If asked to name a consumer payment category with billions of transactions globally, one that touches nearly every household and is still primarily cash-based, not many would come to mind. If then asked which of those listed could transform the financial and payments market, probably a very small number would remain on your list, and bill payment would not likely be one of them. This is not surprising. Very few people think of transformation when they think of bill payment. This study tries to change that mindset by illustrating how bill payment can be a potential path to financial inclusion, thus transforming the payments and financial industry.

Financial inclusion is seen as a key path to poverty alleviation and therefore is widely embraced by both developed and developing countries across the globe. The threshold to financial inclusion is typically understood to be the ownership of a payment transaction account, but achieving active usage of non-cash payment methods represents a major challenge worldwide. This paper shows that to address this challenge, financial inclusion should start with promoting non-cash methods of bill payment. This is a new way of thinking about both bill payment and financial inclusion that has not been explored before. A key distinction is defining financial inclusion as a hierarchy of financial needs starting with the most basic needs versus a binary state encompassing all financial needs. Bill payment is one of the most basic financial needs because it generally represents the essential living expenses of consumers, payments that every household has to make to survive. Therefore, financial inclusion should start by addressing the consumer’s need for better alternatives to cash for bill payment.

There are four reasons discussed in this paper (the large scale of bill payment, the potential for electronic bill payment to create value for all stakeholders, the ability to drive electronification of other payment categories and the potential to achieve greater financial inclusion by accelerating lending) as to why bill payment is well positioned to initiate financial inclusion and drive it forward. This is a new way of looking at bill payment and one of the many ways in which bill payment could transform the payments and financial industry. It also approaches financial inclusion from the demand side by addressing consumers’ financial needs, which, when joined with the product/supply-side view (e.g., prepaid cards, mobile phones), could be a powerful combination.
Alternative Definition of Financial Inclusion

A common definition of financial inclusion is having access to and leveraging financial products and services to serve one’s payments (beyond cash), investments/savings, borrowing and insurance needs1. However, there are two challenges to this definition. The first is that it seems to imply that financial inclusion is a binary state that is achieved when all financial needs are met. While it is important to address all needs, this definition does not offer any flexibility in recognizing progress in financial inclusion as partial needs are met. The second challenge is that this definition does not provide any guidance as to the right path to financial inclusion.

Therefore, this study thinks of financial inclusion as a progression and defines a hierarchy of needs, with higher levels of financial inclusion achieved as more needs are fulfilled. Figure 1 below depicts this hierarchy, beginning with the most basic/foundational needs, such as a secure account for holding payment transaction funds and bill payment, and moving to more complex needs like borrowing and insurance.

This study defines financial inclusion as a hierarchy of financial needs that should start by promoting non-cash methods of bill payment.

FIGURE 1: HIERARCHY OF FINANCIAL NEEDS

![Hierarchy of Financial Needs Diagram]

1. This study defines financial inclusion as a hierarchy of financial needs that should start by promoting non-cash methods of bill payment.
There are two important reasons to define the hierarchy of needs in this manner: (1) people are likely to be more concerned about addressing their foundational needs first and more receptive to solutions that address these needs; and (2) more importantly, by serving people’s needs in the order defined by the hierarchy, more of these needs can be met. For example, if consumers’ payments can be tracked, that information can be used to assess their risk and extend loans to them. If people get credit, they will have greater opportunity to create wealth and invest/save, which in turn will create a need for insurance products. The following example illustrates this consumer progression.

**Bill payment is one of the most foundational/basic financial needs because it generally represents the essential living expenses of consumers, payments that every household has to make to survive.**

**THE PROGRESSION OF CONSUMER FINANCIAL INCLUSION**

Ram Das is a 45-year-old food vendor in urban India. Like the majority of people in India, he currently pays his bills with cash at the biller offices. This is how Ram Das’s progression might look (subsequent sections in the paper discuss in detail how bill payment could drive this progression):

1. Like the majority of Indians, Ram Das currently pays his bills with cash at a local retail store. He gets an offer from the State Bank of India to pay his bills with a prepaid card, which appeals to him, and he accepts.

2. Ram Das pays his bills regularly at the local retail store, using his prepaid card.

3. Ram Das likes the convenience of the prepaid card and starts using it for other purchases such as groceries.

4. State Bank of India announces a new small business lending offer.

5. Ram Das goes to a local State Bank of India branch. Based on his transaction history, the bank assesses his creditworthiness and issues him a loan.

6. Ram Das uses the loan to buy a food van and expands his business. Now Ram Das generates enough income that he can start investing/saving, and opens an investment/savings account.

