

Mobile payments ... a “Southern” revolution!

Development of mobile payments:
Issues and prospects for the future



Editorial

5 billion: the number of mobile phone users worldwide in 2010.

“There are over 4 billion bank cards¹ in use across the world in 2010 and almost 5 billion mobile phone users.”²

In a world where technology can be used for multiple exchanges, the use of mobile phones is no longer limited to simple voice communication functions. Mobiles have moved on and now provide access to a growing number of services.

Mobile payment or M-payment is a service which is continually gaining in popularity and can meet the associated challenges: worldwide, there are similarly huge numbers of mobile phone users and bank card holders. This service therefore has great potential as a new economic market and brings together the previously somewhat disconnected banking and telecoms sectors.

This concept has been under discussion for several years now, leading to both successes and disappointments.

Amongst the leading lights of the M-payment universe we find NTT DoCoMo (Japan) which has 15 million users (August 2009)³ and Safaricom (Kenya) whose M-Pesa service had registered 9.5 million users by March 2010⁴ in the space of three years⁵. Other young and budding initiatives such as the “Cityzi” experiment (Nice, France) have raised hopes of developing interoperable systems in France and Europe.

Although M-payment is clearly nothing new, it is important to understand the issues currently facing this hugely diverse market. Will M-payment be given a new lease of life? Will it be revolutionary? What is at stake for banking and telecoms sectors, or independent and political players? Will M-payment become an integral part of our daily lives?

This study aims to give an overview of the current situation regarding M-payment, highlight the sector’s challenges and prospects for development and identify the key elements which will ensure the success of this new feature.

The examples listed below should not be taken as an exhaustive overview of the multiple M-payment markets and initiatives. This would necessitate a much longer list and a thorough analysis of the M-payment landscape. Our intention above all is to shed light on the multi-faceted reality of this phenomenon.

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¹Kurt Salmon study, Base CB universelles (except personal cards)

²ITU – Francesoir, 2009

³NTT DoCoMo, Press release, 2010

⁴Safaricom Investor Roadshow

⁵Safaricom.com, Press release, 2009

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M-payment, a new tool in our daily lives

The term “mobile payment» or M-payment is used for payments which are either initiated or completed using mobile phones.

Nowadays there are numerous different forms of M-payments, including money transfers, bill payments, in-store payments and remote payments, all of which can technically be carried out using a mobile phone.

This definition should be distinguished from the following concepts which we will not be covering:

- “Contactless payment” (using a payment card) is slightly different: some contactless payments are made not using mobile phones but instead through cards (usually bank cards) with contactless technology. For instance, the bank Crédit Mutuel uses a system of contactless payment based on bank cards as part of the Cityzi project.
- “Contactless” technology can also be used for functions which have nothing to do with payment, such as retrieving information from advertisements (“Tags”), authorizing physical access to sites, exchanging personal or medical information and so on.
- «Mobile banking” or m-banking is a term which covers a wider range of banking services (e.g. checking account balances, ordering chequebooks, managing investments and support services such as finding out a bank’s address).

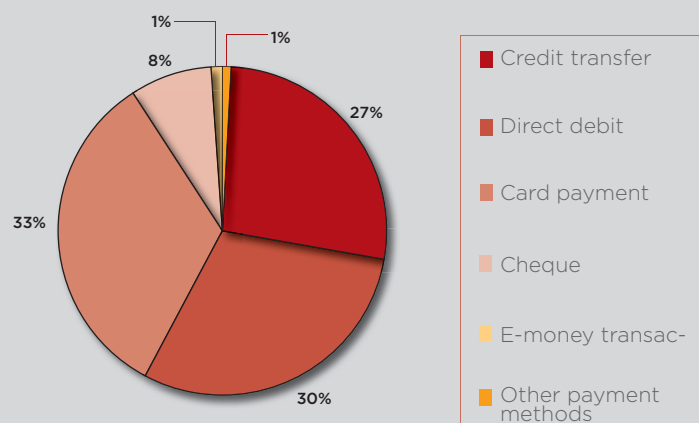
According to different sources, the definition of M-payment can describe various different services e.g. transferring funds from one account to another (under the m-banking umbrella), payments using points (marketing) or payment via mobile internet.

A reinvented payment method...

The current available forms of retail payment methods include cash, cheques, transfers, debits and payment cards, and the choice of method varies depending on the amount being spent, the geographical location and the economic and cultural contexts of the parties involved in the payment.

For example, cash is a hugely popular method for routine exchanges in Africa, Asia and Latin America, whilst in Europe a wider range of methods are used for payments. Nonetheless, the use of cash remains common in Europe: 85% of transactions are carried out using cash, 90% of which are for sums under €20.⁶

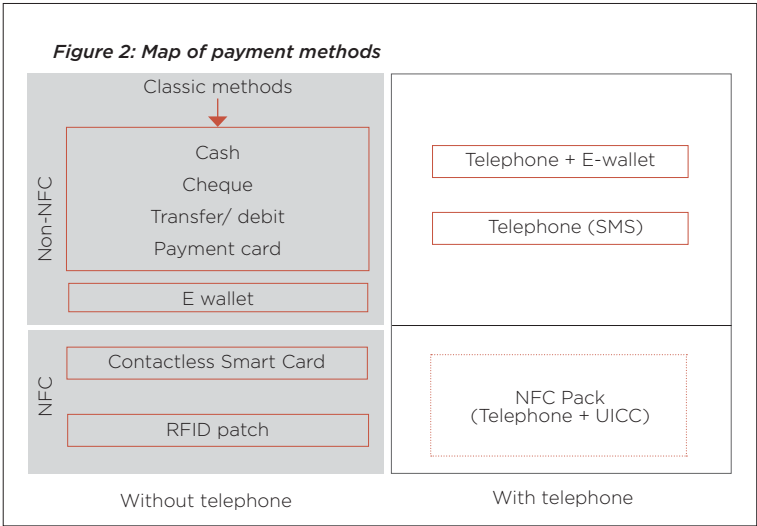
Figure 1: Comparison of payment methods (non-cash) in Europe (% of total number of transactions)



Source : BCE

⁶Visa Europe study, quoted by Carte Bleue, Cartographie 2009, 2009

Traditional payment methods have evolved, thanks to new innovative technologies such as NFC (Near Field Communication) and RFID (Radio Frequency Identification).



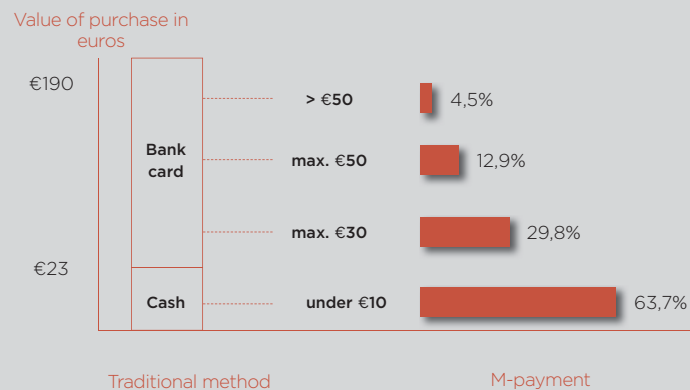
... which complements traditional payment methods...

M-payment is used for payments which are either initiated or completed using mobile phones. This reinvented payment method is primarily intended to replace cash and physical cards.

In developed countries, M-payments are used mainly for micro-payments (e.g. car park tickets, vending machines) or to pay for “minor purchases» (of up to €50) which would traditionally be paid for using cash or bank cards, up to a total of €190. However, there are no limits: M-payment could equally be used to pay for higher value purchases.

A study carried out by the AFMM (Association Française de Multimedia Mobile) asked the question, “Generally speaking and irrespective of the payment method, what is the maximum amount that you would be prepared to pay for your purchases using your mobile phone?” The results clearly demonstrated that French mobile phone users would use M-payment mainly for “minor purchases.” This would mainly affect traditional payment methods (cash and bank cards).

Figure 3: Types of payment methods used depending on value of purchase (example: France)



Source : GIE Carte Bancaire, AFMM

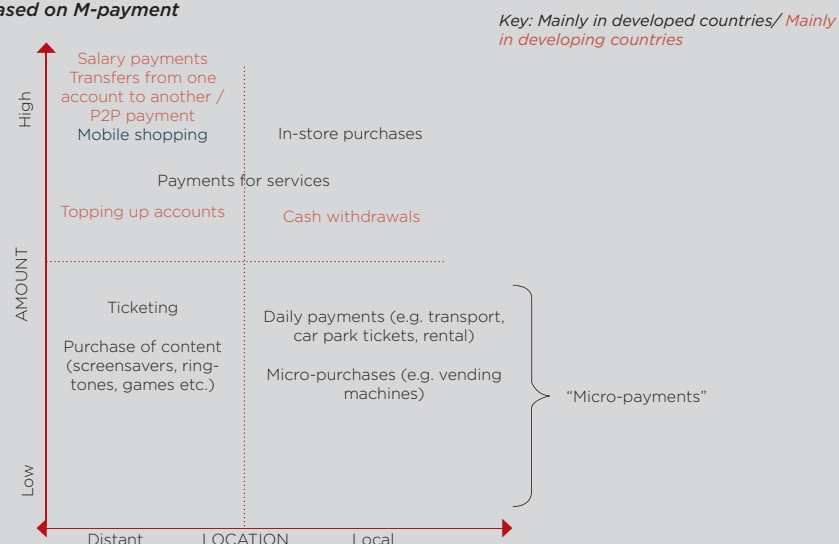
However, the introduction of a new payment method does not necessarily lead to the extinction of existing ones. In fact, past events have shown that when new payment methods have been introduced they have complemented those already in use. For example, bank cards have not replaced cash payments.

... and meets different needs.

In addition to being used to meet traditional payment needs, this new technology will also provide a means of fulfilling new needs and functions which thus far have not been supplied by traditional payment methods. Some of these new applications could include ticketing, topping up accounts and P2P (person to person) payments, for instance.

These new needs and functions can be categorised according to the amounts being paid and the distance between the customer and the service provider.

Figure 4: Separation of uses based on M-payment



These services are supplied by targeted schemes which are now available on the market. The following examples aim to illustrate the wide variety of M-payment functions. Undoubtedly there are also many other uses which have yet to be identified and invented.

Usage	Description	Examples of initiatives
Money transfers/ P2P (person to person) payments C2B (consumer to business) payments	"People who don't have bank accounts can transfer sums of money."	M-PESA (Kenya), Orange-money (Kenya, Côte d'Ivoire etc.), Wizzit (South-Africa), G-Cash (Philippines), Obopay (various)
	<p>This service allows a customer who does not have a bank account to make a P2P transfer of a sum of money. These money transfers, mostly carried out in developing countries, currently take place on a local or national level in areas where the urbanisation rate is under 50%. These services aim to expand internationally, to fulfil the needs of expatriate communities to transfer money home. This international development is making progress gradually with "corridor" strategies to get a foothold in the market and respond to political and economic needs to bring financial flows and international fraud under control.</p> <p>"People with bank accounts can make payments without having to provide their bank card details."</p> <p>This also includes mobile functions for payments with an electronic wallet made by customers who have electronic accounts containing their banking details. This allows customers to pay using their mobile telephone without having to provide their bank card number.</p>	<p>PayPal mobile (190 countries, 24 currencies)</p> <p>Google check-out</p>
Cash withdrawals	<p>"The customer withdraws cash at a retailer."</p> <p>The telephone is used to manage the transaction between the m-wallet of the customer and the outlet. This service is very popular in developing countries.</p>	A basic service in the overwhelming majority of cases
Car park payments, bicycle rental	<p>"The customer pays for their car park space with their mobile."</p> <p>This service is intended to make life easier for users by allowing them to dematerialise their payment and access added value services (e.g. Text alerts when the car park ticket is about to expire, options for remote payment etc)</p> <p>For instance, users can open PaybyPhone accounts to link their telephone to their bank account. The PaybyPhone service can then be accessed via several channels (SVI, SMS and fixed/mobile Internet) and their mobile acts as an interface for the payment. The amount is debited from their bank account.</p>	PaybyPhone (France), Mobile-for (Belgium)
Ticketing	<p>"Customers can purchase tickets on their telephone which can then be used as proof of purchase (e.g. purchase of a concert ticket for access to the concert venue)"</p> <p>Another possible function is buying transport tickets. This is an extremely significant opportunity given the number of transactions that are performed.</p> <p>It is vital to promote the introduction and adoption of M-payment services in the key area of transport services (e.g. buses).</p>	OBB, London Underground mobile ticketing, Oxicash

Usage	Description	Examples of initiatives
Purchase of content	The digital content market, which initially concentrated on ringtones and wallpapers, is expanding rapidly and now provides a wider range of services (games, videos, subscriptions etc).	AT&T, SFR, Orange, Zong
Vending machine purchases	This kind of function includes frequent micro-payments such as purchases made at vending machines (confectionary, newspapers etc). For this kind of service to be introduced, both pay points and machines must be developed in order to integrate NFC technology.	A1 Telekom Austria
Topping up prepaid accounts	This service allows customers to top up on prepaid airtime. It is mainly promoted by MNOs who want to reduce the amount of commissions they have to pay to airtime distributing agents.	MNOs (AT&T, Orange, SFR, True, M-Pesa, Wing)
Paying bills	This service allows customers to pay their personal bills (electricity, telephone etc.) via their mobile handset. These kinds of services are very common in developing countries and make it possible for customers to avoid queuing up in-store to pay bills.	M-Pesa, Wizzit, G-Cash, Orange-money (Senegal)
In-store purchases	"Customers can pay for purchases in-store using their mobile phone without needing a bank card or cash."	NTT DoCoMo, Cityzi, Fasttap, UMP, Moneta, Oi Paggo, M-Pesa, True
Payments for services (to self-employed workers, freelance workers etc. without a POS)	"Customers can pay for domestic services using their mobile phones." M-payment services could also benefit a broad sector of the working population which offer paid services to customers but do not have a point of sale terminal (POS). These include itinerant workers (salesmen, lawyers, plumbers, electricians, builders, delivery drivers etc) and domestic staff (babysitters, domestic staff etc).	Pay2me Service (Belgium)
Paying employees or suppliers	Businesses, administration services or the armed forces can make wage payments, and wholesalers can be paid via the retail outlet on receipt of consumer products. This improves control over payments and also limits the risk both for employers and employees of having to carry cash. What's more, recipients can then send a part of this payment to their family more rapidly.	Wing, M-Pesa Afghanistan, Zap
Distributing social benefits or emergency aid	These services are particularly useful for beneficiaries living in remote rural areas or for peoples who have been displaced (due to wars or natural disasters). Money arrives more rapidly and with greater reliability (as it is less susceptible to theft and fraud).	Fino (India)

"In London, 75% of car park ticket payments are made by telephone."
(P. Lerouge – PaybyPhone)

A few examples of such uses:

PAY2ME

The Pay2me service has been available in Belgium since 2007. It allows users to pay professionals or domestic staff who do not have a point of sale for diverse kinds of services costing over €6.

This service is provided by three Belgian telecom operators (Mobistar (France Telecom), Base, and Proximus) who work in cooperation with Belgian banks and the IT company Banksys (bought by ATOS Worldline in December 2006).⁷

This service is activated online and transactions are carried out via text messages exchanged between the retailer and the customer. Customers validate the payment by entering the PIN code of their bank card. This is made secure by a system of encryption. One example is the Proximus service, which charges €0.25 per payment made. This is itemised on the mobile telephone bill and the cost of the product or service is deducted from the customer's bank account.⁸

PAYBYPHONE

PaybyPhone, launched in Canada in 2001, is a service which allows customers to pay for various transport services via their phones (car park tickets, public transport tickets, bicycle rental etc). The service has been rolled out in 180 cities across the world (in the USA, UK, Canada, Australia and France) and has over 2 million users.

PaybyPhone has been available in France since 2009 and has partnered with banks (notably Crédit Mutuel) on the financial side of the service and with transport service providers for the supply side (Vinci, Veolia etc). PaybyPhone is available in Issy-Les-Moulineaux (car parks), Vannes and Nice (public transport and bicycle rental).

CREDIT MUTUEL

For several years now, Crédit Mutuel has offered its customers the opportunity to purchase a telephone and sign up to a fixed rate telephone service. Working together with an MVNO called NRJ Mobile, Crédit Mutuel quickly identified the potential for cooperation between MNOs and banks to offer services for everyday life. This initiative, as part of the Cityzi project in France, has made Crédit Mutuel the first bank capable of offering its customers a choice between a contactless card payment and an M-payment compatible telephone.

