

The Threat of Global Mobile Wallets to Developed and Developing Countries

*Nick Brown, Sept. 21, 2020
(updated to include additional webinar series links)*

Although Mobile Wallets are still in their infancy, their potential is undeniable. And, some are already looking to become global.

These **Global Mobile Wallets** are a threat to Mobile Money Operators like MPESA, conventional banks, and even entire currencies and governments, both for developed and developing countries.

However, steps can be taken to minimize the damage that will be caused by this threat, provided that the steps are taken soon.

Webinar Discussion Series by Two Top Experts in the Payment Industry

This imminent threat was discussed in a series of webinars in August featuring two of the top experts in the world in the Payment Infrastructure industry, **Bashir Fancy** and myself.

Not only did we discuss the threat of Global Mobile Wallets to both Developing Countries and to financial institutions here in the West, we also examined the “solutions” that must be implemented quickly in order to minimize the potential damage caused by this threat.

This document is a summary of that discussion.



Bashir Fancy

Bashir advises companies and countries on Cyber Security, PCI Compliance, Governance and Risk Management.

His background includes starting and managing several departments at VISA International, including Risk Management and Security.

He was also the originator of Payment Card Industry (PCI) Compliance.

Bashir recently founded Business & Technology Professionals' Association of Canada (BizTek.org).



Nick Brown

Nick is a technical expert on payment infrastructure, with 30 years of experience across the entire breadth of the industry. This included the implementation of the VISA Global Debit Card system at VISA International, and also writing national and international standards for data security for the financial services industry.

Nick is the founder of Clear Purchase, which is building new Payment Infrastructure for Developing Countries specifically designed for the poorest people on the planet.

What do I mean by Mobile Wallets?

First, it is important to define what I mean by Mobile Wallets in this particular context:

Mobile Money	<p>This is where money is held in an account attached to a phone number, managed by the Mobile Network Operator (MNO) under a subsidiary Mobile Money Operator (MMO).</p> <p>The first was MPESA, launched by Safaricom in Kenya in 2007, and was so successful that all the other MNOs in Developing Countries have either already built a Mobile Money system or are building one. These MMOs have been central to the global Financial Inclusion Initiative, by making basic financial services available to the poorest people on the planet.</p> <p>Mobile Money systems are “Closed,” meaning you can only transfer money to someone who has an account at the same MMO, and also a phone from the same MNO.</p>
Mobile Wallet	<p>This is a Mobile App where money is held in an account on behalf of an account holder; for example, AliPay, Google Pay and Facebook’s Calibra.</p> <p>Mobile Wallets are also “Closed” systems, so you can only send money to someone who also has an account at the same Mobile Wallet.</p>
Mobile Card Wallet	<p>This is a Mobile App that holds credit/debit card information on behalf of an account holder.</p> <p>The Mobile Card Wallets utilize the existing card infrastructure, and are now able to be used at most merchants through their card systems.</p>

What are the Global Mobile Wallets offering?

In order to understand the potential threat Global Mobile Wallets present, we must first clarify exactly what they are currently offering.

- **Mobile App.** While this may seem obvious, it must be emphasized.
- **Free Account for Anyone.** This is important, as it means **anyone can transact with anyone else**.
- **Fast, Inexpensive Transactions.** The vast majority of transactions are internal within the Mobile Wallet - it is a “Closed” system. Transfers result in an internal accounting transfer. This means they are both instant and inexpensive for the Mobile Wallet to accomplish.
- **Tiny Transactions.** Because transactions are so inexpensive to accomplish, it is possible to facilitate transactions as small as 5¢-10¢.
- **Currency Exchange.** While Mobile Wallets may not currently allow for currency exchange, that would be easy for them to include, meaning that fast, inexpensive international transfers would be possible.
- **Other Reason.** For most of the main Global Mobile Wallets we are considering here, there is another reason for a User to have an account with the Mobile Wallet. They would log in for this particular service. For example, **AliPay** has **Alibaba**, and **Calibra** has **Facebook** (or **WhatsApp**). Since their customers already have an account they potentially use many times a day, it would be extremely convenient for them to also use an attached payment service.

Which Mobile Wallets are we talking about?

We are now seeing the beginnings of a **Global Mobile Wallet War**, as market share is starting to be carved out on a global level. And keep in mind that the goal of each Mobile Wallet is to “own” the payment market. All of it!