7. Ram Das can now afford to secure his family’s financial future, and buys life insurance.

Bill payment is one of the most foundational/basic financial needs because it generally represents the essential living expenses of consumers, payments that every household has to make to survive. Therefore, financial inclusion should start by addressing the consumer’s need for better alternatives to cash for bill payment.
BILL PAYMENT: AN EFFECTIVE DEMAND-BASED APPROACH TO FINANCIAL INCLUSION

Financial inclusion is seen as a key path to poverty alleviation and therefore is widely embraced by both developed and developing countries across the globe. Based on research conducted by Financial Access Initiative, a consortium of researchers from institutions including Yale, Harvard, and New York University, around 50 percent of the adult population of the world is financially unserved. Even in high-income Organization for Economic Cooperation and Development (OECD) countries, 8 percent or 60 million adults are financially unserved. The U.S., which is the world’s largest and most developed economy, has 15 to 20 million such adults. One key reason for this high percentage is that, historically, access to financial services and products has been closely tied to people having bank accounts. At the same time, the infrastructure costs and regulatory requirements of offering bank accounts have made it economically unviable for banks to offer accounts to the large segment of the population that is below a certain income threshold.

Clearly, using bank accounts as an enabler for financial inclusion has shown its limitations. New emerging solutions such as mobile payments and prepaid cards are trying to provide alternatives to bank accounts to drive financial inclusion. Like bank accounts, most of these solutions take a product/supply-focused view to address the problem although they are more viable given the lower cost and regulatory hurdle. To some extent, this approach makes sense. For example, over half the population of the world has mobile phones. Attaching a payment account to the phone or leveraging the phone account as the payment account could quickly drive penetration of payment solutions, especially for P2P payments, as evidenced by M-Pesa in Kenya.

Clearly, using bank accounts as an enabler for financial inclusion has shown its limitations. New emerging solutions such as mobile payments and prepaid cards are trying to provide alternatives to bank accounts to drive financial inclusion. Like bank accounts, most of these solutions take a product/supply-focused view.

Figure 2: Adults Who Do Not Use Formal Financial Services

<table>
<thead>
<tr>
<th>Region</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Asia</td>
<td>876</td>
<td>59%</td>
</tr>
<tr>
<td>South Asia</td>
<td>612</td>
<td>58%</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>326</td>
<td>80%</td>
</tr>
<tr>
<td>Latin America</td>
<td>250</td>
<td>65%</td>
</tr>
<tr>
<td>Central Asia and Eastern Europe</td>
<td>193</td>
<td>49%</td>
</tr>
<tr>
<td>Arab States</td>
<td>136</td>
<td>67%</td>
</tr>
<tr>
<td>High Income OECD</td>
<td>60</td>
<td>8%</td>
</tr>
<tr>
<td>Total</td>
<td>2,455</td>
<td>53%</td>
</tr>
</tbody>
</table>

The other potential approach to driving financial inclusion is to take a demand-side view. Based on the financial inclusion needs hierarchy shown above, this would mean starting with bill payment. There are four concrete reasons why bill payment is well positioned to initiate financial inclusion and drive it forward:

1. The large scale/size of bill payment.
2. The large potential for making bill payment electronic by creating a value proposition for all stakeholders.
3. The potential to drive electronification of other payment categories by creating stickiness for an electronic payment method.
4. The potential to achieve greater financial inclusion beyond payments; for example, giving individuals access to non-cash methods for bill payment could lead to companies ability to track those payments, and over time this could provide insights for analyzing credit risk and driving lending such as microlending in developing/emerging countries.

These four reasons are likely to be relevant in any country in the world, making bill payment a universal phenomenon that could accelerate financial inclusion in any market. The solutions based on this demand-side approach may still use mobile phones or prepaid cards as the underlying technology, suggesting that the right answer would likely combine the supply/product view with the demand-side view. This study looks in depth at the four reasons why bill payment could accelerate financial inclusion and why combining the product view with the demand-side view is the right approach.

1. Bill Payment Represents A Large Scale Consumer Payment Type

Three aspects of the scale of bill payment make it particularly well suited for driving financial inclusion.

- **High Penetration:** Bill payment touches nearly every household in the world. As mentioned earlier, bill payment generally represents payment of consumers’ essential living expenses, often the most basic survival requirements such as electricity, water and cell phone. Nearly every household has to make these payments; if they do not, they lose critical services.

- **Recurrence:** Bill payment is not a one-and-done phenomenon; each person has to regularly pay bills. This has two important implications: a) finding the right solution becomes a key priority for consumers, and once they determine what works for them, they are likely to adopt that solution; and b) this creates stickiness for the bill payment solution and could lead to other levels of financial inclusion along the hierarchy.

- **Size:** Bill payment is a large enough segment for stakeholders to focus on. Globally, there are billions of consumer bill payment transactions.