⁷C. COUSIN, *Les Echos*, 25th April 2007
⁸Proximus.be, 2010

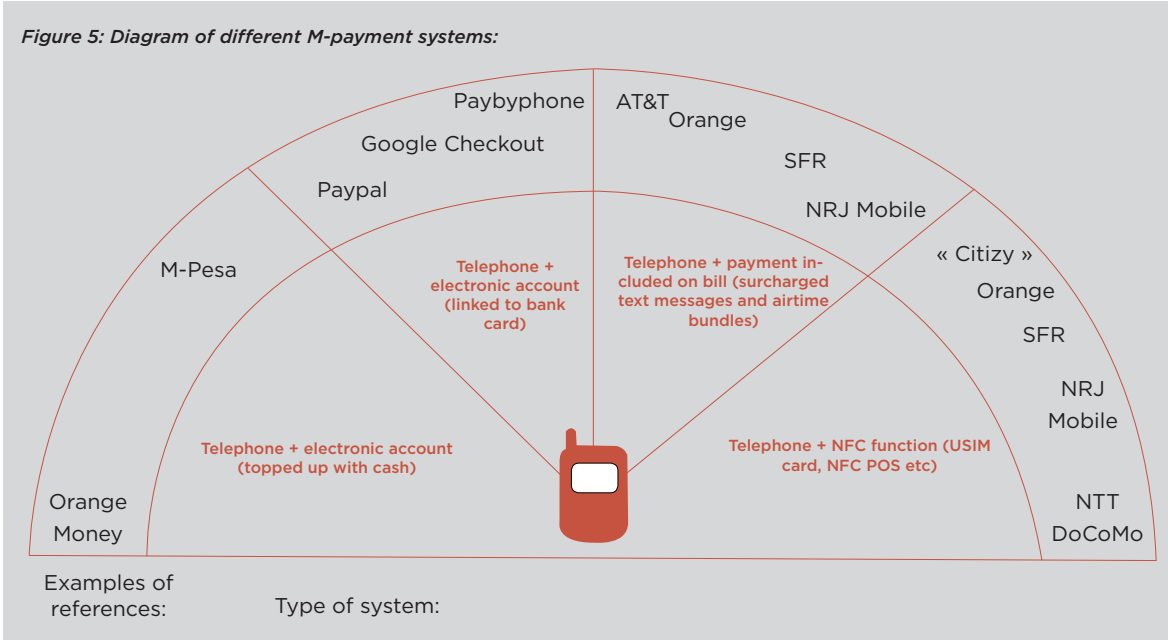
In addition, M-payments bring two major novelties in terms of its usage:

- **A revolution of “on-the-spot” and “remote” services for routine payments.** M-payment promises practicality and simplicity when making routine payments, which are great assets for customers in their everyday lives. One example of how M-payment has improved everyday life for customers is that in developing countries, it provides meaningful access to banking services for segments of the population who were previously completely unbanked. Moreover, routine payments have been made easier: users can pay their bills (electricity bills for example) at the touch of a button instead of going to an often distant and crowded counter. Remote payment functions are therefore significant timesavers which improve daily life.
- **The opportunity for an approach which merges payment services with marketing (loyalty schemes) and communication for businesses.** M-payment is part of a broader range of customer services. The advantage of mobile payment over cash is that it offers extra services which are of real benefit to users. For instance, a car park ticket service could have an option of sending text messages when the ticket is about to expire, or offer the possibility of renewing the ticket from a remote location. Customers who purchase airline tickets on their telephones using the FeliCa M-payment service (NTT DoCoMo) also receive a text message with information on their airport terminal and boarding gate as soon as they enter the airport. What's more, whereas payment cards offer only a limited space for co-branding opportunities, the telephone has limitless possibilities for co-branding applications which can be adapted according to the service required.

M-payments are carried out via different types of systems...

There are three functional mechanisms:

- Payments from an **“m-wallet”** or **“e-money”**: The client manages an electronic wallet. With this function, either:
 - The customer manages an electronic account which is topped up with cash at an agent (e.g. M-PESA). This service allows the user to transfer sums of money and to convert these transfers into cash at an authorised point of sale, which updates the total of the electronic account; or
 - The customer pre-registers on an electronic account and generally enters information such as bank account and telephone details. Transfers can then be carried out using the mobile phone. Only the mobile phone number is needed and there is no further need to enter bank account details. Purchases and payments are deducted directly from the electronic wallet (e.g. PayPal mobile). Another example is PaybyPhone which is mainly used for parking and rental (e.g. bikes) services. By subscribing to an electronic account, mobiles can then be used flexibly to manage a car park ticket remotely, for example, whereby the payment will be directly deducted from a bank account.
- Payments where **the telephone is used as a payment card**: the information required to authorise payments is loaded onto the telephone's SIM card. The customer can then use their telephone to make the payment. The bank account is charged directly.
- **Bill payments**: the telecom operator includes the cost of the purchase (for example the purchase of a transport ticket) on the client's telecoms bill. A pre-agreed system of repayment is then enabled to transfer money between the operator and the business partner. The Payment Services Directive, by according a status of “payment establishment», will make it easier to use this kind of function more extensively. This solution has been widely accepted by mobile users. Payments included on the telecoms bill also encompass surcharged text messages and airtime bundles.

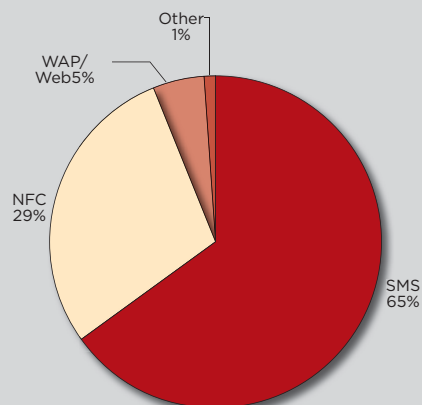


These options are not mutually exclusive: a mobile phone can be used both to make proximity payments (with NFC technology for making in-store payments, for example) and remote payments (via an m-wallet or an mobile phone billing system to buy a transport ticket or manage a car park ticket, for example). The challenge for the adoption of the service by the end customer is the packaging of these services to offer greater flexibility of choice for different kind of purchases.

... and it makes use of already existing and well-known technology.

The main technologies employed for M-payment usages are SMS (Short Message Service) and NFC (Near Field Communication). These allow for information to be exchanged between the telephone and a payment station. According to Gartner, these two technologies will account for 94% of the technology used to make transactions in 2012.

Figure 6: Benchmark technologies for M-payment usages (% of transactions per technology, estimates for 2012)



Source: Gartner

However, these technologies also have specific limitations which directly affect their potential:

Technology	Advantages	Limitations	Most suitable for:
SMS	<ul style="list-style-type: none"> - Available on all handsets. - Easy to use and modern. 	<ul style="list-style-type: none"> - The payment service could fail or be delayed due to the MNO being overloaded, weak reception or a problem with the telephone (e.g. low battery). - The lack of encryption is a concern. - Additional costs to the SMS are incurred (e.g. for a delivery report or billing report) which make this option relatively expensive for small amounts. 	<p>This technology can be used for all kinds of uses:</p> <ul style="list-style-type: none"> - transfer of money - remote payments and so on (e.g. renewing car park tickets, P2P payments etc)
NFC	<ul style="list-style-type: none"> - Speed and practicality: the transaction time is optimised. For example, according to Visa, cash transactions take on average 34 seconds, card transactions 24 seconds and NFC cards 15 seconds.⁹ - Security. 	<ul style="list-style-type: none"> - Terminals which offer NFC payments (whether mobiles, chips or POS) are currently not very common. - The level of acceptability for telephone customers must be considered. - The system has yet to be launched in the commercial arena. - An additional cost for the components must be taken into account. - The customer must be physically present at the point of sale. 	<ul style="list-style-type: none"> - This technology is used for payments at points of sale.
WAP/ Web	<ul style="list-style-type: none"> - Available on all handsets with Internet access. - Usage is familiar and identical to using the internet on a computer. 	<ul style="list-style-type: none"> - This option is not widely used and only accounts for 5% of M-payment transactions made - Users need a subscription to allow them to connect to a telephonic information network (such as Edge). 	<p>This technology is used for:</p> <ul style="list-style-type: none"> - online payments - transfer of money
USSD	<ul style="list-style-type: none"> - Available on all handsets - Easy to use and contemporary. - USSD 2.0: interactive menu which requires SMS, USSD, or WAP sessions. 	<ul style="list-style-type: none"> - The payment service could fail or be delayed due to the MNO being overloaded, weak reception or a problem with the telephone (e.g. low battery). - Security must be ensured. 	<p>This technology is used mainly in countries where the mobile telephone fleet is old or bottom-of-the-range. It is also used as a supplement to other technologies for rapid and relatively insecure interactions. Its comparative cost is low.</p>

⁹Visa report, 2007



All hype or all systems go ?

Why hasn't M-payment taken off before now?

The progress of M-payment is still a relatively new development even though the technology has existed for several years. There are various reasons which might explain this phenomenon:

In developing countries:

- Before the first schemes such as M-Pesa were introduced, informal or semi-formal alternative options to M-payments were already available, and banks had done relatively little to try to resolve the issue of customers without access to banking services. Their primary aim was to offer the service to potential bank account holders. Telecom operators thus saw a gap in the market and were able to provide a breakthrough service.

In developed markets, notably in Europe, there are multiple reasons of which we would like to highlight the following:

- Cooperation between players in the telecoms and banking sectors did not reach an adequate level to allow for the creation of a viable option. The division of value and legitimacy within the customer relations field delayed the process of achieving an agreement.
- Players in the telecoms and banking sectors neglected to wholeheartedly support the endeavour.
- Making the model secure technically and otherwise delayed the creation of a service (e.g. questions whether security codes should be loaded onto the SIM card, onto the mobile or onto an SD card).

In France:

- There has been little interest in initiatives to dematerialise cash payments. The economic model was judged as providing too few incentives, especially for retailers. Here is one example:
 - "Moneo" was the first electronic wallet launched in France in 1999. It was aimed at dematerialising low value transactions and reducing the need for businesses to process currency. When launched, this payment method met with major problems because its economic model did not convince users.
 - "Movo", an experimental P2P payment service launched by Caisse d'Epargne in France in 2003, was terminated in 2005. Despite its innovative nature, this product could only be used by holders of a specific type of account with Caisse d'Epargne.

Observations and prospects for the future

Even after the novelty has worn off, M-payment is producing positive results:

Significant growth of the market

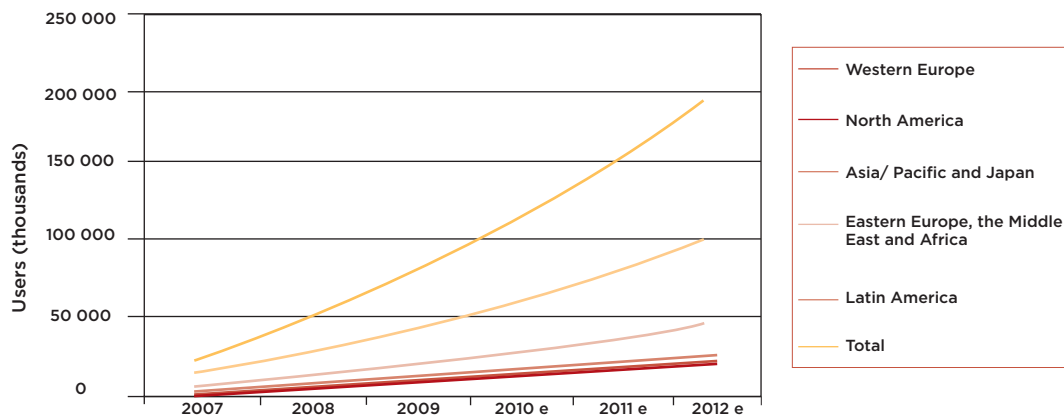
Rising numbers of M-payment users reflect a wider context of consistent growth occurring in all international markets. However, the ranks of users are swelling in some markets more than others: according to Gartner, 80% of users are located in the Asian/Pacific/Japanese regions, Eastern Europe/ the Middle East and Africa.

The West European market is growing at a slower rate: from year to year the market increased by 1.7% from 2009-2010 compared to a predicted 1.3% in 2012.¹⁰

¹⁰Gartner, Dataquest insight, April 2009

According to Juniper Research, almost half of mobile phone users will make payments with their handset by 2014.

Figure 7: Number of M-payment users per region



Source : Gartner

Clear successes...

Success on many continents is driving the development of M-payments:

- NTT DoCoMo, the number one mobile network operator in Japan with a 53% share of the market, launched the first contactless M-payment service in Japan (Osaifu Keitai by NTT DoCoMo) in 2004 and is becoming a world leader in contactless M-payments, with 15 million users in August 2010.¹¹
- Success is notable in developing countries: services such as M-Pesa (Kenya) already number almost 10 million users after being established three years ago.¹²

Safaricom, a force to be reckoned with

M-Pesa is a mobile payment service developed by Vodafone in the United Kingdom and Kenya (March 2007), in Tanzania and in Afghanistan.

Safaricom was able to count on a positive market context which ensured that the launch of its M-payment service was successful:

- A favourable regulatory framework in Kenya
- A leading position (practically a monopoly)
- Only 19% of the population has a bank account in 2007 (4.6 million bank accounts)
- Mobile phones were used by 40% of the population in 2009.
- A very high latent demand for transactions in Kenya - in 2006 14.3% of households were dependent on money transfers (21% in 2009)¹³
- The poor quality of alternative methods for transferring money, largely due to the small amounts involved and the high costs of transactions.

At the same time, Safaricom was well equipped to give its service the best chance of success, thanks notably to:

- An extensive media information campaign costing almost \$10 million based around the «Send Money Home» slogan, combined with an extremely active campaign on the ground to inform end clients and retailers.
- The use of a dense and well-connected distribution network of agents to get closer to customers, which was capable of offering and ensuring a quality service.
- The development and promotion of both B2C and B2B uses
- The relatively low cost of services: while Western Union and MoneyGram charge commissions of 17% and 19% respectively for a transfer of €100, Safaricom takes just 1%.

¹¹NTT DoCoMo, Press Release 2010

¹²Safaricom.com, Safaricom Investor Roadshow - 2009

¹³FSD-Kenya (June 2009), "Finaccess Kenya 2009: Results of the Finaccess National Survey"

And the results are impressive:

- M-Pesa is the most popular method for transferring money in Kenya: in 2009, 52% of the population had received money through the service which was launched in 2007.¹⁴
- After 14 months of activity, M-Pesa in Kenya had 2.7 million customers and 3000 distributors.¹⁵ Today it has almost 10 million customers and over 10 000 distributing agents.¹⁶
- Between March 2009 and March 2010, M-Pesa's income increased by 158.1%, which accounts for 9% of the MNO's total income. Income from voice services increased by only 7.8%¹⁷ during the same period. The average amount of the transactions was around the €350 .
- Despite facing growing competition in Kenya, Safaricom remains the dominant actor in the sector with a 78% share of the market : Safaricom managed to convert 40% of its standard customers to M-Pesa users, and this service explains in no small measure how Safaricom has resisted competition.¹⁸

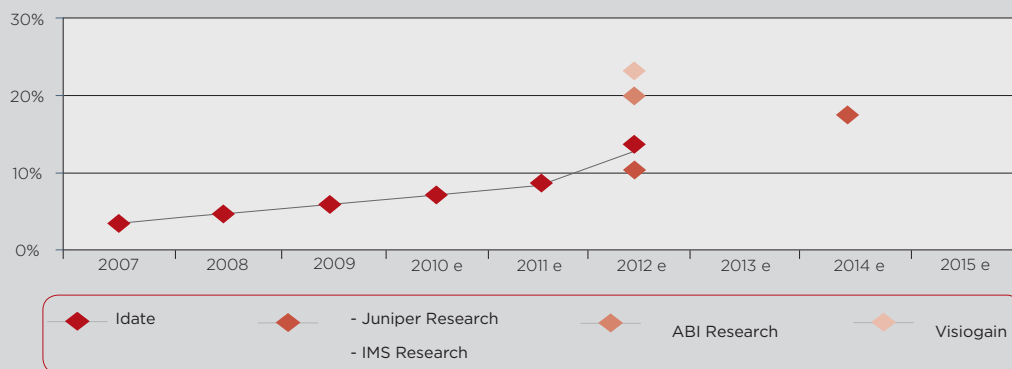
A positive outlook:

Growth is likely to stem principally from the development of M-payment services which make use of already widely available SMS technologies.