When everything settles down in this Global Mobile Wallet War, within the next 5-10 years, there will likely be around 6 Mobile Wallets left standing. I call these survivors the **Big 6**.

AliPay and **WeChat Pay** are prime candidates right now, as both have been operating successfully in China for several years. Cash is now almost non-existent in China, as most Chinese now use these accounts for all their transactions. Plus, these two Mobile Wallets have already started pushing into other countries in SE Asia, as well as in Africa.

Facebook's Calibra is another candidate. Although Facebook announced its intent to create Mobile Wallet Calibra about a year ago, that story was hardly noticed, because the simultaneous announcement of their decentralized cryptocurrency **Libra** grabbed all the headlines. While Calibra barely exists at the moment, Facebook has a huge presence across developing countries and can easily seize a huge market share when they finally do launch Calibra.

Amazon Payments has the potential to be a player, since they have the potential to dominate global online/mobile shopping -- the same way they have done in the USA. Never count Amazon out!

Some National Mobile Wallets have the potential to grow into Regional and possibly Global Mobile Wallets.

Google Pay, on the other hand, I do not consider to be one of the Big 6, despite technically being a Global Mobile Wallet. Specifically -- they do not have that “Other Reason” to have an account. Google Pay seems to understand that this will stop them from becoming one of the Big 6, as they have deliberately followed a different business model, “one of many,” as evidenced by their approach in India by joining **UPI**.

What are the Prime Markets of Mobile Wallets?

1. The Unbanked and the Underbanked

Forgotten and ignored people are a perfect customer base for Mobile Wallets. Balances can be small, as can transaction sizes. For the 5 billion poorest people on the planet, a Mobile Wallet offers so many excellent features with a basic account: customers' money is safe, customers can save for the future, get paid electronically, pay bills electronically, and send money electronically.

2. B2B transfers, especially International

Mobile Wallets may not be going after this market; however, it is ripe for the taking. Traditional banking transfers can be slow. International transfers are not only incredibly slow, but they can also be expensive. A transfer of funds from India to the USA, for example, can take a month or more.

Predictions

Prediction 1: Destruction of Mobile Money

Mobile Money started by **Safaricom** in Kenya with **MPESA** shows the opportunity -- as well as the incredible demand -- for these types of services. However, the Mobile Money Operators cannot currently compete with Mobile Wallets.

- **Text-Based.** Mobile Money is mostly text-based, due to their customer base having limited access to the Internet. However, the Internet is rapidly becoming more widespread, and, when they become available, people will adopt Smartphones. Customers will then want their payment method to be “new and cool,” rather than “old and clunky.”
- **Limited Reach.** Mobile Money systems are “Closed” Systems, accounts limited only to those with a phone from the appropriate MNO (Mobile Network Operator). Therefore, an account holder can only transfer funds to someone who has a phone from the same provider.

The likely scenario:

1. Merchants will open a Mobile Wallet account as soon as it becomes available. They are in the business of selling goods/services, and will want to accept any payment method their customer base wishes to use.
2. People will open a Mobile Wallet account when they get Internet access and a Smartphone, especially as it is “new and cool.” Customers will then request that income and other receivables be given to them via their Mobile Wallet.
3. There will then be a flood of customers moving money from their Mobile Money account to their Mobile Wallet account. Mobile Money will not stand a chance of surviving.

Prediction 2: Working Up the Supply Chain

Merchants now have money in their Mobile Wallet accounts, and will want to use that money.

1. Merchants will pay their employees using Mobile Wallets.
2. Merchants will request the ability to pay their suppliers using Mobile Wallets.
3. Those suppliers will then do the same, go to their suppliers and request acceptance of Mobile Wallets. So this will proceed up the supply chain.
4. This scenario will result in money being moved out of conventional banks and into Mobile Wallets.

Prediction 3: Potential Collapse of Conventional Banks in Developing Countries

If the above predictions are not enough to cause problems for conventional banks, there are other challenges:

- **Limited Reach - Payroll.** The Conventional Banks’ biggest customers, businesses, are unable to easily complete payroll when their employees are unbanked/underbanked.
- **Slow International B2B Transfers.** Mobile Wallets offer instant transfers, and, once currency exchange is available, they will also offer instant international transfers. This is a huge issue for international businesses right now, but little is being done to remedy the situation, as the conventional banks cannot provide the solutions.

