial services. More than half of all mobile money services globally are in Africa. East African countries such as Kenya, Tanzania, Zimbabwe and Uganda have dominated the mobile money growth in Africa. Now, West Africa is also witnessing rapid growth in mobile money. As shown in the figure 1 below, the West Africa's share of 90-day active mobile money accounts in Africa has increased from 8% in 2011 to 29% in 2016. In West Africa, the WAEMU countries are the prime drivers of mobile money growth.



— By Mohit Bhargava

Figure 1: Mobile money growth in Africa



Enabling e-money regulations facilitating growth

West Africa Economic and Monetary Union (WAEMU) is a group of eight francophone West African countries, regulated by one central bank BCEAO and follow one currency (CFA) and one monetary policy. These countries include Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal and Togo.

In 2006, BCEAO came up with an innovative e-money regulatory framework allowing MNOs and non-banks to provide mobile financial services in the region. The regulation was further reinforced in 2015. Under the regulation, the central bank permits two models for Mobile Network Operators (MNOs) and non-banks to offer mobile financial services. Under the first model, MNOs or non-banks can partner with banks. Banks will be responsible for

e-money issuance and compliance issues, while the MNO or non-bank will focus on developing, distributing, marketing and managing the mobile financial service. Under the second model, MNOs or non-banks can become e-money issuers by creating a dedicated subsidiary for e-money issuance and distribution.

BCEAO's innovative e-money regulatory framework provided impetus for MNOs and non-banks to launch mobile financial services. By end of September 2015, there were 33 e-money issuers offering digital financial services in WAEMU. 29 out of 33 services have adopted the first model, where MNOs and non-banks have partnered with banks. The remaining 4 services follow the second model and are run by standalone e-money issuers.



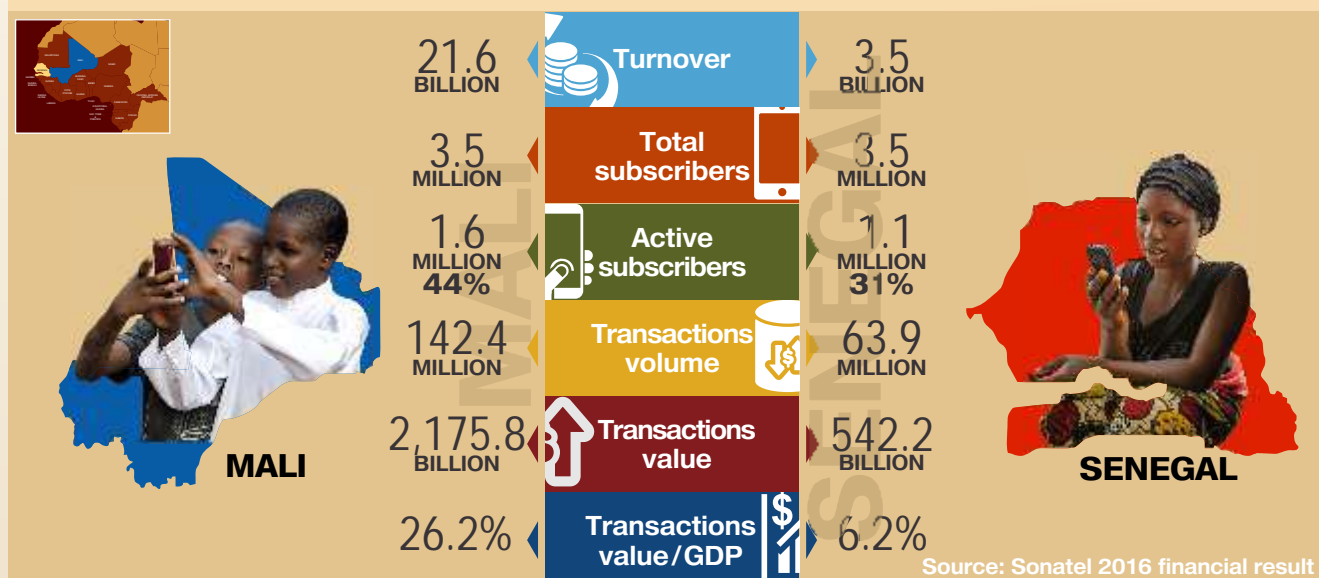
MNOs dominate mobile financial service landscape in WAEMU

MNOs lead the mobile financial services market in the WAEMU region. MNOs are best placed to offer successful mobile money service due to their huge customer base, expansive airtime distribution network in both urban and rural areas, free availability of mobile channels like USSD and SMS, strong brand presence and extensive marketing experience. Backed by new-age technology platforms following the fintech approach, the MNOs offered innovative low-cost mobile financial services

reaching the unbanked. They cater to the large number of financially excluded people not served by banks.

Orange, Airtel, Onatel, Sotelma, MTN and Moov are the dominant mobile money players in the market. Orange Money is the largest mobile money service in the region available in 6 countries – Burkina Faso, Cote d'Ivoire, Guinea Bissau, Mali, Niger and Senegal. It has achieved scale in many countries (Figure 2).