Uses based on NFC technology are likely to grow in a less exponential fashion:

- IDATE predicts that 14% of telephones sold in 2012¹⁹ will contain integrated contactless technology.
- Juniper Research and IMS Research estimate that by 2014, NFC technology will be available on 16% of mobiles worldwide, or one telephone in six.²⁰

Figure 8: Prediction of the number of mobiles with NFC technology in the global mobile fleet



However, there are notable discrepancies between potential NFC technology user markets: whereas 51 million mobile phones in Japan are already equipped with an electronic wallet microchip²¹, Europe on the other hand is still in an initial phase of producing prototypes and pilot schemes. For example, Samsung revealed its Star NFC mobile phone at the GSMA Mobile World Congress in Barcelona in February 2010.

Progress thus seems to be well and truly underway with realistic models for development being established in different countries and on all continents. Clearly, the differing characteristics of developing, emerging and developed markets leaves ample room for creativity on the part of the different agents involved, whether telecom operators, banks or payment service providers.

¹⁴FSD (2010), "Finaccess 2009 Survey Results"

¹⁵FSD-Kenya (August 2009), "What makes a successful mobile implementation? M-PESA in Kenya and Tanzania"

¹⁶Safaricom, "Safaricom Investor Roadshow", 2010

¹⁷Safaricom, "Safaricom Investor Roadshow", 2010

¹⁸Safaricom, "Safaricom Investor Roadshow", 2010

¹⁹IDATE - Les service mobile sans contact (Arcep) - February 2010

²⁰IDATE - Les service mobile sans contact (Arcep) - February 2010

²¹Les Echos, Le paiement par téléphone mobile relancé en France



An economic and social breakthrough for developing countries

An innovation which is spreading

In developing countries, there are millions of mobile phone users who have no access to banking services. M-payments in these markets plays a role in offering a practical system to stimulate the development and better security of banking services. Although currently money transfer is the main service provided via M-payments in these regions, it could also gradually expand into complementary services, such as wage payments, distributing social benefits, providing subsidies and so on.

Developing countries perceive mobile payments as a key aspect of development. The solutions on offer are primarily based around the concept of prepaid electronic wallets, to meet the needs for payment methods and banking services for underbanked populations.

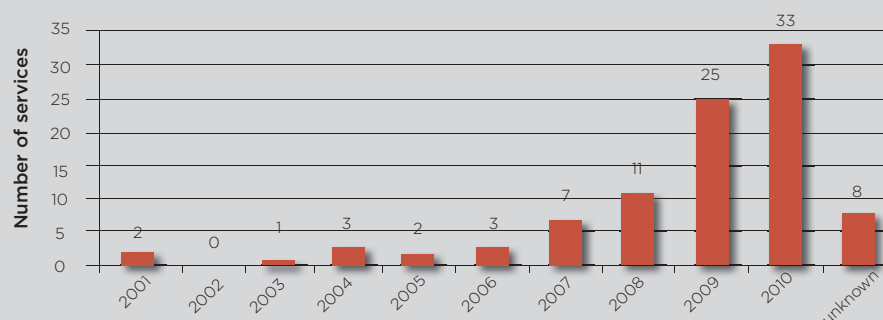
The first M-payment service was Celplay, launched in Zambia in 2001. The only function on offer was airtime credit top-ups. Since then, different functions have been set up taking advantage of contextual factors such as the regulations in place in the country, local customs concerning transferring money, the mobile penetration rate, the bank branch penetration level, the numbers of banked and underbanked and so on. The functions differ in terms of services, price plans and the technology used.

Currently, a major increase in the number of possibilities of M-payment can be identified: According to CGAP²³, 120 service providers will have launched M-payment services by the end of 2010. And according to GSMA, there are currently 95 services already on the market and 87²⁴ in a launch phase in developing economies.

According to the CGAP (Consultative Group to Assist the Poor) and the GSMA, around 1 billion people in developing countries have mobile phones but no access to banking services. And CGAP estimates that in 2012, the number of unbanked people with mobile phones will be 1.7 billion.²²

The number of M-payment service providers will have reached 120 by the end of 2010.²⁵

Figure 9: Number of new M-payment services launched per year



Source: GSMA (2010), "GSMA Mobile Money and Wireless Intelligence"

²²CGAP - <http://technology.cgap.org/2009/06/04/mobile-money-by-the-numbers/> - 2009

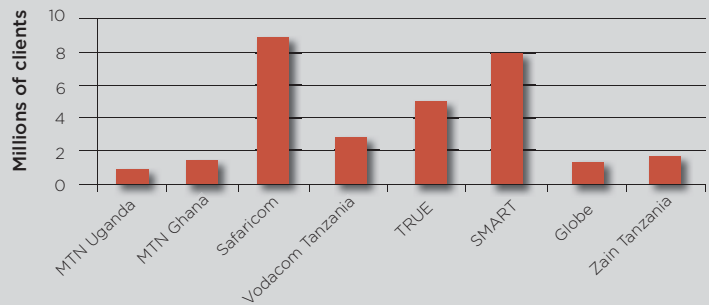
²³Amrik Heyer and Ignacio Mas, "Seeking fertile ground for Mobile-money", September 3rd 2009

²⁴GSMA (Sept 2010), Mobile-money Deployment Tracking

²⁵Mobile Market Development, "Mobile-money : Lessons from Emerging Markets", 2009

Considering the speed at which services are deployed and the rate of customer take-up, other MNOs will soon have enough customers to pass the symbolic 1 million mark. This is true notably for MTN Ivory Coast whose M-payment service currently has 750,000 subscribers.

Figure 10: M-payment services with over 1 million customers in 2010



Source: GSMA

True, the Thai mobile network operator which managed to launch True-money in a negative context

True-money, launched in Thailand in 2005, now includes over 8000 distributing agents and 6 million users, who complete a total of 120 million transactions per year for a total value of 900 million USD.²⁶

Initially used by the MNO to allow customers to pay their bills, True’s services have now expanded into a much wider range of functions, including the purchase of airtime credit, carrying out money transfers and so on.

True’s speciality is that it launched its services in a very different context to that of “Southern” countries. Thailand benefits from good banking infrastructure (ATMs, branches etc) and a large percentage of the population has bank accounts. The money transfer market in Thailand had also been saturated already by several banks and postal services.

In order to ensure the success of its service, True therefore had to offer differentiating functions to attract customers. It offered its mobile telephone users free cable television if they paid via the True-money method. The result was a gain of over a million True-money customers and retailers selling airtime credit being convinced to sell prepaid True cards.

²⁶Paul Leishman (February 2010), “True-money and M-PESA: Two Unique Paths to Scale”, GSMA

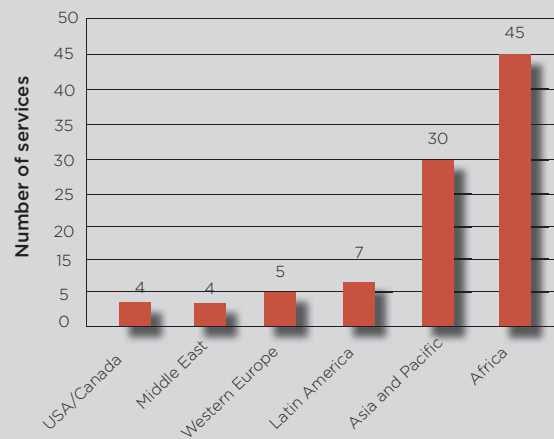
Africa: an example of a fertile land for M-payment

Africa, the Eldorado of M-payments

Africa is the geographical region which has witnessed the most deployments of M-payment services. Confirmation of the commercial success of these innovations is revealed in the statistics concerning the number of companies with over one million subscribers.

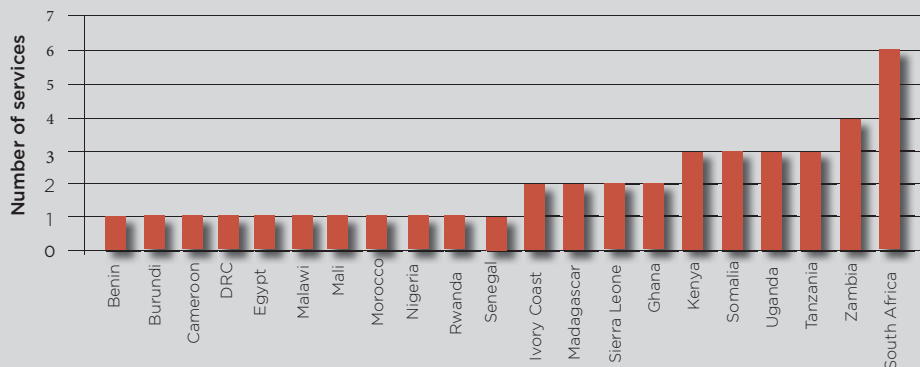
90% of managers in MNOs estimate that in 5 years' time, M-payments will be responsible for 10% of the revenue of telecom operators. They also claim that in 8 years' time, this figure will increase to 30%.²⁷

Figure 11: Number of M-payment services by region in 2010



Source: GSMA (2010), "GSMA Mobile Money and Wireless Intelligence"

Figure 12: Number of M-payment services per African country in 2010



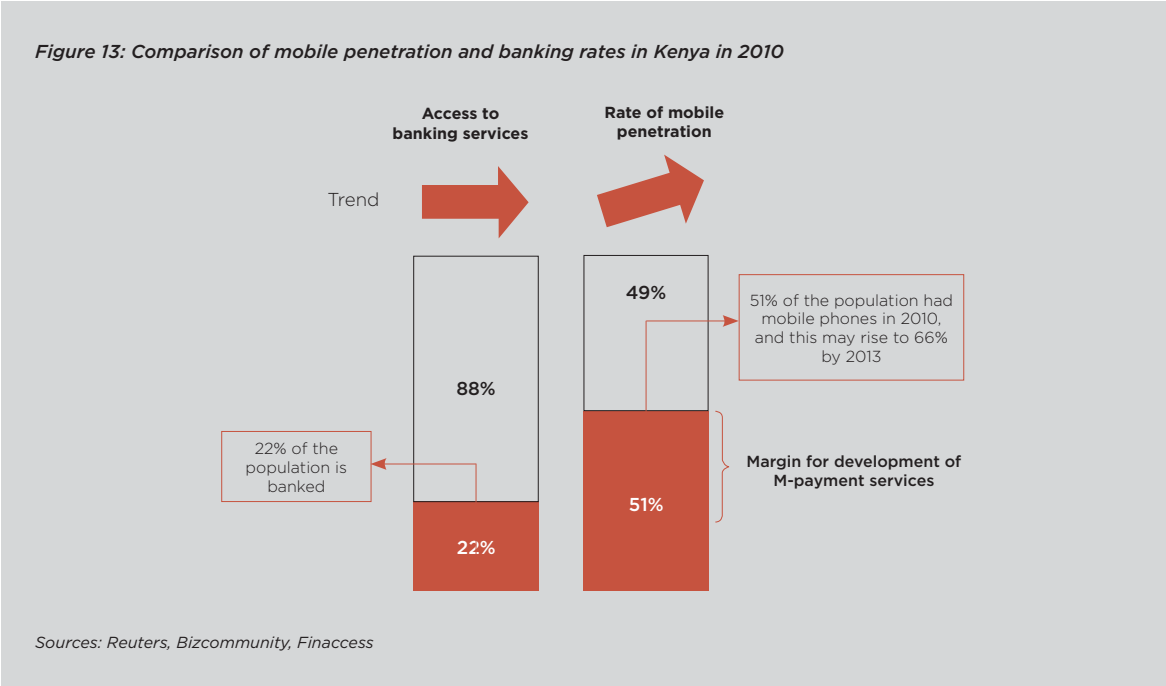
Source: GSMA (2010), "GSMA Mobile Money and Wireless Intelligence"

²⁷ CGAP (September 2010), "CGAP Mobile-money Expectation Survey"

A favourable context for the development of M-payments

For a large part of the population in Africa, M-payment services are the only method for accessing formal financial services. This observation is based on three key contextual factors:

- **The rapidly increasing mobile penetration rate:** the rate of penetration for mobile telephony could reach 80%²⁸, with established companies dominating the market.
- **Low numbers of bank account holders:** few people are bank account holders, and banking penetration is low: the rate of banked persons remains under 30% in some countries in Sub-Saharan Africa.
- **Long-standing companies offering high-cost services with no high security performance guarantee.**

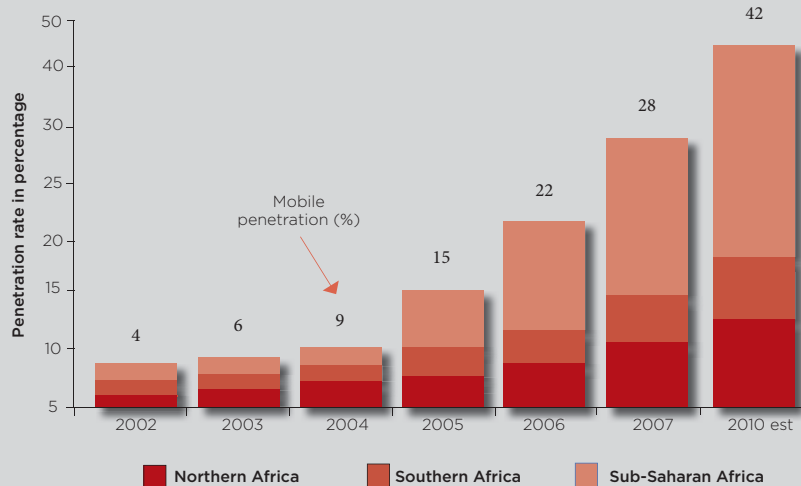


²⁸UN Agency for Information and Communication Technology

A rapidly increasing mobile penetration rate

The African continent is witnessing rapid growth in mobile usage, due partly to the almost complete absence of a landline telephone network and partly to the low cost of mobile phone usage in comparison with landline telephony and the Internet.

Figure 14: Mobile subscribers in Africa 2002-2010

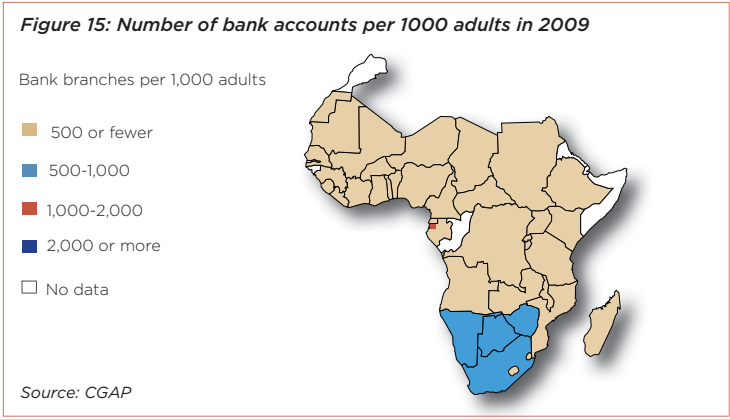


Source: ITU

Low numbers of bank account holders

Africa is largely underbanked. Sub-Saharan Africa in particular is characterised by a low bank account penetration rate.

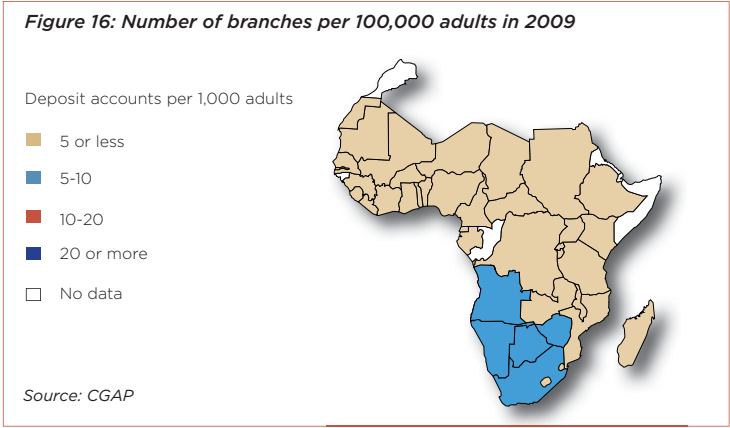
This under-development can be traced to three factors: marketing and services adapted to high-income customers, the often crippling demands for supporting documents, and few or no initiatives for G2P (Government to Person) transfers which is one of the key elements of banking services in developing countries.