The likely scenario:

1. Employers will move money to Mobile Wallets for Payroll. Not only is this more convenient for the employer, but employees will likely be requesting it.
2. Once money is in the Mobile Wallets, it will stay there, as noted above under Prediction 2.
3. Businesses doing international trade will opt to transact with their business partners using Global Mobile Wallets that have a currency exchange built-in. This allows transactions to be conducted instantly, and will streamline international trade and the supply chain.
4. Again, the buyer determines the method of payment, and the businesses that receive these funds internationally will then wish to use the funds in their Mobile Wallets for their purchases, continuing on up the supply chain.
5. With funds being withdrawn from business accounts, the banks will lose cash reserves. In fact, they could easily end up running out of reserves, since most deposits are lent out to others.
6. ***There could easily be a run on the banks, similar to the Great Depression in the 1930s in the USA.*** This is especially true in countries without FDIC-type account guarantees provided by the government.

Prediction 4: Potential Destabilization of Financial Institutions in Developed Countries

Developed Countries are much more protected from this threat than Developing Countries; however, they are not immune to the threat, because they both suffer from the same two vulnerabilities: The Unbanked; and slow International B2B Transfers. These will both cause funds to be transferred out of conventional bank accounts and into Mobile Wallets, with similar results to those described in Prediction 3.

Adoption by the Unbanked/Underbanked:

1. The Unbanked adopt Mobile Wallets. Currently the Unbanked are ignored, and in fact, most are not allowed to open bank accounts.
2. Merchants adopt Mobile Wallets, as in Prediction 1, to accept payment from potential customers.
3. Moving up the supply chain, as in Prediction 2.

However, the impact on the banks will not necessarily be that great, since the vast majority of the population have accounts, and also have a viable payment method - credit/debit cards.

International B2B Transfers:

1. Businesses switching to Mobile Wallets for International B2B transfers, as described in Prediction 3. This will cause funds to be withdrawn from bank accounts, leading to a shortage in reserves.
2. Central banks may be forced to support conventional banks to ensure they stay solvent.
3. Conventional banks that have lower reserves will have to stop lending money. This is especially damaging to businesses who use short-term loans to cover payroll while they wait for receipt of receivables.

Prediction 5: Reduction of Tax Receipts

People and businesses will take advantage of ways to avoid reporting transactions for tax purposes. Global Mobile Wallets are outside any jurisdiction of national governments, other than the country they are officially located in.

1. People/businesses avoid taxes.
2. Governments might attempt to pressure Mobile Wallets into providing information on account holders. However, Mobile Wallets can easily ignore any requests.
3. Governments might attempt to restrict usage of Mobile Wallets. This will cause widespread discontent among the populace, when a tool they have become reliant on is taken from them. Ironically, this action by governments would do little to stop tax avoidance.
4. Governments might try a different tactic, and attempt to restrict usage of the national currency. This would likely cause businesses to switch to another currency. If pushed too far, the Mobile Wallets themselves could switch ALL accounts to a different currency.
5. Would lower tax receipts destabilize Governments?

Prediction 6: Potential Destabilization of Currencies

It is even possible that currencies would be at threat.

1. As mentioned in Prediction 5, actions by the government for tax purposes could result in companies switching to another currency.
2. High-inflation currencies would cause people and businesses to look for alternate currencies for their deposits. Mobile Wallets will make finding an alternate currency easy.
3. Once there is an exodus of a currency, there could easily be a run on that currency on the international exchanges, exacerbating the problem. A currency collapse is possible.
4. The Mobile Wallets could easily introduce their own currency, as has been promoted already by Facebook with Libra. This would certainly reduce friction for international business transactions.

Prediction 7: The Gatekeepers

It is entirely possible that the Big 6 Global Mobile Wallets could control ALL payment processing. This means that the 6 people that lead these companies get to be the gatekeepers for everything purchased worldwide, and every B2B transaction worldwide.