Figure 2 : Orange Money Mali and Senegal - 2016 data



MNO's mobile money services are dominated by basic transactional services like cash-in, cash-out, money transfer, airtime top-up, bill payments and merchant payments. Very few MNOs have experimented with banking service such as savings and loans. However, MNOs are continuously innovating and launching new services that are extending the use of

mobile money to include wider population. International remittance is an apt example. Multi-country MNOs have launched mobile money based inter-country money transfer services. For example, Orange has launched direct money transfer between its Orange Money customers in Cote d'Ivoire, Senegal, Mali and Niger. Etisalat/Maroc Telecom

group has launched money transfer between its mobile money customers in Cote d'Ivoire, Niger, Togo, Benin and Burkina Faso. The transactions are completely digital as the money transfers take place instantly from sender's mobile money wallet in one country to recipient's mobile money wallet in the other country. Mobile money based international remittance are almost 60% cheaper than services offered by traditional money transfer operators. Due to ease-of-use, convenience and affordability, mobile money based international services have gained significant traction in the region. There are 23 live mobile money based international remittance corridors in West Africa. West Africa constitutes 63% of all mobile money based international remittance transactions globally.

MNOs are also innovating and evolving the merchant payment offering. Orange Money Côte d'Ivoire and MTN Mobile Money Benin have launched NFC-based merchant payment services. They have provided NFC POS to merchants and NFC sticker to customers linked with their mobile money wallet. Customers just tap the sticker over POS to make payments. Orange Money in Senegal has launched a GIM UEMOA credit card. GIM-UEMOA is the WAEMU Interbank Card Processing Grouping. The card can be used by Orange Money customers to pay at GIM-UEMOA POS and withdraw money at GIM-UEMOA ATMs in the WAEMU region.



School fee payments in Côte d'Ivoire

Côte d'Ivoire is one of the biggest success stories of school fee payments using mobile money. The Ministry of National and Technical Education (MENET) partnered with four accredited mobile money providers in the country and made it mandatory for secondary school students to pay their school registration fees digitally. The impact of these collaborations and the adoption of digital payments have been phenomenal. In academic year 2015-16, 99.3% of Côte d'Ivoire's 1.7 million secondary school students paid their annual school registration fee via various mobile money services.

The service has provided convenience to parents as they can now focus on their work, rather than worry about paying fees. The service has also benefited MENET and schools in multiple ways. Digitization of fee payments has reduced cash handling costs as well as incidences of armed robberies, which was very commonplace before the introduction of digital payments. Secondly, with mobile money, school fees are now collected in full, and that too much earlier in the year, which means that schools have more access to funds function properly and provide better learning conditions to students and working conditions to teachers. Lastly, digital registration of secondary school students allowed MENET to consolidate its student database, eliminate duplicate entries and significantly increasing the quality of its information.

Source: GSMA

Every growing business has challenges and mobile money is no different. Despite being the dominant player in mobile money business, MNOs often complain about rigidity of bank partners. Hence, some MNOs are creating

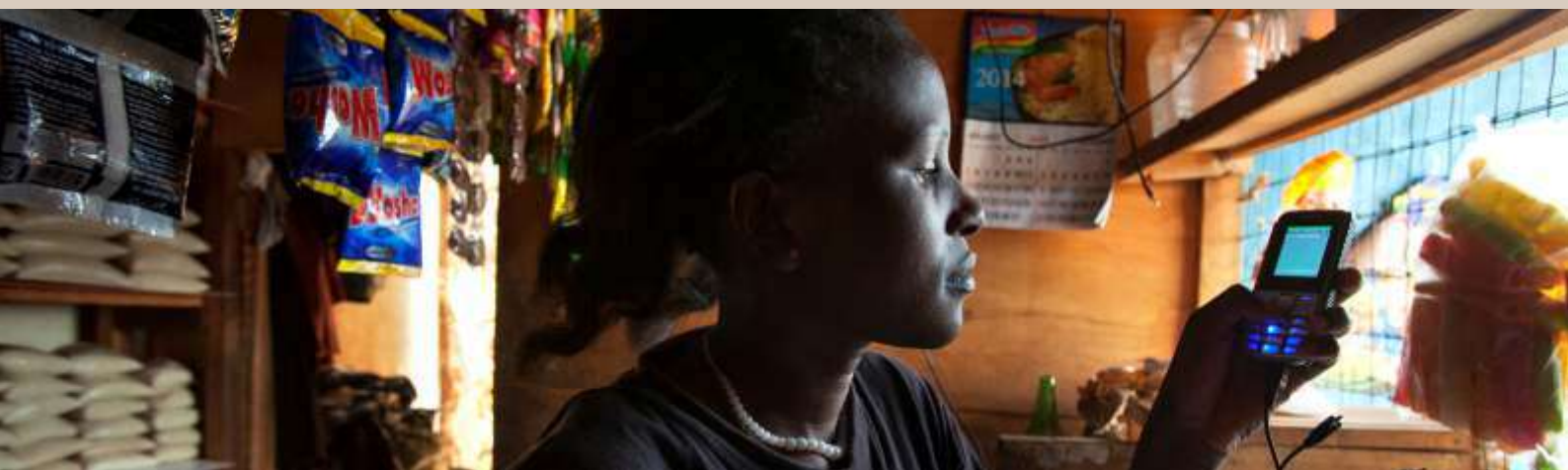
dedicated subsidiaries to become e-money issuers themselves. Foreg., Orange has become e-money issuer in three countries in WAEMU region: Senegal, Côte d'Ivoire and Mali.