Generally speaking, the bank branch network is very sparse in Africa compared to those of developed countries: there are less than three branches per 100,000 adults compared to an average of nine per 100,000 in developed countries.

This scarcity can be explained by the following reasons:

- Under-development of the network in rural areas
- The lack of “branchless banking” schemes (particularly Automated Teller Machines / ATMs)
- Strict regulations restricting the establishment of bank branches



Long-standing companies offering high-cost services with no high security performance guarantee

For the populations of these regions, M-payment services offer several advantages: charges are three to five times lower than those of banks or money transfer agencies such as MoneyGram or Western Union, services are available around the clock, seven days a week thanks to distribution points at the disposal of the population, and the option of transferring sums of money, including very small amounts, on a person to person level.

The African continent therefore offers fertile terrain for the development of M-payment.

Strengths: <ul style="list-style-type: none"> - A breakthrough system with a high added-value. <p>Example: Deposits and withdrawals of money at nearby points of sale, remote payment of bills thus avoiding the need to travel.</p>	Weaknesses: <ul style="list-style-type: none"> - The system is still not very interoperable. - International services are not among the available options: this is still an under-developed area.
Opportunities: <ul style="list-style-type: none"> - High potential for growth of the M-payments market due to the size of the target population. - Consistent growth in the rate of mobile penetration. - Political and legislative backing for these kinds of services which are capable of supporting and stimulating economic wellbeing in the country - Permissive regulations: openness of the market to new actors from outside the banking sector. 	Threats: <ul style="list-style-type: none"> - Security of funds being stored and transferred. - Deterioration of the customer experience due to certain restrictive laws aiming to reduce the risks of money-laundering, financing of terrorism and other forms of fraud. - The existence of a cash culture which could impede the development of electronic currency. - Lack of trust in the concept of digitization of money. - A target population whose financial resources are scarce and tend to fluctuate. - In order to expand the service, illiteracy and multilingualism must be taken into account. In fact, a model based on an exchange of SMS including text elements would not be suitable for people who are unable to read. Likewise, the choice of language (IVR) is crucial to ensuring that the service can be used by all customers.

Orange, driving forward a change in mindset concerning the provision of banking services to populations

Orange is present in the Middle East, Northern and Western Africa, Central and Southern Africa as well as the Caribbean Islands with almost 50 million clients on 31 December 2009. In June 2010, its M-payment service "Orange-money" was launched in Ivory Coast (2009) as well as in Senegal, Mali, Niger and Madagascar. Their stated aim is to launch the offer across all of the company's subsidiaries where regulations allow.

From the beginning, the system covered a fairly broad range of services including options for cash withdrawals and deposits, money transfers, purchasing phone credit, as well as bill payments and paying for goods and services from certain companies.

The results after around 5 months of operations have been deemed satisfactory by both Laurent Kiba, Manager of Orange-money in Senegal, with almost 200,000 customers in Senegal and by Hawa Diallo Toure, Project Manager for Orange-money in Mali with 150,000 customers in Mali. Huge information and on-the-ground campaigns combined with dedicated customer service activity all played vital roles in promoting and explaining the service.

Laurent Kiba remarks that in Senegal, the concept of an electronic wallet (on a mobile telephone) will take time to enter into the mindsets of populations, the majority of whom have never had an account either with a bank or even a micro-finance institution. Take-up is stimulated by significant promotion campaigns involving purchases of airtime to get customers used to topping up their mobile accounts with money, then buying telephone credit with bonuses worth as much as 100% of the original amount. The second stage of take-up focuses on the use of electronic wallets for other uses such as making transfers or paying bills.

Now, promotional activity is primarily targeted at increasing the number of active customers (those who have conducted transactions during the last 30 days), while the numbers of new customers signing up are growing at a steady rate of around 10,000 per week both in Senegal and in Mali.

The parties involved

To launch a M-payment service, a number of actors need to interact and cooperate. These actors have complementary skills and knowledge and together can fulfil all of the technological and relational needs which are indispensable to the functioning of the service. The skills and knowledge needed are mainly in the fields of regulation, marketing, distribution, back-office, technological systems and so on.

These different areas are given greater or lesser degrees of importance depending on the market context within which the M-payment services are launched (in terms of regulations, availability of banking services, mobile penetration rate, size of the agent network, specific cultural characteristics etc.) and the actors present in the market (influences, competition, political interest etc).

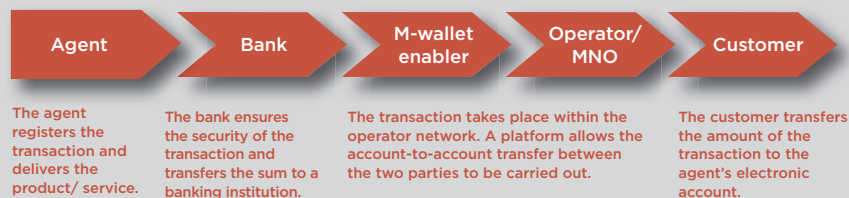
Given that the eco-systems of different markets are all constructed differently, each M-payment service follows an individual model of its own and there is no unique model for relations between the stakeholders.

The principal parties involved in the process are as follows:

- **Mobile Network Operators (MNOs):** MNOs are responsible for the communication and marketing aspects of the service, and make their network available.
- **Banks:** The banks ensure the security of operations and transport cash money to their multi-faceted banking institutions. Banks also play a part in guaranteeing the application of banking regulations, creating “e-money” or M-payments, as well as being involved (depending on the arrangement) in distribution, development of the services, advertising, branding and so on. They can even be the main promoters (such as in the cases of Wizzit and Wing).
- **Agents:** The primary intermediaries who dispense money to and collect money from customers, e.g. retail shops. The size of the agent network is a key factor in launching the service and rapidly reaching a critical mass. For example, in March 2010 the M-Pesa agent network incorporated around 17,650 licensed distributors. This network brings to light both needs and opportunities for training in order to develop a professional service. In particular, agents must sign a membership agreement and fulfil certain conditions (e.g. having an Internet connection). The agent receives a commission for each transaction carried out.
- **Managers of the M-wallet platform:** Here, a technical platform is made available for carrying out transfers between m-wallets and managing the flows with the banks involved. This is the keystone of the service (e.g. Gemalto). This service is often provided by banks, the MNO or even the agent network.
- **Mobile customers:** the customer accesses financial services and uses the phone to make a M-payment. The customer is charged for each transaction: For example M-Pesa takes €0.28 for a transfer of an amount of money (no greater than €324) to another M-Pesa user. For international transfers, charges can vary depending on the network involved (usually around the 5% mark). Orange-Money in Senegal charges 3% of the total amount transferred, 500 CFA francs (€ 0.75) for a bill payment and 4% for a cash withdrawal at a partner’s agent or ATM.²⁹

²⁹Sonatel et BICIS – Système de paiement – N°313

Figure 17: Classic value chain for M-payment services



Additional actors are also involved in the M-payment ecosystem:

- **Financial institutions:** in particular, these actors are involved in converting e-money into physical money.
- **Regulatory and institutional organisations:** These aim to standardise and establish the legislative framework. They are particularly important for pushing debates and awareness of M-payment issues into the trans-national market arena. These organisations notably pushed to establish caps for the totals of transactions (during a given timeframe) to deal with the issue of international fraud and money laundering.
- **Money transfer organisations:** These are the primary partners in developing the systems for international money transfers. For example, Western Union (with 330,000 distributors in over 200 countries) has built links with MNOs (e.g. Safaricom and Orange).
- **"Institutional» customers:** Billing companies (for electricity, etc.), financial institutions (micro-finance and insurance companies, etc.), governments (social benefits, etc.) and International Development Agencies (emergency aid) and so on.

Zain provides an innovative technical function with its Zap service

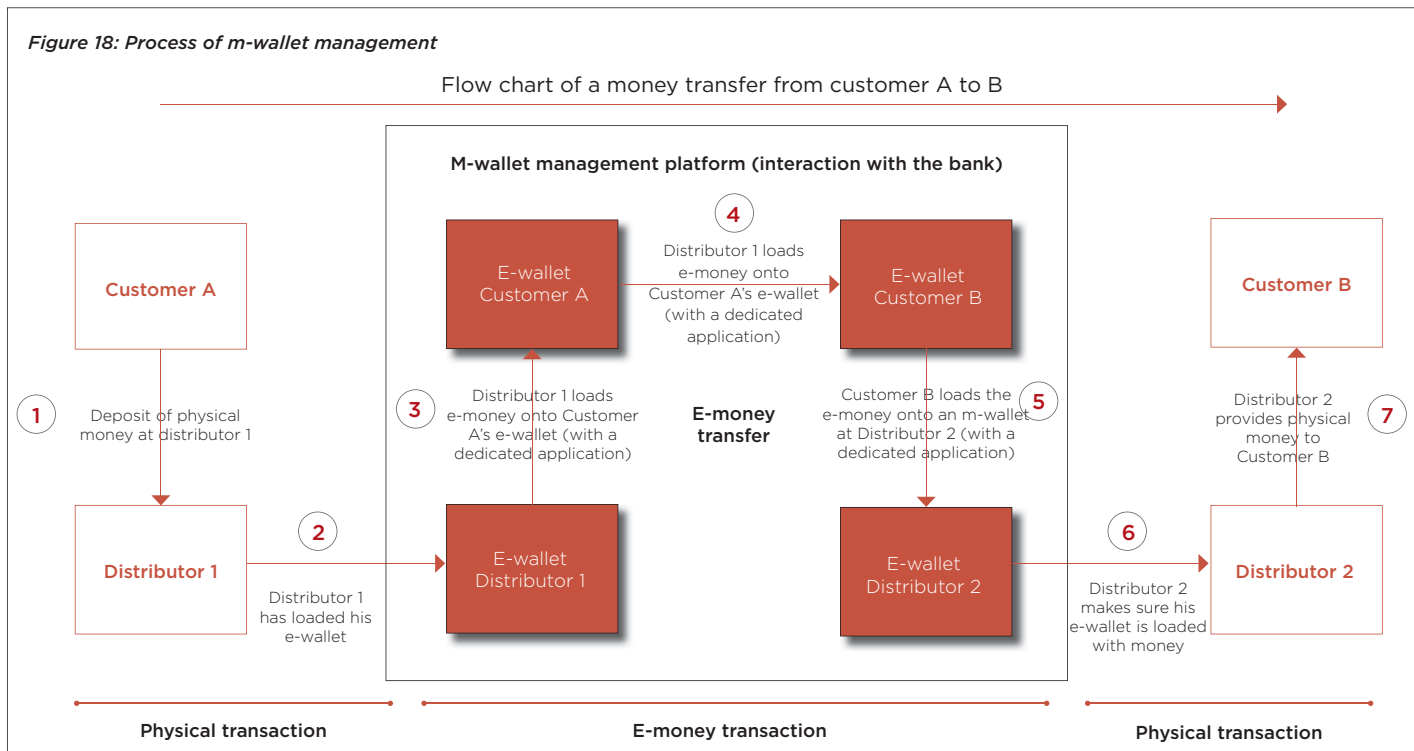
Zain introduced Zap, its M-payment service, in February 2009. One year later, it had become the most widespread M-payment service in the world, present in Bahrain, Kenya, Tanzania, Sierra Leone, Ghana, Niger, Malawi and Uganda. By the end of June 2010, Zap had 1.2 million customers in Kenya, 5.3 million in Tanzania, 330,000 in Ghana, and 100,000 in Uganda, Niger and Sierra Leone.

The success of Zain's newly-launched service stems principally from the fact that the MNO developed a model which stands out from those of its competitors Vodafone and MTN. The differences are the following:

- The creation of different subsidiaries in each country where the service was launched, which allowed the MNO to adapt its service depending on the characteristics of different markets. Thus in Kenya, Zap did not introduce charges for making deposits, to make sure the service was in line with M-Pesa practices.
- Subsidiaries have the independence to control the financial and organisational aspects of their operations (marketing campaign budgets, size of staff, etc) which allows them to react more swiftly to react to needs and problems.
- A customer recruitment strategy in harmony with the progression of the customer life cycle: Zain linked together campaigns for registering SIMs and for Zap services. Users can therefore sign up for Zap automatically without having to begin a new procedure.
- Agreements were signed with airtime credit retailers authorizing them to become Zap agents. This meant that the MNO was able to build a branch network efficiently and at a low cost.
- The concept of "branches", traditionally considered a place for making deposits and withdrawals of money only, was substituted with the concept of «dealers». In addition to offering deposit and withdrawal services, dealers can pay suppliers and accept payments from their clients in e-money.
- In accordance with their "cash-free ecosystem" strategy which tries to deter customers from withdrawing their money from the system, Zain has been working since the launch of its service to diversify the M-payment services it provides, to incorporate bill payments, purchase of airtime credit, money transfers, e-wallets and in-store payments.
- A low-cost strategy: The costs of Zap transactions are kept especially low in order to encourage customers to make transfers electronically rather than withdrawing money.

M-payment services in developing countries are distinguished by the use of an electronic wallet (usually without the support of a bank card).

Figure 18: Process of m-wallet management



Fino, an intermediary service which boosts the M-payment market in India

Financial Inclusion Network & Operations Ltd. (FINO), established in 2006, is an intermediary that distributes financial services on behalf of banks, financial institutions, governments and insurance companies to end clients who often have little access to banking services.

The M-payment services on offer include the transfer and provision of information, savings deposits, international money transfers, loan repayments, insurance payments and fixed and regular deposits. By June 2010, Fino had over 16 million customers, and this number continues to increase by 50,000 a day. Its financial services are carried out by a network of agents in 21 states and 238 of India's 600 districts.

According to Kamaljit Rastogi, Head of Strategy and International Business at Fino, regulations in India are favourable to Fino's growing activities and encourage banks to invest in Fino, indeed investment is on the rise.

The service is constantly expanding. Now that a (conditional) licence for mobile e-wallets has been awarded to Bharti Airtel, mobile network operators are likely to become more involved in developing mobile financial services.

Back to basics: the fundamental aspects of launching a M-payment service

Five areas for evaluation

For an M-payment service to last, its launch must be vigorous and based on three key elements:

- A large volume of transactions which should compensate for a small revenue margin
- Swift take-up on the part of new customers and agents to reach a critical mass which will allow the service to be operational. Remember, for services such as a money transfer to take place, senders, receivers and agents all need to have access to the M-payment service.
- Broad geographical coverage so that the service is accessible anywhere and anytime.

In the light of these criteria, five key areas must be examined in detail before it will become clear whether a service can be successfully launched:

- The latent demand for transactions
- The quality of alternative services
- The regulatory framework
- The mobile operator market
- Retail distribution networks

The latent demand for transactions

A high level of temporary or permanent migration of rural populations to urban areas has created a need for M-payment services, particularly money transfers. Regional migration is more common than international migration and migrants provide vital incomes to their families. For example, 30% of households in Kenya rely on money transfers to maintain their quality of life.³⁰

This demand needs to be analysed extensively. The volume of transactions which currently take place can only provide a rough estimate. It is much more difficult to record transactions via traditional methods such as face to face, through bus drivers, through the postal service etc. Moreover, the migrant may have several other relationships (e.g. as a member of a village or family) which must be taken into account in order to evaluate the total number and amount of domestic payments.

Regional or intra-continental transfers account for a significant percentage of international payments when compared with trans-continental transfers. In fact, only 47% of international migrant workers have migrated outside their own continent.³¹ It is often more difficult to set up international transfers, because a foreign partner is usually involved. For instance, Smart Money and G-Cash in the Philippines partnered with Western Union to set up one such service.

³⁰Sander, C., & Maimbo, S. M. (2005). *Migrant remittances in Africa: A regional perspective*

³¹Amrik Heyer and Ignacio Mas, "Seeking fertile ground for Mobile-money", September 3rd 2009

We now know that national transfers often account for much higher amounts than international transfers (sometimes 10 times higher, such as in Kenya's case). Moreover, promoting national money transfers via mobile phones in many cases seems to be a regulatory and commercial prerequisite for encouraging international transfers via mobile phones. This category also encompasses wage payments and bill payments. The primary users of this service include traditional employers as well as governments and micro-finance institutions (MFIs).