All three aspects of the scale of bill payment apply to every country in varying degrees. For example, in a developing economy like India, every household pays four or five bills per month or 10 to 12 billion bills per year\(^2\). In a developed market like the U.S., every household pays around 15 bills per month or over 20 billion bills per year\(^3\).
2. Electronic Bill Payment Can Create a Value Proposition for All Stakeholders

A key reason that payment solutions fail is that they do not create a value proposition for all stakeholders in the value chain but rather focus on just one or two stakeholders. Making bill payment electronic has the potential to create a value proposition for all stakeholders and drive financial inclusion, an important first step for initiating financial inclusion on a large scale.

The following three examples demonstrate this ability:

**Mexico:** Mexico has a large unbanked population (~70%)⁴, making financial inclusion a key priority. In Mexico, 65 percent of consumer bills are paid with cash at the biller’s office, and 27 percent are paid with cash at a bank branch or retail outlet⁶. Only 8 percent of bills are paid online at the biller website or through online banking⁶. Banks and retailers in Mexico have each built their own direct connections to the billers to settle bills. Biller aggregators like Checkfree that provide a single point of connection to several billers are a recent phenomenon primarily serving smaller mom-and-pop retailers.

*All non-online channels are primarily cash based

Interestingly, most of the unbanked consumers in Mexico receive their salary on salary cards (a type of prepaid card) but choose to withdraw the entire amount on payday and use the cash for payments, including bill payment. Taking a closer look at the needs and pain points of all stakeholders shows that making bill payments electronic may create value at all levels and at the same time accelerate financial inclusion.

**Consumers:** The key pain point for consumers is that they have to travel to a physical location like a biller’s office or bank branch to pay a bill. As a result, they not only have to wait in long queues but also have limited flexibility in terms of the time of day they can pay a bill. Internet penetration in Mexico is also very low (~30%) and primarily among the banked population, leaving paying at a physical site as the primary method of bill payment for the unbanked. Alternate remote payment methods that are cost-efficient are a key need for the unbanked in Mexico.

**Billers:** The biggest pain point for billers is the high cost associated with accepting bills at their offices (e.g., staff, office space). Billers have been moving bill payment to alternate low-cost channels like banks and retailer locations for a fee, but most of the bills are still paid at their offices. Billers would be open to an electronic payment solution that materially moves payment volume to other channels, and would be willing to pay for it as long as it lowers their total cost.

**Banks:** On the one hand, banks in Mexico see bill payment as an important source of revenue (charging the biller a fee for each bill) and a way of engaging and acquiring customers, but on the other hand they are facing the high cost of serving bill payment customers at bank branches. Another concern is low usage of the salary cards they issue. As mentioned, most of the unbanked withdraw all the money from their salary card on payday and subsequently use cash for making payments. A key need for banks is to be able to offer bill payment using lower-cost channels and salary cards issued by them.

**Government and Telcos:** A key priority for the Mexican government is to reduce the black economy and make transactions easier to track, which they hoped to accomplish by introducing a tax on certain cash deposits. Telcos are looking for new sources of revenue, and major players like Telmex and Telefonica have already launched mobile payment initiatives.

Current cash-based bill payment clearly has significant pain points for all stakeholders. But there is a common theme: the need for an alternate low-cost channel. This could be the key for developing a solution that creates value for all stakeholders. Given a nearly 75 percent penetration of mobile phones, one answer could be a mobile bill payment solution that uses the salary card as the funding source. This would enable consumers to pay their bills from their mobile phones, the billers to use a more cost-efficient channel for accepting payments, the banks to engage with consumers and drive usage of salary cards, the government to drive electronification of payments, and mobile phone companies to engage in payments. By creating value for all stakeholders, financial inclusion would accelerate as consumers start using salary cards instead of cash for payments.
India: In India, probably only half the population has bank accounts, making financial inclusion an important priority. Eighty percent of bills in India are paid at the biller’s office, 90 percent of these with cash. Roughly 15 percent of bills are paid online either through online banking or biller website—options primarily available for the banked population. For the unbanked population, the primary alternative to the biller’s office is walk-in payment at a retail outlet using cash, but currently this accounts for less than 5 percent of the bill payment volume.