Third-party mobile money services have struggled to gain ground

Various non-MNO, non-bank companies are also offering mobile money services in WAEMU region, however most services are struggling to make headway due to limited agent network and lack of experience in

operations and marketing compared to MNOs. Unlike MNOs which use USSD as access channel for mobile money, many third-party service providers use mobile app and SMS channel which has several limitations.



Banks aligning with the new paradigm

Growing presence of MNOs in digital financial services sector, internal pressure for cost optimization and push from central bank to reduce financial exclusion, is compelling banks to explore digital financial services. However, digital offering of the banks have been largely limited to SMS banking, online banking and prepaid cards, which tend to

target either banks' existing users or high income people in urban areas. Most banks still have to come up with digital financial services to serve rural and low-income population.

Most banks recognize the growing clout of MNO and non-bank led mobile financial services. Hence, rather than ignoring this trend, banks are partnering with MNOs and non-banks to

be part of this growth. Some banks such as NSIA, Ecobank, Banque Atlantique, Bank of Africa and BNP Paribas have become e-money issuers and agents for mobile money services diversifying their revenue. 29 out of 33 digital financial services in WAEMU are based on partnership between banks and MNOs or non-banks. Banks are also enabling money transfer between bank account and mobile money wallet offering additional services to existing users.

Some bigger banks like Societe Generale are taking a different approach and competing with MNO led mobile money services. Societe Generale is promoting itself as a new age bank by launching its own mobile financial service and positioning it as an alternative to traditional banking. To extend the reach of their service, the bank is partnering with third-party agents.

YUP

Societe Generale, a French multinational bank has launched a mobile money service called YUP in Côte d'Ivoire and Senegal. Societe Generale has adopted agency banking model for YUP. Societe Generale has partnered with third-party agents (service stations, traders, small shops) to offer last-mile services such as cash-in and cash-out. YUP is accessible via an expanded network of distributors equipped with adapted terminals and via the mobile banking app of Societe Generale's banks.

Any customer with bank or without bank account can use YUP using their mobile phone irrespective of their telecom operator. YUP's customers can withdraw, deposit and transfer money. They can also pay bills, buy phone credit, and make payments to merchants. The YUP solution also digitizes corporates' payment flows. Societe Generale plans to launch financial services like payday advances, loans, savings and international transfers to YUP's portfolio.

The loan service will be offered via the micro-credit bank Manko, launched by Societe Generale in Senegal. These agents travel by scooter on the ground with a tab to estimate activity, stock, take pictures, scan IDs, etc. The granting of the credit is then completely dematerialized and unlocked via the YUP account.

YUP already has more than 30,000 open wallets and nearly 600 agents in Côte d'Ivoire and Senegal. Societe Generale plans to launch the service in Ghana and Cameroon by end of 2017 and in Burkina Faso, Guinea and Togo in 2018. The bank aims to open one million accounts by 2020 and expand the distribution network to 8000 agents over the same period.

Source: Societe Generale and La Tribune

Going digital is not easy for Banks. They face multiple challenges which need to be resolved to accelerate the growth of digital payments in WAEMU. For example, most banks offer web and mobile app as the only channels for accessing their digital financial service, limiting the uptake of the service. In WAEMU region 70% mobile connections are feature-phones. Hence, for majority of the feature-phone users, banks should offer Unstructured Supplementary Service Data (USSD) as an access channel in addition to web and mobile apps.

The USSD channel is controlled by MNOs. In WAEMU, it is not mandatory for MNOs to offer access of USSD channel to banks and non MNOs. MNOs refuse or restrict access to USSD, posing a challenge for bank in extending their mobile financial service to basic phone users. Constructive regulation in this area should be formulated which will benefit both banks and MNOs.

Unlike banks in Kenya, India and Brazil, most WAEMU banks have not focused much on creating agent network restricting their reach.

A prime reason for this is lack of clear regulations for banking agents. Further clarification in this aspect could help banks to trial and deploy large scale agent networks.

Banks who are planning to launch full-fledged mobile money services should focus on embracing agent banking and creating an expansive agent network to strengthen their last-mile services (customer registration, cash-in and cash-out) and reach more consumers. BCEAO prohibits agent exclusivity; hence all independent agents can work for multiple service providers. Hence, banks can leverage existing agents

of other mobile money providers to offer services.

Banks who want to create strong mobile money services that can compete with MNO's services have to invest in robust mobile financial services platforms. The new-age mobile financial services platforms facilitates open APIs that enables mobile money providers to quickly integrate with billers, merchants, money transfer operators, card schemes and government platforms creating an expansive financial eco system. Moreover, the mobile financial services platforms are future proof and will allow quick adoption of new technologies like NFC and QR Codes.