The quality of alternative services

In order to evaluate the market potential of a service, it is crucial to consider the quality of formal (legal and regulated), semi-formal (legal but not regulated) and informal alternatives. The optimum markets are those with an almost complete lack of alternatives, or which offer a poor service in terms of customer experience. In extreme cases where there are no alternatives at all, potential customers need to be educated about how to use the service.

For all of these alternatives, the criteria which are most relevant to the user must be evaluated. These include the various direct costs (interest rates, prices etc), the security of the operation (likelihood of money being lost), trustworthiness (the likelihood of the service provider going bankrupt, the desire to have access to one's cash at all times) and convenience (ease of use, travel time or waiting time to execute a transfer).

Semi-formal or informal services are often very convenient whereas more formal services tend to be safer and more trustworthy.

The regulatory environment

Currently many countries have no regulations in place concerning Mobile payments. This means that there are still many uncertainties for MNOs as well as for investors. The regulation has a dual effect: on the one hand it can help increase trust, whereas on the other hand it can slow down development of the service by restricting the MNO and negatively affecting on the client's experience

The objective of regulation concerning the identification of clients (Know Your Customer or KYC) is to counter money-laundering, as well as the funding of terrorism. These rules often imply asking clients for numerous documents proving their identity, which are generally difficult to obtain.

Regulations concerning banking licenses, necessary for issuing e-money, play an important role in partnership strategy. For instance, in Brazil, India and Nigeria the MNOs do not have the authorization to issue e-money and are therefore forced to partner with a bank. Certain laws also regulate limits on costs that the client can be charged.

Mobile services

It is clear that the degree of penetration of mobile phones plays an essential role. For this reason it is important to take into account the fact that it is not rare for a family or a group of people to share a mobile phone. Likewise, good coverage of the network is necessary.

Although in some countries the mobile phone penetration rate is high, customers are more used to voice services than services which require data (text messages, etc), especially the part of the population that is illiterate. It is therefore necessary to adapt the product in accordance with the target market.

The MNO's market share is also essential to create a client base. Moreover, if it is already well-known, the MNO will be able to take advantage of its brand image and there will be fewer barriers to the creation of a client network.

Distribution chains

All mobile network operators need a good network of agents to sell their services, train clients and for certain services such as deposits and withdrawals. Generally, in order to reduce costs, they base themselves on existing networks such as post offices, franchise retailers, airtime resellers etc.

Retail distributors such as Unilever, Cadbury-Schweppes etc. already have networks in place that can be found even in the smallest villages. Their trucks could also be used to transport funds.

Wing: the ambition of a mobile bank

Wing is a subsidiary of the Australia & New Zealand Banking Group Limited (ANZ) that offers mobile payment services in Cambodia: deposits, withdrawals and money transfers as well as service payments (especially mobile phone services).

Wing is targeting Cambodian customers who are generally un-banked, but nevertheless have significant needs for financial services (approximately 56% of customers do not have a bank account). Cambodia has a population of 14 million people, of which only half a million have a bank account even though there are over 4 million mobile phone users.

A true success story, Wing already has 150,000 active customers after 18 months of activity (the launch took place in January 2009). There are many reasons why it has been so successful:

- Wing established a relationship very early with the Central Bank (the National Bank of Cambodia, NBC) which didn't previously have any specific and adapted regulation for Mobile payments. Wing's commitment to disadvantaged people and their work in circulating information, training and information exchange with other central banks enabled Wing to obtain an adapted license.
- Wing began as an independent identity and was therefore able to benefit from institutional support and top management at ANZ, whilst still having the operational freedom to innovate and implement a new approach.
- Wing has gradually established agreements with all mobile network operators (9 of them) with the exception of Mobitel, the market leader, by starting with the smallest actors that have the most to gain by a partnership.
- Prices are clear and affordable: there is no fee for deposits, but there is a fee shared equally between the sender and the person who is withdrawing money.
- Wing identified communities that could be the first users of this innovation and also identified corridors (urban-rural) that take into account the network effect: Wing started by targeting the 350,000 workers in the garment industry in Cambodia. The 300 main employers were able to connect to a virtual private network and download a simple CSV file to pay wages through the Mobile payment service. Employees could then send money to their village.
- Wing led an innovative brand approach, adapted to its market, which inspires trust and is supported by intensive and repeated communication (in and outside the media).

The expected results of these initiatives for telecom operators in developing countries are as follows (only the results of the MNOs are currently available):

- **Acquisition of new clients:** particularly in disadvantaged areas and/or rural areas, to attract new mobile payment clients or for the expansion of financial services.
- **Generation of (new) income:** this income comes from various commissions on transactions and is deducted from commissions paid to agents. It represented over 10% of Safaricom's total revenue in 2009-10 and 55% of profits obtained by Mobile money services by MTN in Uganda.
- **Increased consumption of traditional MNO services:** usually this increase in consumption is due to users who have money on their phone and can use it at any time (especially when stores are closed).
- **Reduced churn from end customers and partner businesses:** this aspect, as illustrated by the case of MTN Uganda, may represent one third of indirect profits obtained by m-payment services. In the analysis carried out, the cancellation rate fell from 4.5% to 0.2% per month.
- **Reduced cost of sales:** when the subscriber tops up his phone credit via M-payment service rather than with a prepaid card, the MNO saves money. On the one hand, no commission needs to be paid to the agent for the sale and on the other hand, there are no logistics costs associated with manufacturing or storage of the prepaid card.
- **Brand Reinforcement:** Some MNOs such as Safaricom and MTN in Sudan³² do not hesitate to make brand reinforcement a major axis of their corporate social responsibility.

³²MTN, Revue de Presse « MTN Micro Finance Initiative », 2010

MTN is already reaping the benefits of its recently launched Mobile-money

The leading African telecom operator MTN is present in 21 countries in Africa and in the Middle East, and had 129 million subscribers registered in June 2010. Their M-payment service, Mobile-money, is already operating in 5 countries and is planning to start operating in two more by the end of the year.

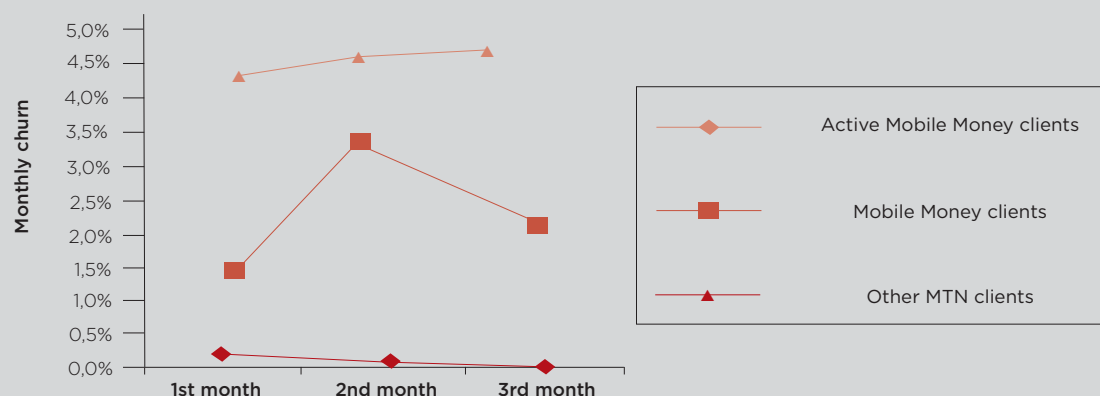
The ease with which Mobile-money has developed depends on the countries where it was launched. It is highly dependent on the regulations in different states. Despite this constraint, the MNO has increased its capacity to implement this innovation by mobilizing teams dedicated to marketing, banking partnerships, distribution, operational processes...

The MNO's Mobile-money marketing strategy was carried out in two phases: a first phase concentrated on attracting new customers with simple services such as an electronic wallet and money transfers. A second phase of promotion focused on how these services could be used.

Positive results were very quickly achieved: after only 14 months of operations, MTN already has a positive cash flow on a monthly basis³³, even though over half of all managers interviewed by CGAP estimate that a period of 3 years is required before a positive cash flow can be realized.³⁴ In Uganda, the network already has more than 1,400 agents and over 400,000 active subscribers making 385,000 P2P transfers per month (from one MTN user account to another MTN account) after 1 year of being launched.

Everyone agrees that M-payment services tend to reduce churn for mobile network operators. The case of MTN confirms this: the churn for a customer using Mobile-money is almost zero. The rate goes from 4.2% a month for a regular mobile phone client to 0.2% per month for a subscriber using Mobile-money.³⁵

Figure 19: MTN clients' churn evolution



Source : Paul Leishman (Octobre 2010), "How significant are churn reduction benefits to profitability?", GSMA

Proof that the results are satisfactory and encouraging, MTN is continuing to increase its development by announcing its partnership with Western Union enabling MTN Mobile-money customers in the 21 countries where their products are available to make money transfers with Western Union via their Mobile-money account.

³³Paul Leishman (Octobre 2010), "Is There Really Any Money in Mobile-money?", GSMA

³⁴CGAP (Septembre 2010), "CGAP Mobile-money Expectation Survey

³⁵Paul Leishman (Octobre 2010), "How significant are churn reduction benefits to profitability?", GSMA



An aspiration to modernity in developed markets

In developed markets, due to a high usage of banking services and high mobile phone penetration, M-payments represent an opportunity to start using mobile phones in a new way and take advantage of new services (most likely yet to be invented) and is expected to become part of a large universe of banking and marketing services (customer loyalty) that already exists. The stakes are therefore different from those encountered in developing countries.

As an example, Europe is characterised by multiple initiatives and pilot programs. The sector is dynamic but is not developed such as pioneer markets as Japan, where usage is already widespread (FeliCa, the mobile payment brand of NTT DoCoMo, expected 50 million phones to be equipped by 2009³⁶).

In developed countries, a greater variety of M-payment solutions are available than in developing countries: a comprehensive range of services is being developed to make payment services more convenient for users.

M-payment in developed countries must be understood as two distinct but closely related approaches:

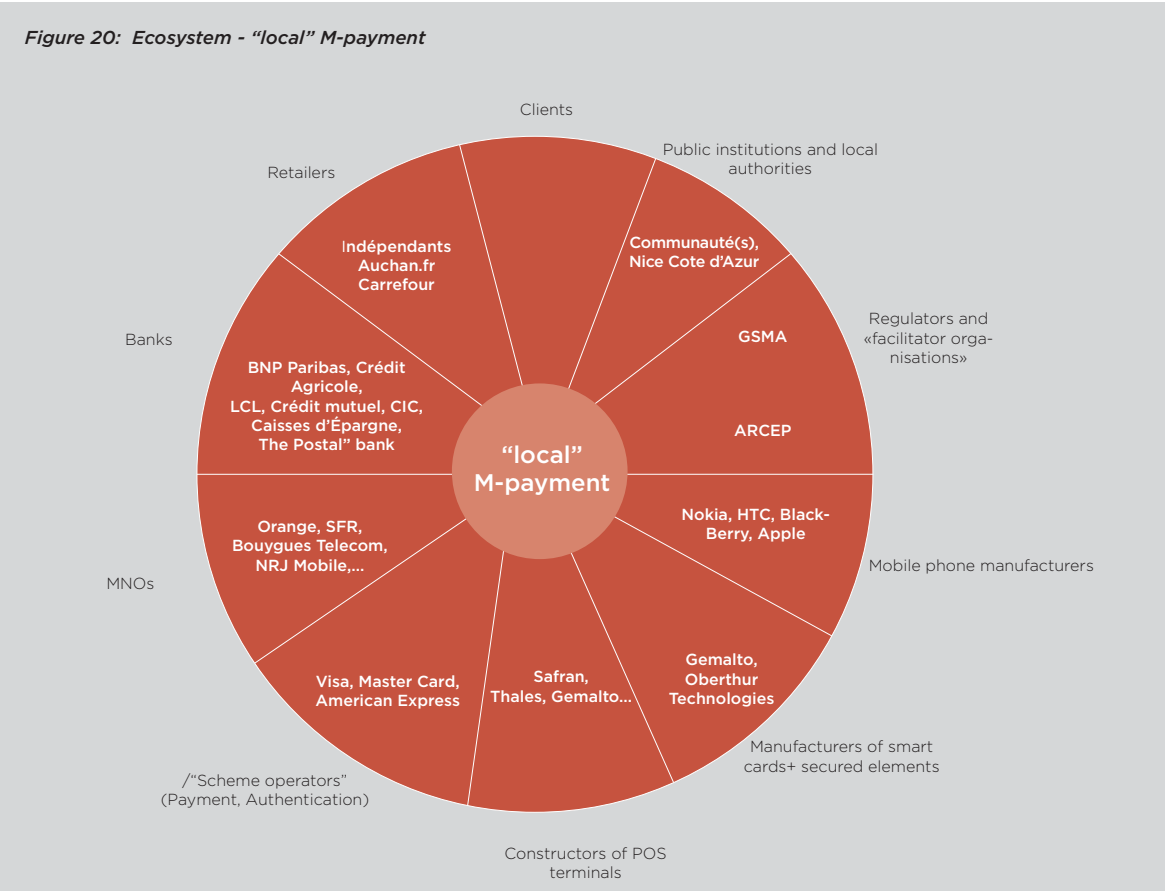
- **«Local» payment:** the buyer is present at the point of sale. Mobile payment solutions are mainly NFC.
- **«Remote» payment:** the seller and buyer do not need to be close for the purchase. The functional solutions are of the «M-wallet» type, debiting the bill of the MNO, etc...

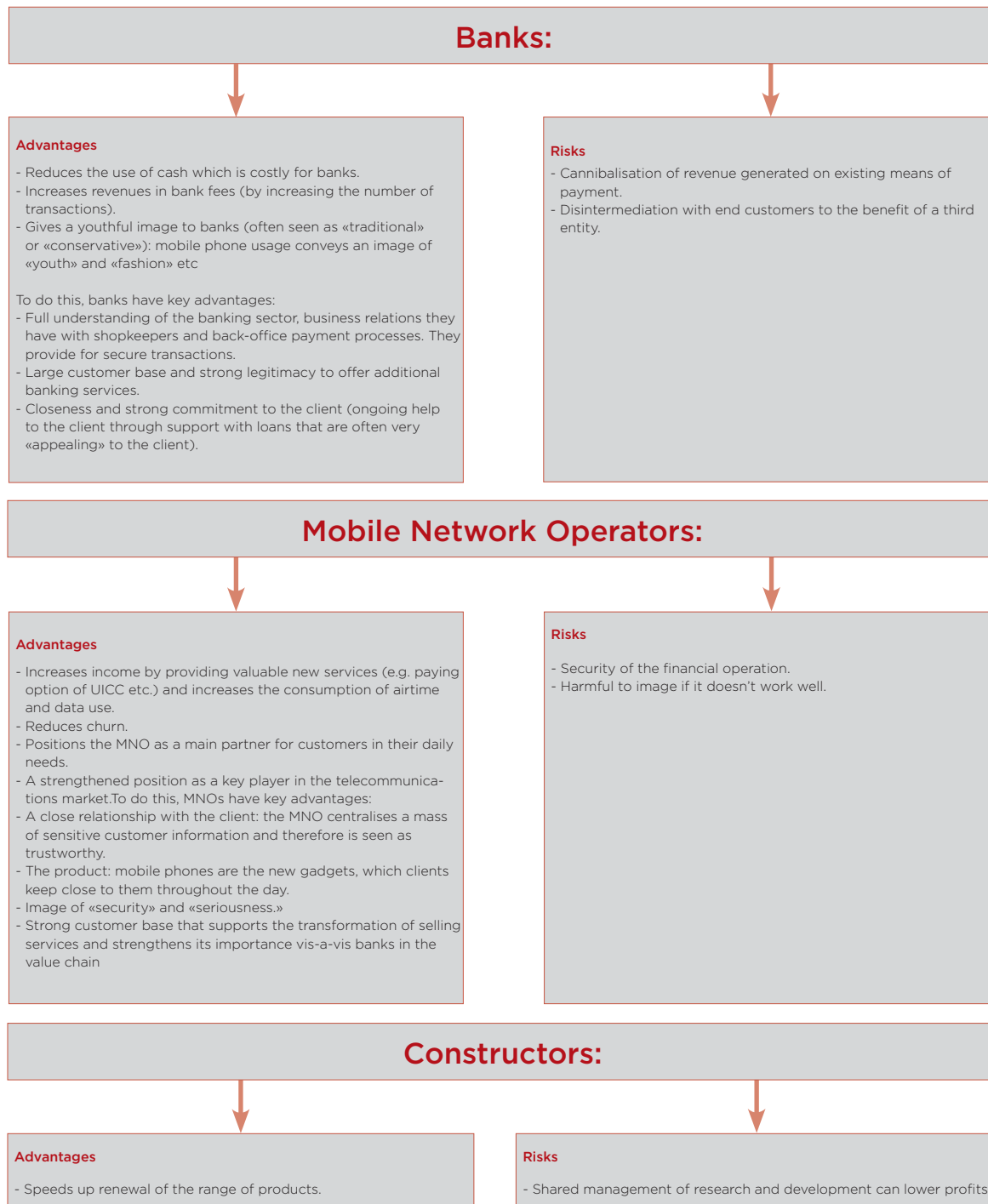
³⁶Analyses Kurt Salmon, Blog Mobile paiement, Site corporate NTT DoCoMo