1. If you want to offer a product or service, it will be necessary to get approval from at least one of these Big 6 in order to have a business at all. How else would you get paid?
2. Companies offering financial services are the most vulnerable. If the Big 6 decide they want to start offering the same services, they can easily just switch off their competition, and there is nothing that can be done.
3. Potential for an Oligarchy. There is every reason for the Big 6 to come to agreements that benefit them all. Competition among them is self-defeating, so why not agree to work together? This would be illegal in most Western countries; however, Global Mobile Wallets are not restrained by national laws/regulations. They would likely start by increasing fees for all transactions. There is nothing users and businesses could do about that, as all their competition would have disappeared.
4. The Big 6 now have the ability to control ALL other businesses. Do you think they will resist the temptation? *“Power tends to corrupt, and absolute power corrupts absolutely!” - Lord Acton 1887*

Solutions

All of the above predictions certainly sound dire. However, there are actions that can be taken to minimize the potential damage caused by Global Mobile Wallets.

The first thing to understand is that although Global Mobile Wallets cannot be stopped permanently, it is possible to delay their entry into your country.

Guiding Principle: A new product/service will only gain adoption if it offers Users a “reason to switch” by offering more than is currently available.

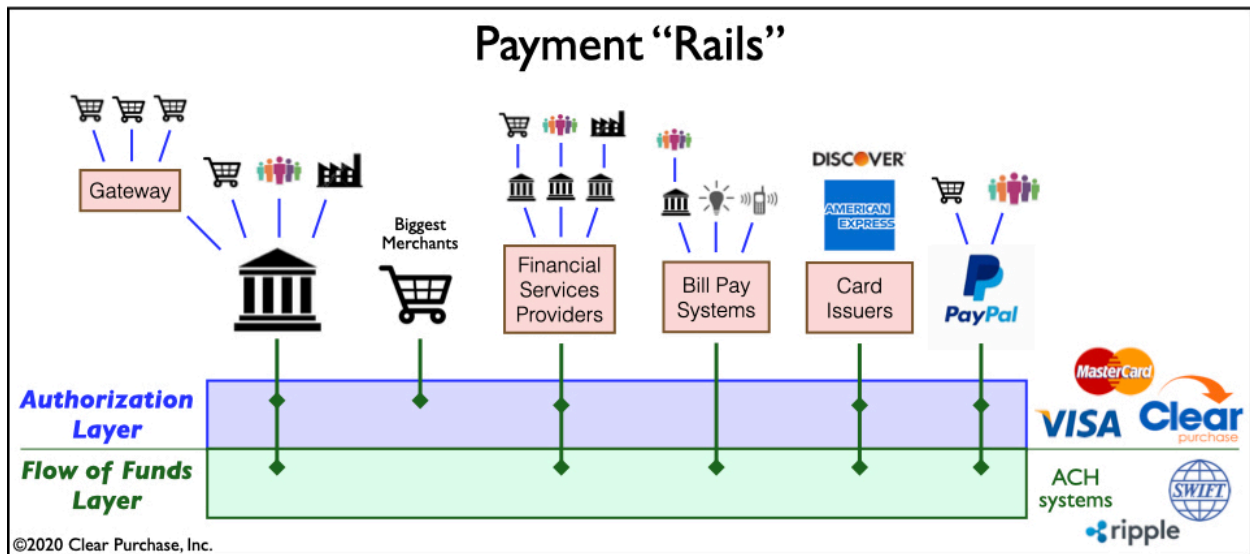
In other words, to prevent your customers from switching to a competitor, it is only necessary to offer the same services as the competitor, and your customers will stay with you.

Step 1: Mobile App

MMOs and conventional banks should ensure they have an appealing Mobile App.

Step 2: Interoperability - Authorization Layer

Interoperability is, in effect, connecting a system to the Payment “Rails.” This has two layers:



The Authorization Layer is the most complex technically, and, therefore, the most important to start building as soon as possible.

1. VISA/MasterCard

The main existing players in the Interoperability Authorization Layer are the **VISA/MasterCard** Payment Switches. These are limited, due to the high cost of Payment Fraud, which causes a minimum transaction fee of 20¢-35¢.

This will not reach the Unbanked/Underbanked, leaving an opportunity for Mobile Wallets.

2. New Payment Switch for the Unbanked/Underbanked: Tiny Transactions

A new Interoperability Payment Switch must be built between MMOs and conventional banks, facilitating tiny transactions.