The way forward

BCEAO has set a target of 75 percent of adults to be formally included in the financial sector. To achieve this objective, banks and MNOs have to work together to accelerate the growth of financial inclusion. To take mobile financial servthe second-generation service such as savings, loans and insurance. MNOs need to partner with banks and MFIs to launch these services. MNOs and banks would mutually benefit from the second-generation services. MNOs will be able to add more customers and retain money in digital format, whereas banks would get a launch pad to extend their

products to unbanked consumers at low-cost. Kenya is a befitting example, where M-Pesa and Commercial Bank of Africa (CBA) partnered to offer M-Shwari savings and loan service. At end of June 2016, M-Shwari had 15 million accounts and disbursed loans valuing US\$ 1.3 billion. The non-performing loan ratio of M-Shwari was 1.92%, significantly lower than Kenya's average of 5.3%. The non-performing loan ratio in WAEMU is relatively high at 15.6%. Hence, mobile-based micro-loans can be leveraged to bring down non-performing loan in WAEMU countries.





Orange Money Mali: Mobile savings and insurance

Orange Money in Mali offers a savings product (Sini Tonon) and an associated life/disability and maternal health insurance product (Tin Nogoya). The service is specially targeted at women.

Mali has a maternal mortality rate of 587 per 100,000 live births, one of the highest in the world. In order to make pregnancy and delivery safer Orange Money in Mali partnered with the NGO Population Service International (PSI) and NSIA, an insurance company, to launch a linked savings and insurance product targeted at pregnant women. Orange Money users can open a mobile savings account with a minimum initial deposit of 3,000 FCFA. Once the account has been opened users can save money anytime with a minimum deposit of 100 FCFA, by moving money from Orange Money account to Savings account via mobile phone. When savings balance reaches 40,000 FCFA the user automatically gets enrolled for a 12 month life/disability and maternal health insurance. Orange Money pays 100,000 FCFA for child delivery complications including haemorrhage, eclampsia and dystocia, 50,000 FCFA for the C-section and 150,000 FCFA in case of death or permanent disability. Patients who do not attend prenatal consultations only gets 75% benefit. This encourages women to seek prenatal care. Additional Orange money used female actresses to market this insurance product effectively and relate with women.

The service is making substantial social benefit to the customers. As per GSMA, Sini Tonon is encouraging customers to save. 55% of women did not save before using Sini Tonon. Tini Nogoya enabled made many people to get insured for the first time. 97% of female users have never been insured before. The insurance product is appealing to customers over 30% of Sini Tonon users reported using it because it allowed them to be covered by insurance under Tin Nogoya. 24% of Orange Money users in Mali are saving and using Sini Tonon regularly, while 4% are insured by Tin Nogoya.

Source: GSMA

MNOs and banks should also facilitate growth of each other's services. While MNOs should provide access of USSD channel to banks to launch their mobile financial services, on the other hand, banks should adopt more flexible approach towards MNOs where both have partnered to offer a mobile money service.

Another area which requires innovation is customer on-boarding and registration (KYC). The 2015 e-money guidelines increased the threshold of transactions not requiring the identification of users from 10,000 FCFA per transaction and 100,000 FCFA per account to 200,000 FCFA for all transactions per month on an account. This allows service providers to offer different digital wallets to different consumers based on KYC. Many users who do not possess complete documentation are unable to use formal financial services due to

incomplete KYC. However, with this regulation it is possible for such users to open a mobile money account without presenting a valid identification if transactions remain within the thresholds. With a tiered KYC model, MNOs and banks would be able to extend reach to many financially excluded consumers with incomplete documentation.

However, the biggest challenge which mobile financial services are facing is inactivity rates. At the end of September 2015, 69% of the subscribers were inactive compared to 40% in 2014. The primary reasons for inactivity are low income of consumers and high service charge of mobile money services. MNOs and banks have to focus on increasing the activity rate by keeping the service pricing low and providing value to even low-income consumers through relevant services.

S O U R C E A N D R E F E R E N C E S

CGAP: https://www.cgap.org/sites/default/files/Working-Paper-Market-System-Assessment-of-Digital-Financial-Services-in-WAEMU_0.pdf

AFI Global: <https://www.afi-global.org/publications/2020/Overview-of-DFS-in-the-West-Africa-Economic-and-Monetary-Union>

GSMA: <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2017/05/2016-State-of-Mobile-Money-in-Western-Africa.pdf>

GSMA: <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2017/07/2016-The-State-of-Mobile-Money-in-Sub-Saharan-Africa.pdf>

Sonatel 2016 Financial Result: http://www.sonatel.com/wp-content/uploads/2017/02/Sonatel_2016_financial_results_EN.pdf