Characteristics and challenges of M-payments in developed countries

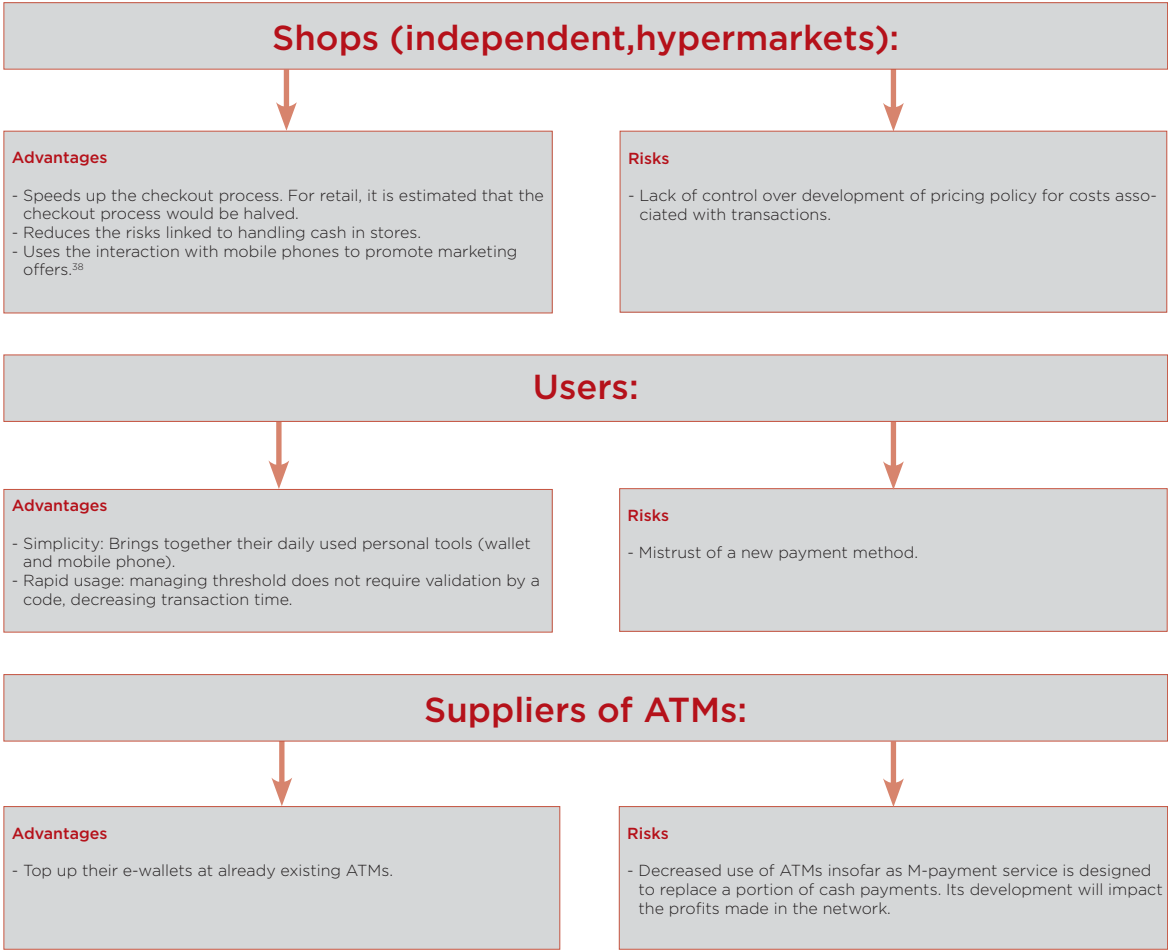
- «Local» M-payment is a complex ecosystem with a variety of challenges

A complex ecosystem of actors...





«In France, 100% of Carrefour hypermarkets are equipped with «contactless» cash registers and by the end of 2010, all the “10 items maximum» cash registers will be equipped with them.»³⁷



³⁷LSA , Mai 2010

³⁸LSA, selon Wincor Nixdorf, distributeurs, Mai 2010

• “Remote” M-payment services: already in use and increasing

In remote M-payments, the ecosystem incorporates independent actors such as PayPal mobile by using MNO networks or MNOs who set up platforms for remote payments.

Remote payment, especially micro-payment, is expected to grow considerably with the joint impetus of solutions provided by telephone operators and independent agents often from the Internet domain. For example, the launch of PayPal Mobile on iPhones had two million downloads in its first three weeks.³⁹ Although current usage still needs to be confirmed and even though the trend is largely driven by an established situation in more than 190 countries, this nonetheless clearly indicates a strong demand for this type of service.⁴⁰

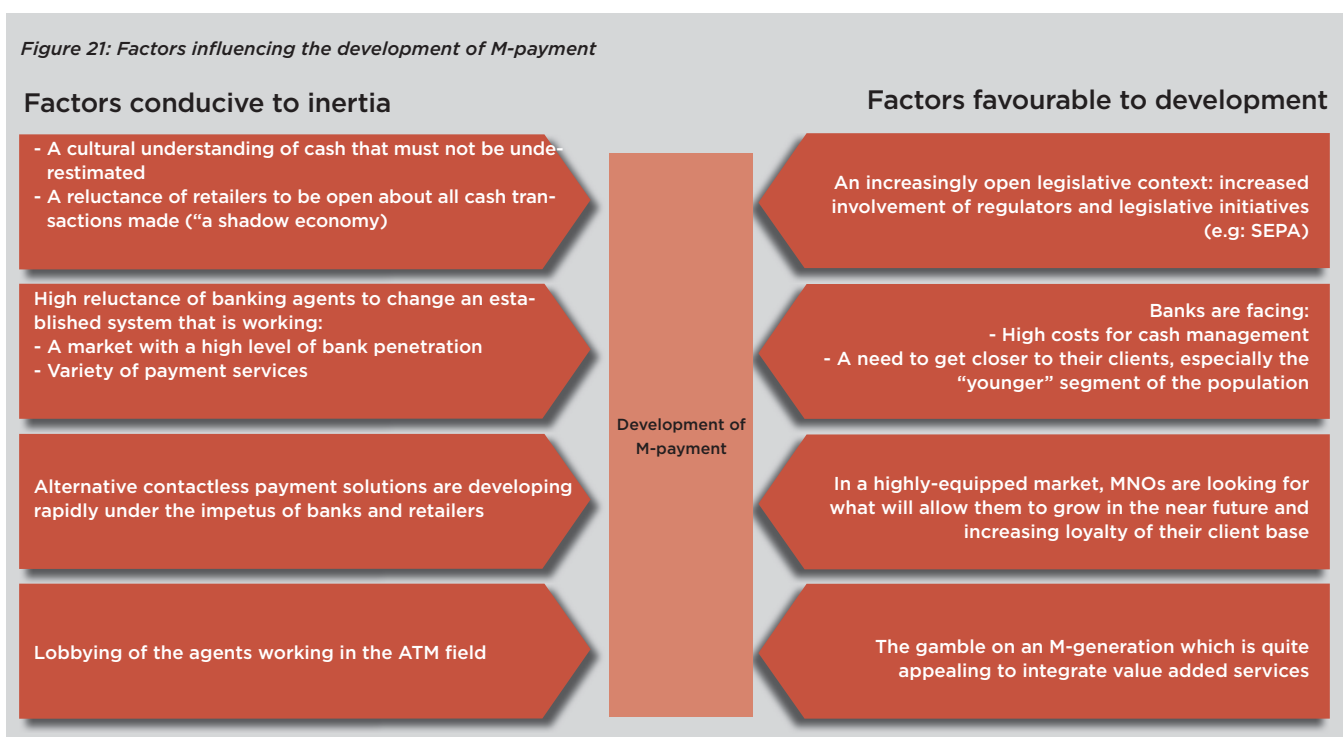
Remote payment services is expected to develop at a rapid rate:

- Because the actors will have to make an effort in marketing and communications.
- Because there will be an increase in supply. The customer will be invited to try the product and might therefore become a potential client.

Although they are competitors, these actors have first and foremost a common concern, which is the expansion of usage. Facilitator organisations and associations have an essential role to play to relay these initiatives.

Additionally, this type of service should attract new members quickly: the amounts traded are very small and there is a relatively high level of trust, particularly for payment service providers.

The conditions that influence the development of M-payments



³⁹E.Duprat - Mobile : PayPal veut se déployer sur « tous les supports » - 2010

⁴⁰Systèmes de paiement - N° 313

Factors conducive to the development of M-payments:**• An increasingly open legislative context**

At European level, several factors contribute to facilitating the development of M-payment services:

- The Payment Services Directive

The Payment Services Directive (PSD), adopted by European legislators on 13th November 2007 and transposed into national legislation in France, took effect on 1st November 2009.

This directive provides a harmonized legal framework for payment transactions (credit transfers, direct debits, card transactions and cash transactions) between EU member states, and is another step in European Union's efforts to ensure a single market for payments.

Beyond the objective of transparency and clarity in the payment process, the PSD also aims to increase openness to competition. By including new actors, «payment institutions», MNOs, ISPs, large retailers, money transfer agencies or other actors can now apply for a license to provide payment services.

Since November 2009, the French independent administrative authority for bank regulation, the "Autorité de Contrôle Prudentiel" (ACP - the former CECEI) has been receiving increasing numbers of requests to be granted the status of payment service provider. To date, five companies have obtained licenses to become payment institutions. However, we can observe that in Britain there are around 70 payment institutions and the number of «small payment providers» is close to 600.

- The revision of interchange fees for small amounts

Generally, «scheme» operators (e.g. Visa, Master Card) face persistent regulatory pressure (in Europe, but also in France) to lower the interchange fees. The high fixed costs slow down the development of payment services for low value transactions by schemes such as credit cards.

With regard to transactions involving small amounts of contactless payments, «scheme» operators are offering to apply an interchange fee up to 50% cheaper than a regular transaction made with a conventional debit card.

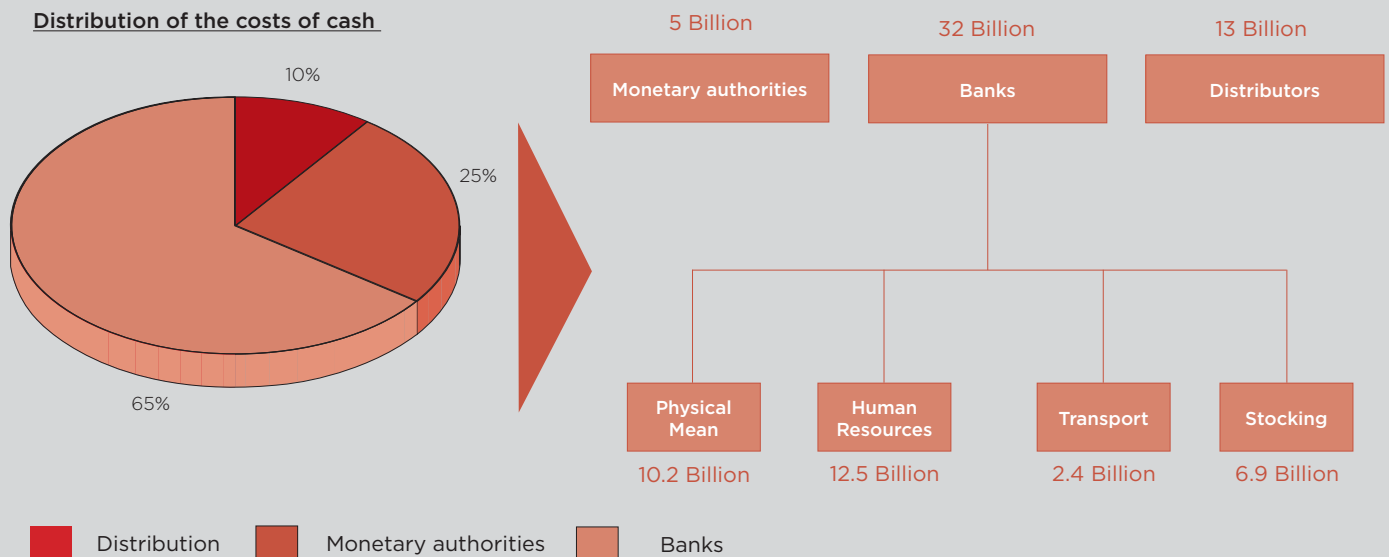
- Banks offered a solution to avoid the very costly problem of managing cash.

For banks, M-payments are an opportunity to drastically reduce costs associated with managing cash.

Cash logistics represent a significant cost for banks, which is not split equally between the stakeholders. This generates a cost to European banks of over 32 billion Euros per year.⁴¹

Figure 22: Distribution of the costs of managing cash

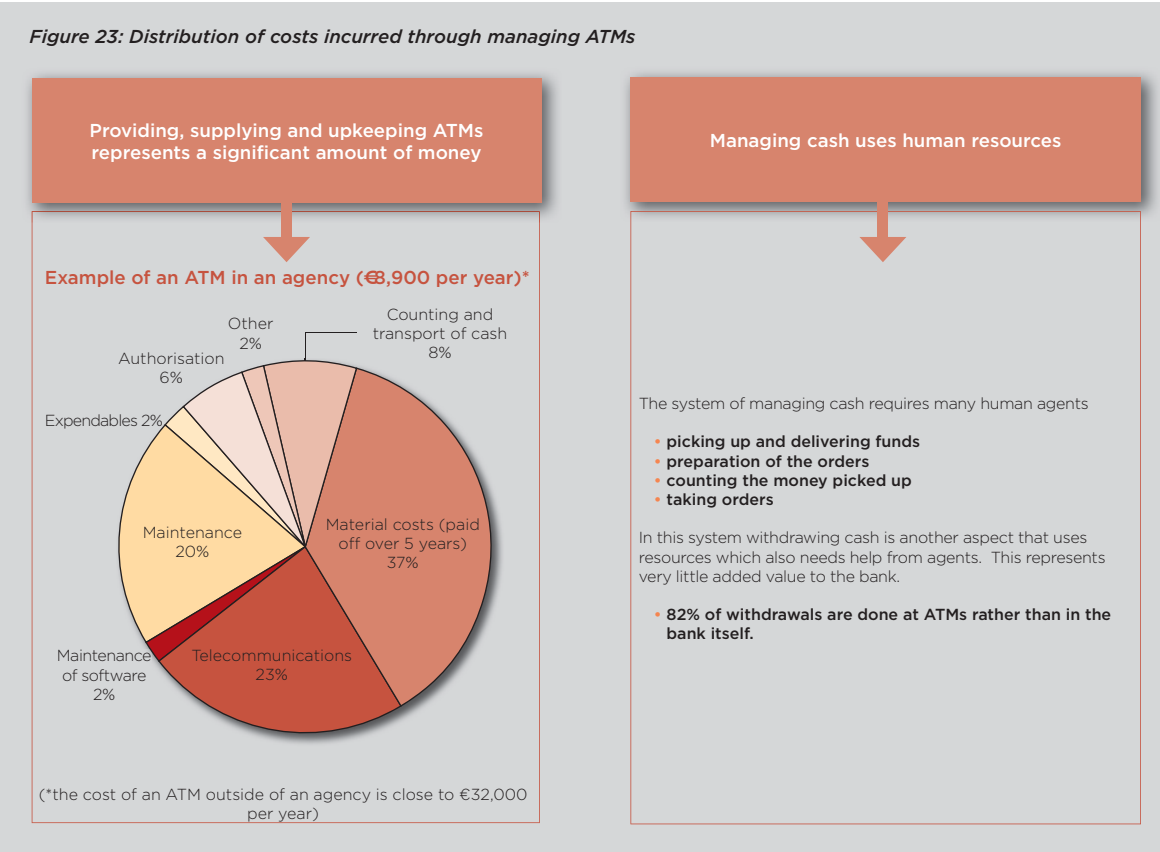
Distribution of the costs of cash



Source : European Payments Council

⁴¹European Payments Council

In the breakdown of costs, the distribution of cash, as well as the human resources to do this, together represent over 70% of overall costs. ⁴²Distributing cash, including ATMs and the mobilization of resources in the network, is one of the most cost-consuming operations.