Challenge 1: Building a Payment Switch

Building a Payment Switch is an incredibly dangerous endeavor due to the staggering risks of Payment Fraud, as detailed [here](#). This must only be attempted by those who understand the industry sufficiently to build the Payment Switch safely. The consequences of a failure here are far more devastating than doing nothing and allowing Mobile Wallets to wreak their havoc.

Bashir Fancy and I are two of the few people in the world who have sufficient experience to build a Payment Switch.

Challenge 2: Tiny Transactions

This Payment Switch must be designed to facilitate tiny transactions, so that it can be usable by the poorest people on the planet, those earning around \$2 per day. Mobile Wallets can facilitate these transactions, so this Payment Switch must do the same.

*I have developed IP over the last 18 years that would allow for tiny transactions (funds transfers, as well as purchases). Further, I have launched my company, **Clear Purchase**, to build that Payment Switch.*

Step 3: Interoperability - Flow of Funds Layer - ACH

Streamline the ACH (Automated Clearing House: Inter-bank Settlement) flow of funds between banks within a country, so that it happens near-instantly. This step is already being worked on in many countries.

Also, streamline the flow of funds between banks in different countries, so that it happens nearly instantly. Currently, this can often take weeks or months; however, that situation must change.

Step 4: Account Deposit Guarantees

When funds are withdrawn from banks, their cash reserves drop. If sufficient funds are withdrawn, then reserves could run out – which would cause banks to collapse.

This happened in the USA in the 1930s during the Great Depression. When banks collapsed, depositors lost their money; people lost trust in their Banks and withdraw money just to be safe. This reaction only added to the basic problem. It got so bad that all it took was a rumor of a bank in trouble; account holders would flock to that bank to take their money out – the rumor itself caused the bank to collapse. This is the basis of the 1946 Jimmy Stewart movie *It's a Wonderful Life*.

In order to prevent this from happening again, the government introduced FDIC insurance, where the government guaranteed deposits in the event that a bank (or other type of organization that has account balances) collapses. The goal was that people would not worry if their bank was in trouble financially, thereby giving the bank every opportunity to recover. This proved successful. In instances since then, when a bank actually did collapse, the FDIC insurance worked exactly as intended, and was extremely fast and efficient.

Our recommendation is every country in the world should institute similar government-provided insurance on Financial Institution deposits.

Step 5: Streamline Currency Exchange

This is already available, though not easily accessible to most people or businesses. Our recommendation: make streamlined currency exchange easily accessible.

In addition, fees and currency spreads must be minimized in order to remove the opportunity for the Mobile Wallets.

Step 6: Stable Currencies

It will be easy for people and businesses to change currencies. In order for a particular national currency to stay desirable, however, it will be necessary to keep inflation down to a manageable level.

Step 7: Standardization of Regulations between Countries

Mobile Wallets make it easy to transact internationally.

Standardization of regulations allows for businesses to easily transact with businesses in other countries, since there are no new rules to understand.

Step 8: Relax KYC (Know Your Customer) Laws

A prime market for Mobile Wallets are those people denied access to existing financial services. KYC laws limit access to those who are not living in their country of birth. There are no such restrictions, however, for simply opening a Mobile Wallet account.

Solution: Either relax the KYC laws, or make it allowable for foreigners to open accounts.

Step 9: Offer Something More

This is the most challenging. All Mobile Wallets offer other reasons to switch. Even if all your other services are the same, you will still lose customers to Mobile Wallets. Therefore, the only way to keep your customers is to offer something Mobile Wallets do not offer.

Some candidates:

Purchases	Mobile Wallets offer Funds Transfers only. A Purchase is massively more complex than a simple Transfer of Funds. The most important characteristic is a Purchase Guarantee, with associated Dispute Resolution. Most developing countries are not used to a Purchase Guarantee, which will, however, become essential with the spread of the Internet, especially for remote purchases, in which case it is not possible to return a faulty product directly to the seller. Few people know how to make this scenario viable for tiny purchases.
Automatic Bill Pay	This would not be difficult for Mobile Wallets to accomplish in the future, even though they are not focused on Automatic Bill Pay right now.
Access to Credit	This is completely outside the business model of Mobile Wallets, and is most likely also outside their capability. Since Interoperability, by its very nature, will keep existing credit organizations alive, access to that credit will remain. It would also be advisable to find a way to offer inexpensive credit to the poorest people on the planet, who currently have minimal access to any credit at all. The Micro Finance Organizations (MFIs) must be involved.