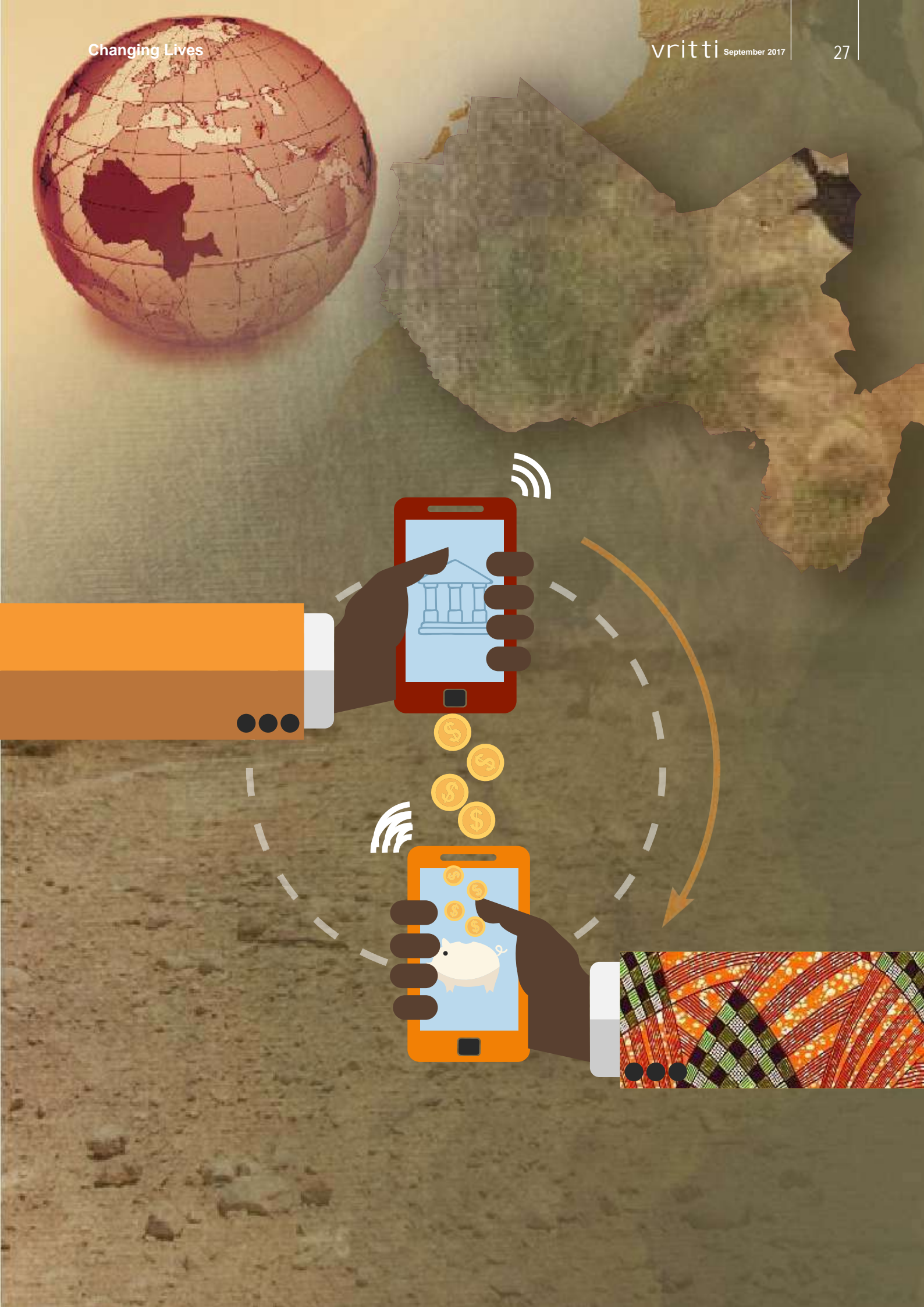
GSMA: <https://www.gsma.com/mobilefordevelopment/programme/mobile-money/mobile-money-facilitates-1-7-million-school-fee-payments-cote-divoire>

Societe Generale: <https://www.societegenerale.com/en/content/enSociete-Generale-launches-YUP-new-alternative-to-the-traditional-banking-model-in-Africa>

La Tribune: <http://www.latribune.fr/entreprises-finance/banques-finance/societe-generale-s-attaque-a-orange-money-en-afrique-750360.html>