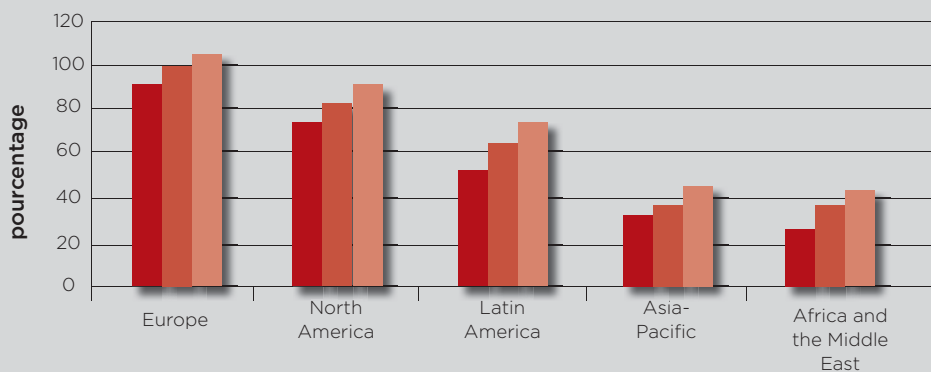


- In a heavily equipped market, MNOs are searching for new growth and loyalty of their customer base.

The rate of mobile penetration in the world is high:

- According to IDATE, Europe exceeded 100% mobile penetration in the population in 2007.
- In North America, the trend is similar even though the penetration rate is nearly 20% lower.
- In France, the mobile penetration rate reached 92% in 2010.

⁴²European Payments Council

Figure 24: Mobile phone penetration in the world

MNOs therefore naturally see two major issues with the new uses of M-payment services:

- A way to support their development.
- An approach to reduce churn, since the use of M-payments strengthens the relation between the MNO and its customers.

The management of costs for the customer to access the service (e.g. via a paying option) is mostly perceived as a barrier to adoption. Sharing of these costs between the actors in the value chain of the service is the most favoured option.

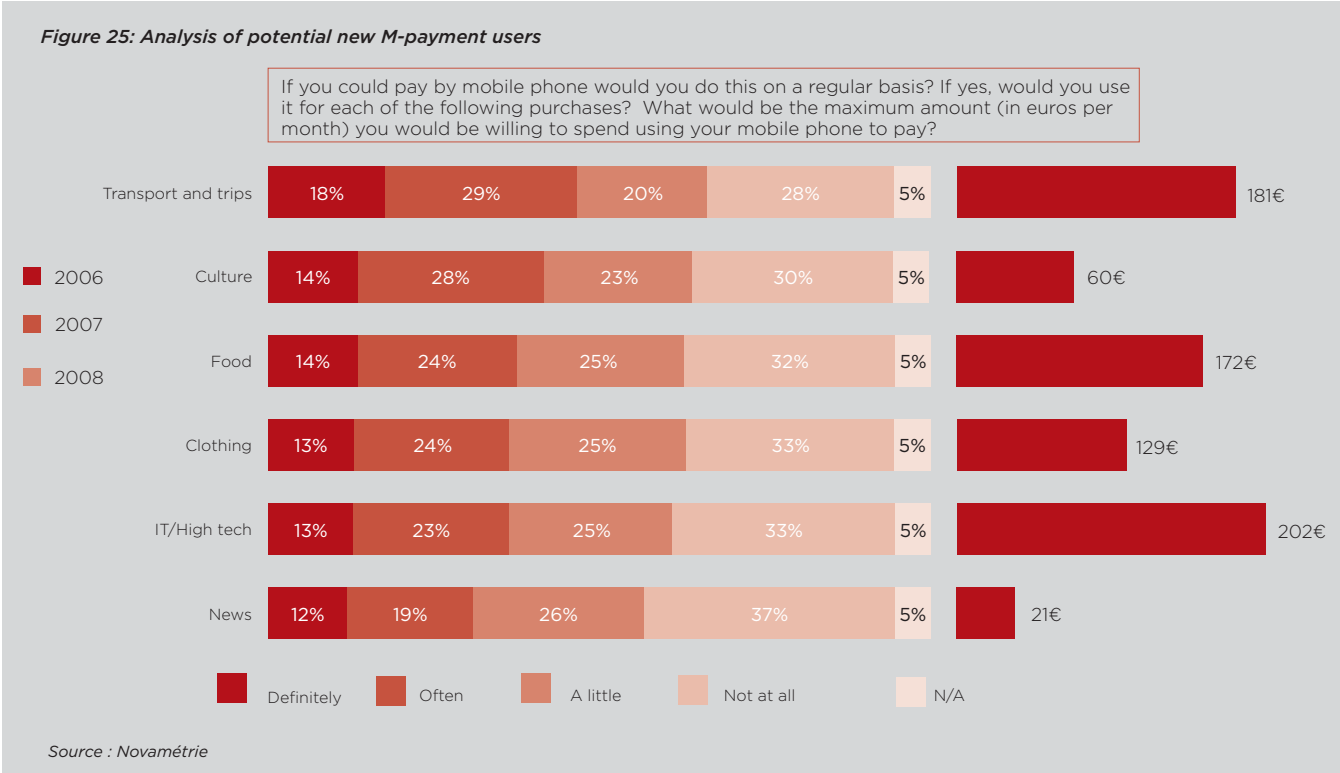
• The gamble of an «M-generation» eager to integrate value added services

Prior to anything else, M-payment services need to be accepted by consumers. A consensus seems to show that consumers are open to the concept of M-payments:

- User percentages are quite promising: the user rates for mobile phone payments is over 90% and 60% of people say they are willing to pay for the use these payment methods.⁴³
- 24% of respondents are willing to switch banks if there was an attractive mobile offer (17% in France and already 39% in Europe).⁴⁴
- 70% of people are willing to make payments from their mobile phone.

⁴³La tribune - interview Laurent Julien, directeur des services de paiement mobile, Bouygues télécom

⁴⁴EFMA



“Surcharging” consists in penalising the client for using a certain payment service (by setting an additional sum on top of the costs already set by the retailer).

The craze for SmartPhones is a reality that shows there is interest for multifunctional tools in daily life: the PayPal iPhone application for mobile payments has already been downloaded millions of times⁴⁵. It allows users to access a range of features, such as sharing bills, giving donations, send payment deadline reminders and so on.

Nevertheless, this popularity is faced with certain obstacles that are often underestimated and that play a key role in the launch of this market: the empirical relationship between the individual and their national currency, the intrinsic value and history, and the sense of insecurity when using an M-payment service for the first time.

Obstacles conducive to disinterest are the following:

• Cultural symbol of cash is not to be underestimated

Cash is today, economically and culturally, a non-negligible good:

The use of cash is primarily defined by the force of habit: depending on the country, between 60% and 90% of transactions are made in cash (in France, cash transactions constitute 63% of transaction volumes and 24% of the value⁴⁶). According to a study from ENST (the French university for ICT and Telecom) for the “Groupement des Cartes Bancaires” (the French organization for the interbank card payment system), cash is the most widely used payment method for amounts up to €23, followed by the credit card that that is used up to €190. Over €190, the most widely used payment method is a cheque.

Moreover, the market demands and encourages the use of cash:

- The existence of «surcharging» in some countries (and its potential arrival in France), often encourages the use of cash.
- A close, dense network of ATMs in most European countries perpetuates the habit of withdrawing and using cash. For instance, the client may even use mobile applications (e.g. ATM Hunter) to be able to locate the closest ATM thanks to the GPS in their phone.
- The use of other methods of payment is often limited to a minimum amount by shopkeepers, because of fixed costs.

⁴⁵Journal Du Net
⁴⁶Groupement des Cartes Bancaires

The consumer has a perception of services being free when using cash.

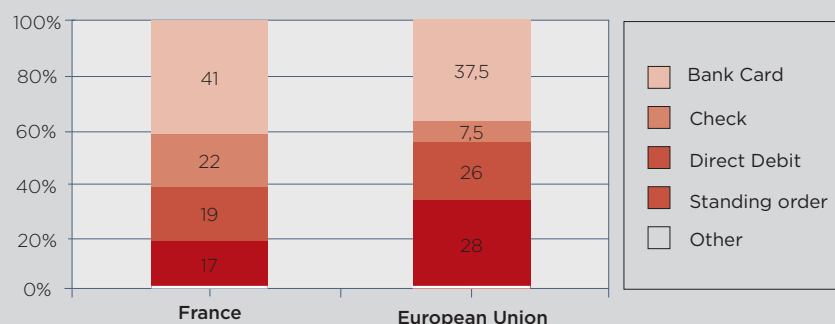
Cash leads to more complex and more intimate relationships than just sharing economic data with the consumer: there is a real identity in the given note or coin which is not to be underestimated, especially for the adoption of a payment service that is less «tangible» and too «digital».

Finally, history shows that the introduction of a new payment service has not replaced existing ones. This is what happened with the credit card for example. A new payment service is generally seen as an additional method which is complementary to the ones already in use.

- **A reluctance of the banking community when a new player is introduced in the value chain.**

Developed countries are primarily characterised by a strong banking penetration: in Europe, the bank card ownership rate is around 90%⁴⁷. This strong presence of banks is accompanied by provision of differentiated payment services. Banks are not subject to a strong need to promote a new payment services, especially as M-payments would mean an additional player in the value chain.

Figure 26: Distribution of payment methods in France and Europe (in 2008)



Source : Banque de France

- **Alternative solutions, such as contactless bank cards, are developing rapidly at the initiative of banks and retailers.**

Banks observe the arrival of a new player in the traditional value chain which leads them to defend their territory. Contact alternatives are booming. Initiatives abound as well as technical solutions:

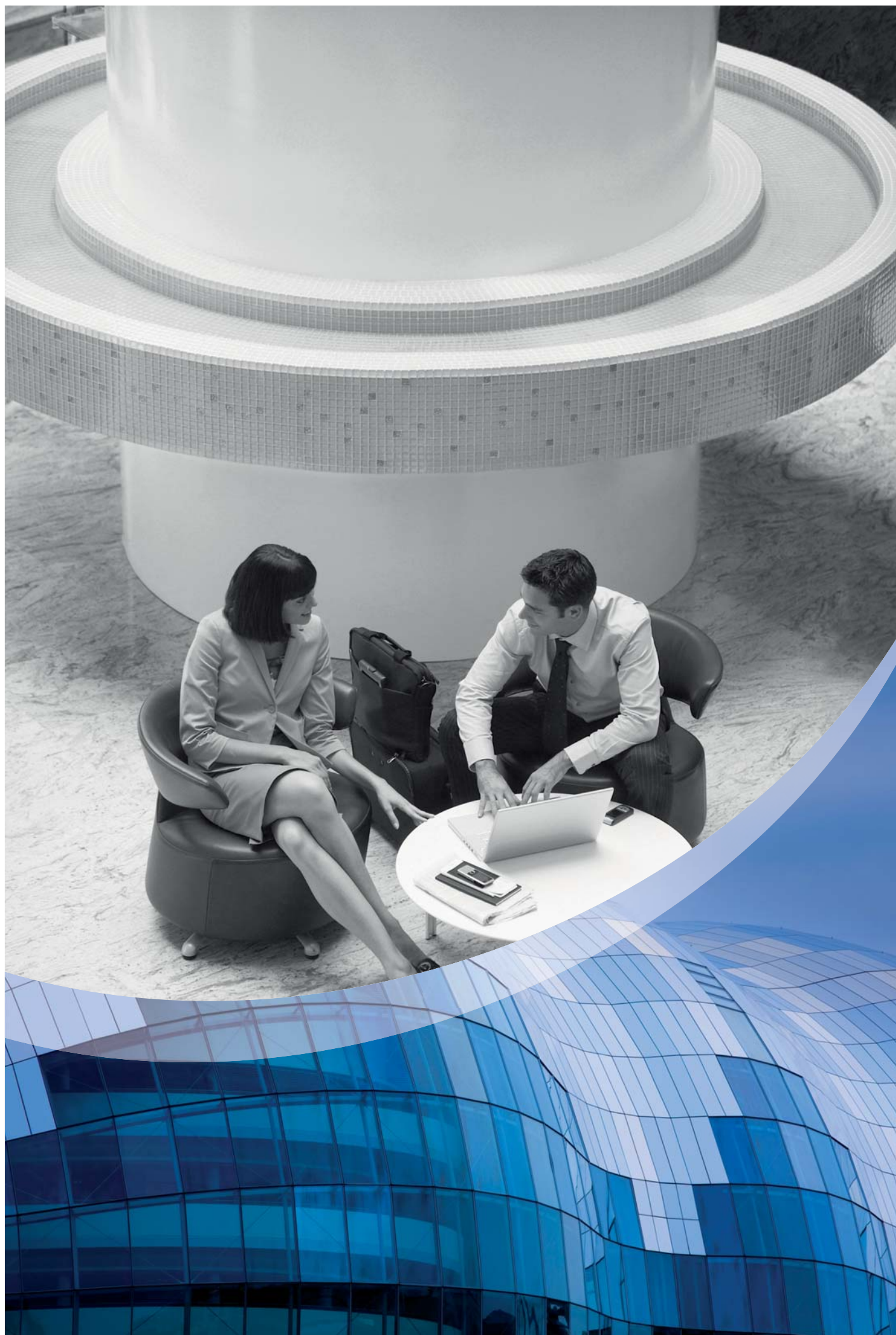
- Global annual sales of contactless smart cards is growing: in 2009 there were 110 million contactless bank cards and the estimations for 2010 are 130 million.⁴⁸
- Contactless bank cards were introduced in 2005 in the United States and in 2007 more than 30 million cards were distributed.⁴⁹
- In Europe in 2009, 24 pilot programmes were listed. The Visa payWave solution includes 8 active credit card issuers, 650,000 cards distributed and 11,000 contactless terminals already installed. These solutions are fully interoperable (in the same country, but also abroad since they are led by banking scheme operators: Visa, MasterCard).

⁴⁷BCE

⁴⁸Eurosmart/ Arcep

⁴⁹Eurosmart/ Arcep

⁵⁰Carte Bleue, « Cartographie 2009 », 2009



Should we expect a dominant model?

The actors involved in M-payment services can have different levels of participation:

- By only providing services for transfer of information (e.g. MasterCard for secure transfers or a telecom provider that allows its network to be used only for the transfer of information),
- By taking over the complete management of the client's portfolio (for example, M-Pesa, which manages flows and more broadly, manages the wallet of the subscriber).

In addition, the creation of services may be driven by different actors. The concept of different economic models below refers to the agent who initiates the M-payment service.

Four models to promote a m-payment service have emerged (Bank-led, MNO-led, collaborative and independent). There is no model more suited to one market than another, but initiatives are rather specific to certain markets. Telecom operators have been very active for example in developing countries, benefitting from the relatively cautious banks in these markets.

MNO-led:

To do this, telecom operators have:

- A privileged access to the client via their mobile phone, which has become the most personal and personalized device and is always present at the client's side (even more than their wallet).
- Knowledge of the customer because of behavioural information, interests, or even geo-location of the client.
- Legitimacy because of innovative services
- Experience with security matters (exchanged encryption data, SIM cards that can be remotely deactivated)

The MNOs offer:

- Payments on behalf of others: payment of digital content via the telecom operator's bill: the MNO is paid via a «surcharge» and returns a portion to the creator of the content.
- Payments as a payment service provider (especially under the instigation of SEPA in Europe)

Bank-led:

The bank becomes the operator. Financial institutions propose integrated and multi-channel M-banking/M-payment solutions backed by a mobile network operator.