The Reality of Regulations

The reality is that Global Mobile Wallets will not, in effect, be held to any regulations.

First, there are minimal, if any, global regulations -- and even if they existed, they could not be enforced. While a Mobile Wallet would be subject to regulation in the country where it is officially located, it could easily move to a more accommodating country.

Add to this the fact that an unregulated payment platform will surely be appealing to both individuals and businesses that have questionable intent.

Only the Payment Rails can Enforce Regulations

The only practical enforcer of any form of regulations is the Payment Rails.

This enforcement is part of the “rules” for being connected to the Rails, which are mostly practical in nature. The Rails present a level playing field, and each company that connects to them must agree to the same set of rules. It is this common agreement that make the Rails possible.

The Timeline

There is some difference between Bashir Fancy and myself as to the timeline of our predictions, and even on the likelihood of each prediction actually materializing.

Focusing on the timeline, I see the worst happening in developing countries in around 5 years, and the worst affecting developed countries in 8-10 years.

Bashir, on the other hand, sees Developing Countries being affected in 3 years, and Developed Countries at around the same time.

Start Planning Now

Regardless of exactly when the worst hits, it is essential that planning start immediately.

Most of the above Solution Steps will take at least a year to fully implement.

The Goal: A Level Playing Field

The goal is a “level playing field,” where everyone gets to play.

Some Financial Institutions will fail to adapt quickly enough and will falter, while others will thrive, as happens in any industry that goes through upheaval.

The Global Mobile Wallet War will still happen as they all fight for market dominance, resulting in the Big 6. At some point they will look for what’s next, which would mean offering more services to their existing customer base. They will then see the value of joining the “level playing field” along with everyone else, in order to be able to offer the additional services.

Summary

Mobile Wallets have proven to be extremely popular, and a Global Mobile Wallet War is starting.

These Global Mobile Wallets are a threat to Financial Institutions, businesses, currencies and even governments around the world.

However, if everyone works together, steps can be taken to minimize the damage that will be caused by this threat, provided that the steps are taken soon.

Webinar Series: Bashir Fancy and Nick Brown

Starting in August 2020, [BizTek.org](https://biztek.org) hosted a series of webinar discussions between **Bashir Fancy** and **Nick Brown**, two of the top experts in the Payment Infrastructure industry.

Part 1: Payment Interoperability in Developing Countries. A surface-level discussion about the technical challenges involved for Payment Interoperability in Developing Countries, as they build their Financial Infrastructure, focusing on the staggeringly destructive risks of Payment Fraud. [Link](#)

Part 2: The Threat of Global Mobile Wallets to both Developing Countries and Developed Countries. A discussion about the impending threat of Mobile Wallets as they become Global, and the devastation that could be caused in Developing Countries as well as Developed Countries. [Link](#)

Part 3: Solutions to the Threat of Global Mobile Wallets. A little deeper discussion about the threat of Global Mobile Wallets to both Developing Countries as well as Developed Countries. This was followed by a comprehensive list of “Solution” steps to take, in order to prevent the devastation that would be caused if no actions were taken. [Link](#)

After this document was originally written:

Part 4: How should Brazil and other countries respond to WhatsApp Payments? Brazil faces decisions as Facebook is pushing for their WhatsApp Payments to be allowed to operate in Brazil, initially to their 120 million WhatsApp customers in the country. This conversation is also relevant to other Developing Countries. [Link](#)

Part 5: How countries can protect: Data, Currencies and Privacy. A discussion about the potential for a country if the Clear Purchase Network was implemented, and was integrated with a Secure ID system. It is important to understand the technology for this already exists. We can build this network with all mentioned functionality, if there is a desire for it. [Link](#)

Part 6: Do Microfinance Companies pose a challenge to traditional Banks? A discussion about the new trend of integrated financial services, like **Kuda**, and how they challenge existing financial organizations. [Link](#)

Nick Brown is a technical expert in Interoperable Payment Infrastructure, with experience across the entire breadth of the industry. This includes building VISA's Global Debit Card System in 1996. He is currently founder of [Clear Purchase](#) which is building new Payment Infrastructure for Developing Countries specifically designed for the poorest people on the planet.