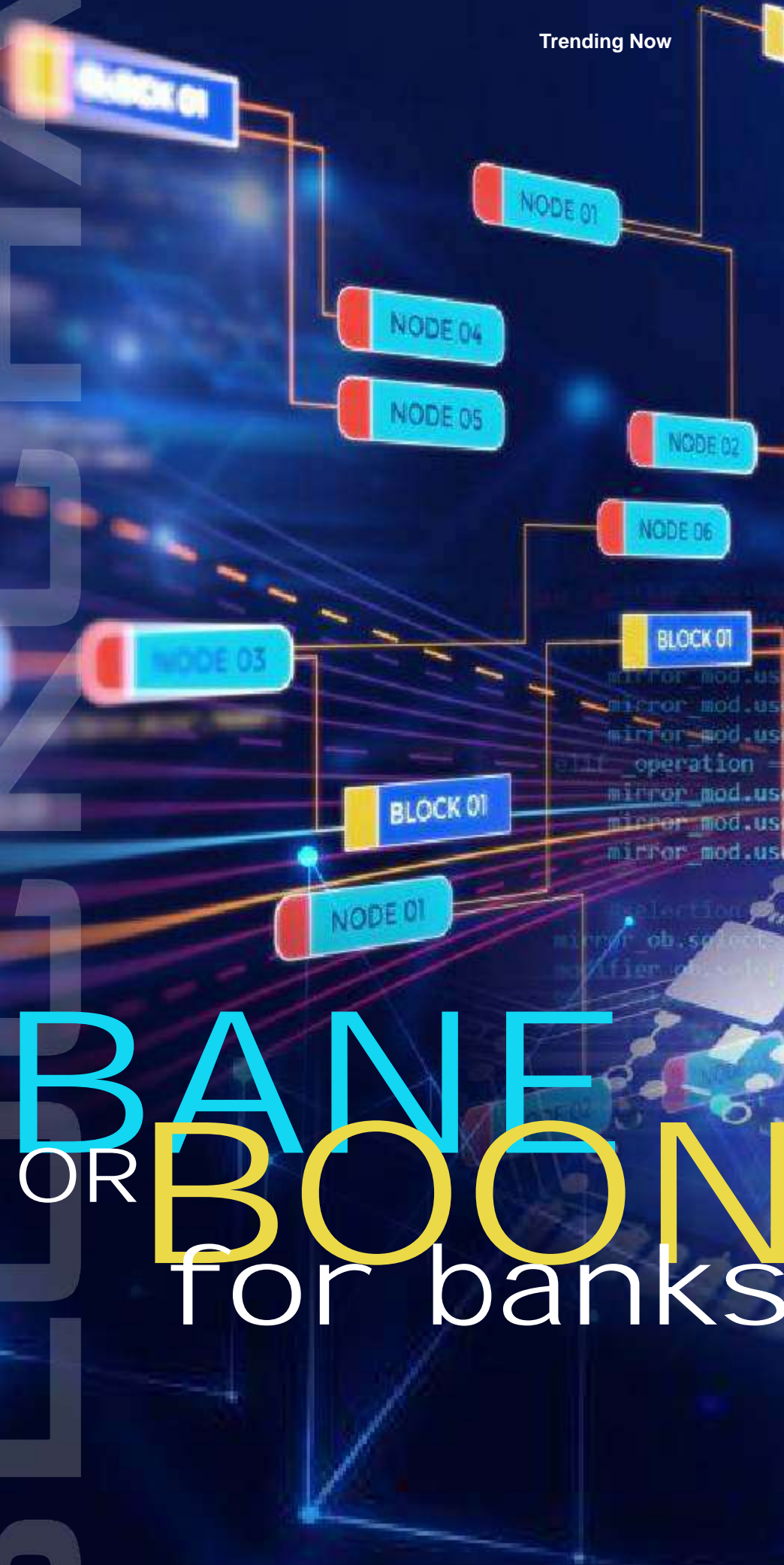
GSMA: <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/03/Connected-Women-Orange-Mali-Case-Study-FINAL.pdf>

About the author: **Mohit Bhargava** has over eight years of work experience in product marketing and research in the telecom domain. At Mahindra Comviva, he is serving as Manager in product marketing for the mobile financial solutions portfolio. His areas of function primarily include evangelizing Mahindra Comviva's mobile financial products and their impact on transforming the financial landscape globally.



Blockchain

BANE
OR
BOON
for banks

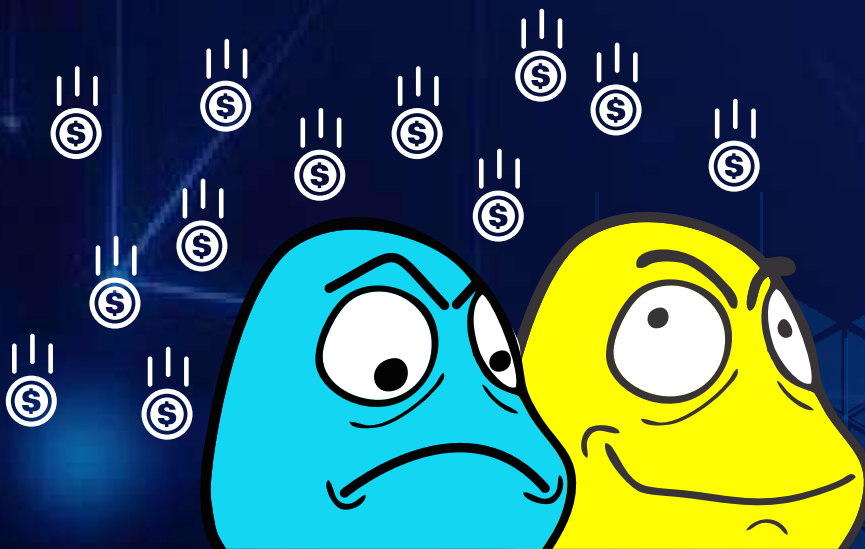




—By Kamaljeet Rastogi

Is Blockchain a bane or a boon for Banks

If you are reading here – you already know enough about Blockchain. So let me directly get to the point - From a concept point of view – Blockchain technology can make the role of a Bank redundant. Banks provide a trusted 3rd party institution to enable transactions between two parties – the saver and the borrower, the remitter and the beneficiary, the exporter and the importer. If two strangers can do these transactions using the trust provided by Blockchain, then there is no need for a Bank and this is what has been a bane to the Bankers worldwide. Infact **Blockchain goes beyond Uberisation** of Banking – as there is no need for any centralized platform or 3rd party aggregator. The chain is the platform.