To do this, financial institutions have:

- A high degree of legitimacy concerning payment services, which MNOs may not have (knowledge about security, payment issues, treatment of high transaction volumes).
- The trust of their customers in the field of payment services as well as a guarantee for availability (unlike, for example, a new ISP).
- Strong knowledge of the client's financial issues and a long-lasting relationship with the client.
- Experience of the banking ecosystems and control of prices to promote mobile banking services.

Collaborative:

This model is based on the fact that the bank and the MNO remain at the heart of their respective areas of expertise without encroaching on the territory of the other.

The difficulty of constructing a strong network of acceptance from scratch (as has been done by NTT DoCoMo) implies that a partnership with banks must be established.

Independent:

This model is based on the development of specific M-payment applications that enable people to buy online, manage their accounts and transfer money.

Companies that choose this model are typically software companies that grow by establishing partnerships with MNOs, banks and networks of local retailers.

Examples of these models can be found on every continent:

Model	Name of the service/ Parent Company	Country of reference	Examples of other international markets	Key Figures	Type of service
Bank-led	Wizzit/ South African Bank of Athens Limited	South Africa	N/A	- Wizzit can be accessed at 2,800 post offices and 800 banks - 250,000 members	Money transfers/ payment of salaries/ payment of bills
	Fino	India	No development yet outside of India	- Founded in 2006 - 10 million clients	M-wallet, money transfers
Collaborative	London Underground mobile ticketing/ Transport for London	United Kingdom	N/A	- 7 million members in London - 500 testers currently	M-wallet: paiement quotidien des transports/ commerces présents dans le métro
	OBB handy-ticket/ OBB Austrian Railways	Austria	N/A	- Launched in 2009 - 200 million passengers a year - 56,400 handy tickets sold each year	Mobile ticketing
Independant	Yellow Pepper	United States	Currently in service in 7 countries: Bolivia, Colombia, Ecuador, Guatemala, Panama, Peru and the United States	- Founded in 2004 - 47 millions transactions in 2009 - 1.5 million users	Payment of bills, money transfer, top-up of prepaid cards
	E-Masary partnered to MobiKash	Egypt	Kenya, other countries to follow	Founded in April 2009, has 600 points of sale and more than 100,000 clients	Credit repayment, M-wallet
MNO-led	Moneyzap/ Zain	Kuwait	Barhein, Kenya, Tanzania, Sierra Leone, Ghana, Niger, Malawi and Uganda	- Launched in February 2009 - 12 million clients in 7 African countries	M-wallet, money transfer
	M-Pesa/ Safaricom	Kenya	United Kingdom, Tanzania, Afghanistan	- Launched in March 2007 in Kenya - 9.7 million users (March 2010) - 11,000 new users a day - 9,000 agents	M-wallet, Money transfer

The success of M-payment also benefits banks

WIZZIT Payments (Pty) Ltd. is a banking service provider for the most deprived in South Africa. Launched in 2004, the first years were difficult in an already heavily-banked market. Despite fierce competition from the four major banks in South Africa, credit card companies (Visa, Mastercard etc.) and facing the regulatory authorities Wizzit had about 500,000 subscribers by late 2010.

In recent years there was the opportunity to prove that the concept of mobile banking for the non-banked or under-banked works. The success encountered in countries where the approach and technology «Wizzit» have been used proves this:

- In September 2010 Zanaco in Zambia, 46% of which is owned by Rabobank, had acquired 200,000 customers after two years of operating its mobile bank account “Xapit”. It seems to be expanding by 10,000 additional customers on a monthly basis and has been used for 1 million transactions. Likewise, in July 2010 NMB bank in Tanzania celebrated the first year of its NMB Mobile service being in operation and has over 280,000 customers. A simple service that allows customers to access their accounts, transfer money between NMB accounts and purchase airtime. Tigo, Zantel, Vodacom and Zain are partnering for this service.
- The example of Good Bee (an Austrian micro-finance institute) is more modest since it had only 25,000 customers after one year of operation (in October 2010) but some of its originality lies in the fact that a model of the «South» was applied in the «North». As demonstrated by Sava Dalbokova, CEO of Good Bee Holding, at the conference “MicroFinancial Services” in Amsterdam this year, there are more than 16 million unbanked people in South East Europe and more than 36 million including Ukraine.

These encouraging initiatives show that banks can successfully meet market demands, in particular for those currently without access to financial services.

On the American Continent, Yellow Pepper joins M-payment

Yellow Pepper, founded in 2004 in Boston, offers financial solutions by mobile phone in seven countries in the Americas: Bolivia, Colombia, Ecuador, Guatemala, Panama, Peru and the United States.

The company has developed a model of technical and commercial intermediation between the different actors within M-payment services: financial institutions, mobile network operators and service providers.

Yellow Pepper had approximately 1.5 million customers by the end of 2009 and has made over 47 million transactions since its launch. A number of innovations have been introduced to extend business development, including the use of a mobile wallet and a partnership with Western Union for international transfers.

However, Yellow Pepper has encountered some difficulties when deploying its services in different countries due to cultural and regulatory differences as well as technical problems related to integration into payment systems.

Conclusion: what are the certainties today?

What are the short-term challenges?

We are now at a decisive moment for the development of M-payment services. While it is normal that this new business has seen vibrant developments since many years, and what else should we expect with something important as the introduction of new payment services, a spirit seems to have settled to secure the sustainability of these developments in our everyday lives.

M-payments should be part of a revolution in our habits and calls for a wave of creativity to structure value-added services. The take-off of M-payment services cannot solely be based on simply replacing another form of payment. Instead, M-payments must be showcased as the tip of the iceberg for services that will win over potential new users.

Remote payment services, far less publicized than NFC payment, continue to grow and promote innovation in new usages. The use of remote M-payment services does not require NFC technology and therefore there is no specific barrier nowadays to adopt this new type of payment (Bill-payments are already being carried out and there is no technical obstacle to widespread use of other payments by M-wallet).

M-payment services can only thrive if a large amount of people use it, as it can only function in a market with a critical mass. To do this, coordination and consultation amongst stakeholders is a key issue: namely, the involvement of public authorities and regulation is paramount, as well as marketing efforts of key players in the market. International money transfers could boost usage in markets, especially in Europe.

Moreover, to meet the growing needs of person to person international money transfers, strategies based on "payment corridors" are developing (e.g. a partnership between M-PESA and Western Union for the corridor Kenya - England). Given that MNOs do not have end-to-end solutions for this type of services, partnerships must develop with actors that have an existing physical network at their disposal, capable of managing cash logistics.

What are the longer term challenges?

Even though the initiatives are now more on a local scale, history shows us that in the future there will be more interoperability and a facilitation of international services. Interoperability and internationalisation are cornerstones for the success of mobile payment services.

Interoperability is emerging now on an international scale. For example, even emblematic players of M-payment services, such as NTT DoCoMo offer their customers credit cards to meet their demand for other payment services when travelling internationally.

At the end of the day, an offer that is too local would not bring sufficient added value to users nor ensure that M-payments are sustainable in the long-term. M-payment services must still strive to homogenise standards, as in the case of bank cards.

In France, the most ambitious project which benefited from collaboration between all of the principal actors is the Cityzi project in Nice. It is a pilot programme which aspires to provide an interoperable solution at a European or maybe even international level. As all of the projects are based on NFC technology and are compatible with MasterCard and Visa, international interoperability is made easier.

It is interesting to follow the European Monnet project which aims to create a scheme complementary to Visa and MasterCard within Europe. If this project, which is supported by European authorities, is made to be compatible with NFC solutions right from the beginning, this would give a strong boost to European interoperability.

This interoperability must be supported by a convergence of facilitator organisations. Organisations that promote the adoption of common standards differ in many regions of the world: the European Payment Council, the GSMA, and France's AFSCM, the "Forum on contactless mobile services".

Why be more optimistic now than in the past?

The lessons learnt from the past are enriching:

- M-payment services must be an opportunity to offer customers added-value for their day-to-day payments.
- M-payment services are evolving in a complex environment where many actors participate, and in which each actor on their level must find an interest.
- M-Payment services must be seen as a mass market tool since M-payment services have a low profit margin.
- The service must be easy for customers to use and to understand, both regarding the way it works and with respect to the added value of the service.

In developing countries, M-payments are already a success: successful initiatives have shown that it is a true economic and social asset, that it provides secure banking services for the unbanked.

In Europe, the lessons of the past have been analysed:

Today, there appears to be several reasons to be optimistic:

- Value-added services are present: targeted initiatives have positioned the ease of use at the heart of the matter.
- M-payments are part of a broader set of services which will show other advantages: healthcare, loyalty and marketing associated with purchases, mobile banking etc.
- There is a multitude of actors and offers on the market and thereby m-payments are starting to become a hot topic and interesting enough for clients to pay attention to and start using it.

Are M-payments going to replace cash? Or credit cards?

Nothing could be less certain!

The enthusiasm surrounding the scheduled take-off of M-payments must be put into perspective:

- Regarding the replacement of cash, the empirical relationship of the individual to currencies (cash) has certainly been underestimated. The logical vision of rationalization of everyday tools for the client could be confronted with a less rational reality. Taking into account the client's psychological parameter is a difficult task and so uncertain that this type of money transfer remains sensitive («Won't the machine charge me twice for the transaction? ...»). We must remember that the revolution of internet purchases and payments, which gave rise to fears for «bricks and mortar», also started timidly.
- In terms of replacing bank cards: This question is particularly relevant for developed countries where the use of the bank cards is widespread. The payment system is expansive and operational. Payment terminals which will be distributed will for the most part be hybrid (NFC + contact). It is safe to assume that the new payment methods will become complementary to the older ones, but will not act as replacements, just as the bank card has not been totally replaced by other payment services.

However, will M-payment mean that there will be an increase in small payment transactions?

This is probably what is really at stake in the debate.

«In Uganda and Ghana, money transfer services have respectively reduced the proportion of the poor population by 11% and 5%».⁵⁰

What are the prospects for international payments?

The number of migrants from developing countries in 2009 amounted to over 200 million people, according to IFAD. With an average of 10 money transfers a year to their countries of origin, the cumulative amount of remittances to developing countries accounts for over \$300 billion, and far exceeds public development aid. These flows are now a major challenge for M-payment service providers.

Most money transfers sent abroad via mobile phones are for unbanked populations. This service guarantees both fast and low costs transfers, compared to other services.

To date, telecom operators cannot provide the international transfer service end-to-end considering the low usage of M-payments in developed countries (few or no M-wallets in developed countries). Strategies, such as “corridor» strategies, focusing on certain target destinations, allow for the implementation of these new emerging services.

Money Transfer Organisations, like Western Union are still unavoidable since they provide a vital link in the delivery of the service.

Similar actors are appearing: Arias, an intermediary platform between a collection network and a distribution network is a natural partner to a platform such as Obopay. Another money transfer organisation, Ria has a website where clients can deposit money (through a secure on-line transaction), which can be withdrawn either in cash or on a mobile account.

What are the challenges for a successful launch in developing countries?

The launch of a M-payments must take into account some key factors:

- A consideration of regulatory requirements and consultation with the authorities.
- The presence of a network of outlets/agents
- Effective communication and a mass effect: to develop successfully, M-payments must first of all have a broad client base (the network effect) since its primary usage is for P2P transfers. Therefore, positioning must be at an affordable and simple level. The image must be that of a «smart» product for citizens. For example, this is the positioning that M-Pesa has in Kenya. In Tanzania, an up-market positioning drastically hampered the development of the M-payment service and gave it an undemocratic image.
- Simple customer processes to guarantee widespread adoption of the service.
- A clear definition of the business model and the banking partnership.

⁵⁰IFIDA, institution financière internationale et organisme spécialisé des Nations Unies

Regarding the definition of economic models, the question arises of whether M-payment services must be interpreted as a convergence of telecom and banking businesses? In other words, do the MNOs want to enter the banking industry and vice versa?

This issue, due to the specialisation of the actors, calls for shared responsibilities and challenges in each other's respective markets. Telecom and banking players are de facto willing to lead the development of these new uses, but prefer them to be more adapted to their chosen fields of work. Indeed, the bank has a banking license and is the legal issuer of the payment service. It also brings its expertise in terms of managing payments, risk management and fraud, as well as supplying its back-office payment systems. Telecom operators are focusing on distribution, marketing and communications and managing remote payment platforms.

Several reasons may explain the delimitation of their fields of action: the actors are not designed to handle a job that is not their job, even though some are willing. Actors in the banking industry don't have much interest in opening up to a segment of the population with little prospect of becoming banked.

Therefore, the joint challenge is to find added value through cross-over deals. For example, by analysing their most active customers, MNOs can move on to promote banking offers and enrol new clients who were previously unbanked.

What tools can be used as levers to launch a mass market?

M-payment services are a mass market that must quickly be supported by a critical mass and must be very dynamic from the start. There can be no half measures if one link in the chain is weak and not committed.

In Europe, this development should be a combination of several factors:

- **It should be valued as a positive economic** factor rather than a comfort for the client: the development of m-payments must be driven by economic logic: for instance saving time at the cash register in big supermarkets, the POS transaction cost for the merchant, the acquisition cost of the service by the customer, the cost of mobile terminals. All of this must be taken into account for the positive economic factor to act as leverage as well as a benefit in terms of service or simplifying daily life.
- **A strategy for converting banking and telecom customers** to M-payment services (e.g. outlets and customers using traditional payment terminals, customers that have phones with an NFC function). The rapid conversion of outlets to NFC payment terminals and the rate of penetration of NFC phones with an NFC package (phone + service + UICC) are indicators that must lead to value market growth. The replacement speed of payment terminals in outlets will primarily depend on banking strategies (e.g. replacement at the same price of POS) and communication marketing directed at mobile phone usage. Mobile payments will blossom thanks to increased usage by retailers who are anxious to meet the expectations of consumers to make sure they stay loyal and increase their sales figures.

- **Marketing supported by M-payment** actors involve the entire range of M-payment stakeholders, working with remote M-payments (excluding NFC) whether they are independent (PayPal, Obopay etc.) or in banking or telecommunications.
- **A necessary «evangelisation» and showcasing of the «universe» of services linked to M-payments:** M-payment services are not a concept that can lead itself. Good communication is needed to popularize and sell the added value of its service for potential users. According to Forrester (based on the last quarter of 2009), 87% of people who do not use M-payments are not aware of its benefits. A strong lever for the adoption of M-payments will involve highlighting its simple everyday use as well as the added value of the services that the customer will have access to. For example, in Japan, a client can receive their check-in desk number on their phone when entering the airport because they bought their ticket via mobile phone. Communications that enhance usage and value are crucial.
- **Securing transfers and technology is essential:**

Regarding security for users (insurance, assistance, etc), bank card fraud in 2009 was at 0.072%, in other words 340 million euros. The Payment Services Directive has recently amended the provisions for consumer protection in terms of fraud committed by bank cards. Thus, in cases of fraud, the burden of providing proof now falls on the payment provider (the bank for example). Querying the transaction must take place in the first 13 months following the transaction and the bank must immediately reimburse the cardholder for the unauthorized transaction. Guarantees related to M-payments, both in terms of securing the transaction and the assistance provided should incorporate an equivalent level of security.
- To ensure sustainable use of M-payments, making the use of mobile terminals secure is essential and must involve similar levels of security comparable to those of bank cards.

In developing countries, its extension should be a combination of several factors:

- **Regulation** that balances security concerns with those of access to financial services for the poorest.
- A collection of **skills** (internal and external) to carry out complex projects until completion.
- Sensitivity and awareness of **socio-economic challenges** (the most resounding successes were led by men and women pursuing a vision and that had social objectives as well as financial ones).
- The search for **collaborative approaches**.

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About PHB Development

As a consulting firm we support our clients in their efforts to expand and improve access to financial services for the underprivileged, with a focus on innovative financial services and their delivery channels – including services such as mobile banking, biometrics, cards, POS terminals and the use of agent networks.

We offer an inclusive approach:

- A comprehensive “Product & Service, Human and Business Development” methodology
- Complete support from strategy to implementation and development phases
- Multi sector knowledge (telecom, banking, microfinance, remittances and payments)
- Multi competency team (legal, technical, marketing, human resources, financial and methodology)

Our expertise covers the whole value chain of innovative financial services, their delivery channels and the different sectors and stakeholders involved: telecom, banking, microfinance, payment service providers, remittances and regulators.

For more information, please visit our website (www.phbdevelopment.com), contact us by e-mail (info@phbdevelopment.com) or by telephone: +32 (0) 495 32 32 88.