But Banking is a very sensitive industry (unlike Taxi or Hotel Industry). Regulators and governments use the Banks to control and manage their economies. So regulators will create lot of roadblocks to let Fintech's to use Blockchain to replace banks completely. It is no wonder that around nine years after its invention, Blockchain technology has not yet managed to take off as a successful commercial application other than as Bitcoins.

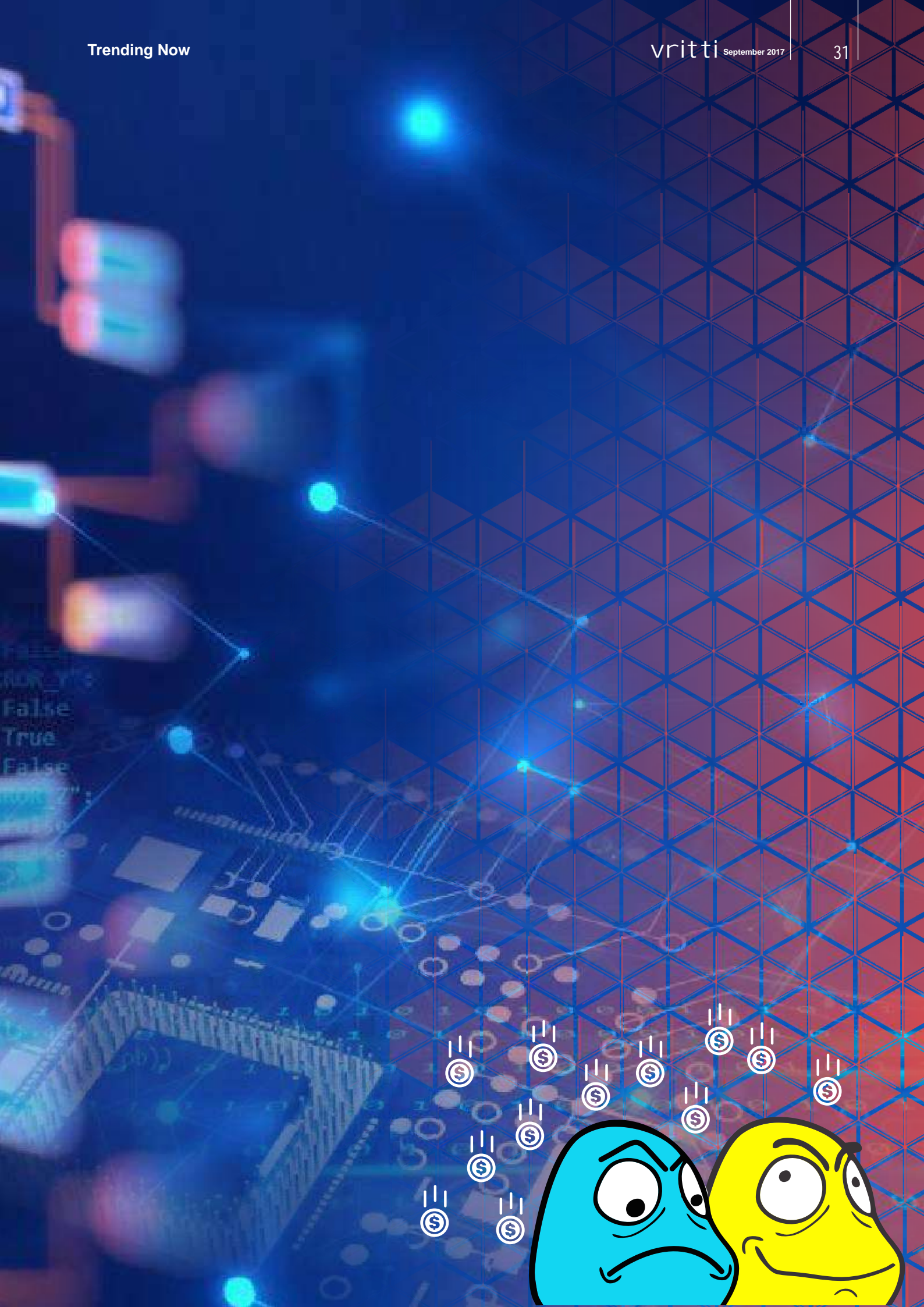
Banks are finally showing some action in adopting this technology. The most likely use cases for Blockchain are funds transfer, digital identity and payments infrastructure. In late 2016, ICICI Bank and Emirates NBD already had a transaction on the Blockchain application that enabled an **ICICI Bank branch in Mumbai to remit funds to an Emirates NBD branch in Dubai in real time**. Currently, international remittances take a few hours to upto two days. It is also envisaged to reduce the cost of remittance for customers as well as banks. Replacing SWIFT (I always wondered why such name for such a slow system) can be one on the biggest applications of Blockchain. In another case, a Bank in the middle east is using QR codes printed on the cheques to be authenticated via the blockchain and thus prevent fraud.

But not all good technologies get adopted by the mainstream. Taking example of QWERTY keyboards, which are used worldwide because they are believed to provide the fastest possible typing but there exist faster typing

keyboards, the most prominent being the DVORAK keyboard. When DVORAK keyboard was invented in 1936, experiment at that time showed that it is faster and less error prone than QWERTY. But as we know that people are generally resistant to change, particularly when it requires significant efforts which is the reason that when Dvorak entered the market, people were so used to QWERTY that it would have been difficult for people to change. So we can say that **best technology is not always the most adopted one**.

Though Blockchain enables us to earn a better interest rate on our money by directly lending money to a third party bypassing Banks, but the question which stands before us is - will the masses take this risk just because technology allows it? Banks need to exploit the basic inertia and trust of their clients and quickly adopt Blockchain to provide instant and low cost services. They need to realize the inherent capability of Blockchain and seriously evaluate how to remodel the current processes. When Karl Benz combined his hobby of designing carriages with his profession of manufacturing internal combustion engines and produced mobile carriage - called automobile, the engine superseded the horse, it did not make horse faster. So before the Fintech's get their act together and put immense pressure on the Regulators to open up more of the services in the banking domain to non-Banks, **Banks need to leverage Blockchain and treat it as a boon**.

About the author: **Kamaljeet Rastogi** heads the Business Development of Mobile Financial Solutions at Mahindra Comviva. He has over 20 years of experience in the digital payments space. Prior to his current stint, he worked with Reliance Jio Infocomm, FINO Paytech, aurionPro Solutions, ABN Amro Bank and Citibank.



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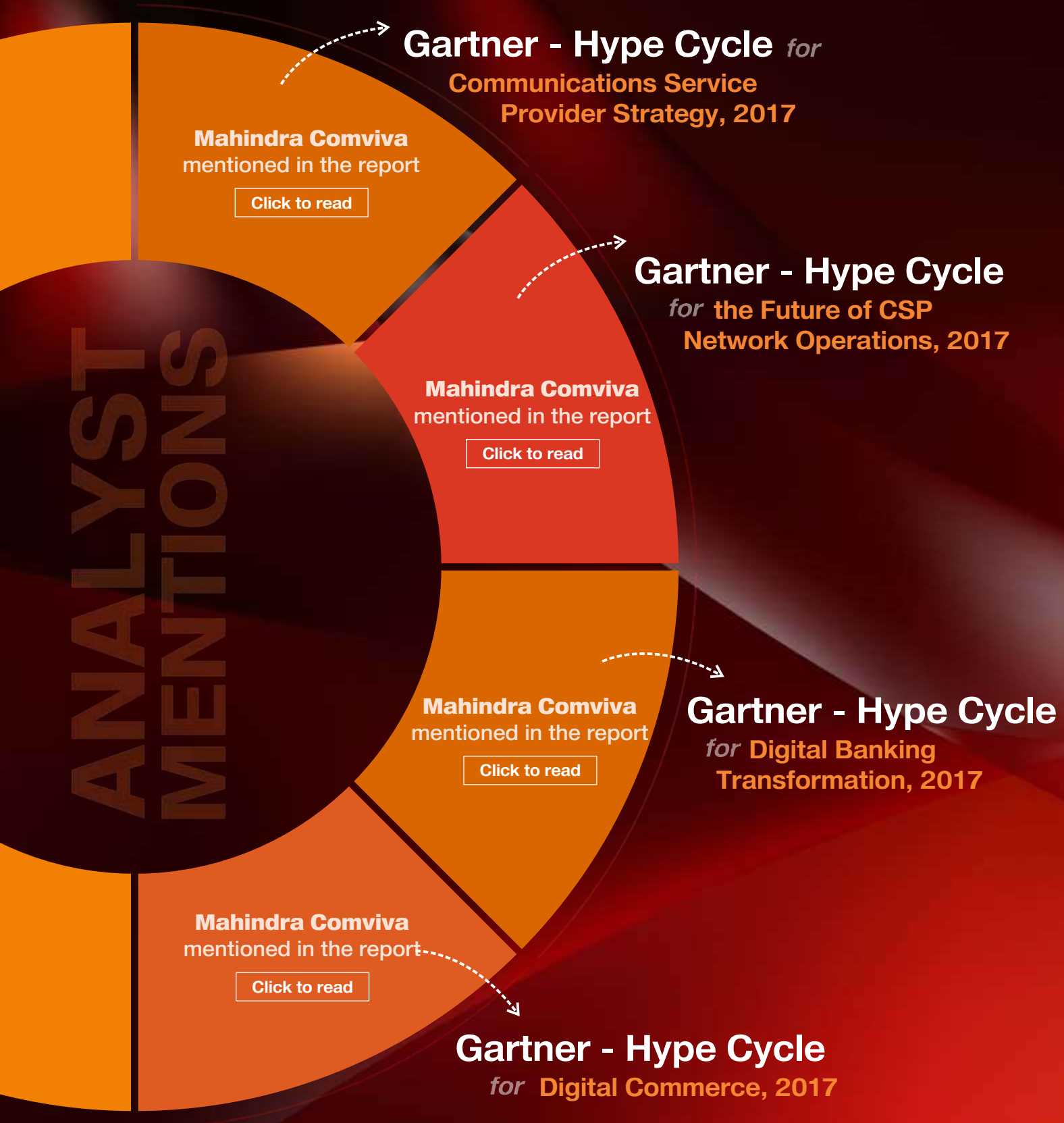
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