**FIGURE 4: INDIA BILL PAY CHANNELS**
Based on the number of transactions

<table>
<thead>
<tr>
<th>Customer Front-End</th>
<th>One-Time Payment</th>
<th>Standing Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Electronic Payment %</td>
<td>Electronic Payment %</td>
</tr>
<tr>
<td>Biller</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biller Walk-in</td>
<td>80%</td>
<td>10%</td>
</tr>
<tr>
<td>Biller Website/Online</td>
<td>7%</td>
<td>100%</td>
</tr>
<tr>
<td>Bank</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Online Banking/ATM</td>
<td>4%</td>
<td>100%</td>
</tr>
<tr>
<td>Third-Party</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Third-Party Website</td>
<td>&lt;1%</td>
<td>100%</td>
</tr>
<tr>
<td>Third-Party Walk-in</td>
<td>4%</td>
<td>0%</td>
</tr>
</tbody>
</table>


A key trend over the last 10 years in bill payment in India has been the emergence of bill payment aggregators. There are two types: biller aggregators like BillDesk, who build connections to billers and offer a common point for accessing a large network of billers for bill payment, and front-end aggregators like Suvidha, who connect retail outlets to biller aggregators to enable acceptance of payments from consumers. Despite the emergence of these aggregators, 80 percent of bills in India are still paid at the biller’s office. This is interesting because mobile operators have been able to leverage the same retail network in India to accept payments—90 percent of mobile top-ups in India are at retail outlets.

The pain points and needs for billers, consumers and government in India are similar to those in Mexico. Banks do not seem to have significant pain points as they appear content to focus on the banked population using currently offered low-cost channels like online banking. Mobile penetration in India is over 50 percent, rapidly growing and significantly higher than Internet penetration (15%-25%), making mobile bill payment a potential longer-term solution. Right now, the retail network appears to be the most likely candidate for creating an alternate network for bill payment based on the success of mobile top-ups.
Retailers: Retailers consider bill payment an important source of revenue and foot traffic. Any solution that provides higher bill payment volume without disrupting their core retail business would appeal to them. In the current setup, two key issues that retailers face limit bill payment volume through this network. The first is that the current experience of accepting bill payment is fairly complicated, especially compared to mobile top-ups. This makes it very difficult for retailers to offer bill payment as an ancillary service. The second pain point is the cost of handling cash, which is significant. To accept bill payment, the retailer is required to prepay the amount to the front-end aggregator so that every time the retailer receives the cash payment, the aggregator can debit the prepaid account. This is a significant burden on retailers in terms of working capital requirements and is unsustainable to support large volumes.

Aggregators: The primary challenge for front-end aggregators is to efficiently solve the two retailer pain points. Biller aggregators have already invested in building connections to the billers and would like to see higher volume.

As in Mexico, current cash-based bill payment is creating significant pain points for all stakeholders in India. And also like Mexico, the common theme across all stakeholders is the need for a low-cost network for accepting bill payment. Two issues must be addressed to enable this large-scale network. The first is to simplify both the technical requirements and the process for accepting bill payments for retailers. Mobile operators have done a great job at simplifying this so only a consumer’s mobile number and a retailer’s phone are required for accepting payments. Therefore, there is no reason that something cannot be done for other types of bill payments.

The second issue is the cost of handling cash in the system. The mobile top-up value chain faces a similar challenge, but because of its narrow focus, it is still manageable. For broader bill payment, one solution could be prepaid bill-pay cards that consumers could use to pay bills at retail outlets with retailers using their phones as acceptance devices. There are several ways in which the underlying mechanics could work, but the key is that it creates a value proposition for all stakeholders. Retailers do not have to lock in their working capital for accepting bills, consumers have more bill payment channels, billers can move more traffic away from their office locations, aggregators get more volume through their network, and more volume moves to electronic payments—a key priority for the government. Just as in Mexico, the process of creating value for all stakeholders would also accelerate financial inclusion as consumers start using prepaid bill-pay cards instead of cash for payments.

The United States: As mentioned earlier, financial exclusion is not limited to developing/emerging economies; the U.S., the world’s largest and most developed world economy, also has a fairly large unbanked population. And these people need to pay their bills. The most popular ways for this population to pay bills are with cash at the biller’s office and at small check-cashing shops where consumers pay very high fees. The pain points for stakeholders, including billers and consumers, are similar to those in India and Mexico with equally significant potential to offer an alternate low-cost channel for paying bills.

One solution in the U.S. could be to partner with the U.S. Postal Service (USPS) to offer a prepaid bill-pay card. Consumers would be able to pay with this card at any post office location, a huge acceptance network that they are already familiar

These three examples show that bill payment could accelerate financial inclusion not only in developing markets like India and Mexico, but also in developed markets like the U.S.
with. The Postal Service would benefit from a new source of revenue at a time when they are looking for alternatives. In addition, billers would get a new, huge alternate bill acceptance network. And, as in India, use of the prepaid card versus cash would simplify the flow of money through the value chain, making the economics even more attractive.

These three examples show that bill payment could accelerate financial inclusion not only in developing markets like India and Mexico, but also in developed markets like the U.S. The key would be to take a holistic look at the ecosystem in the three countries and develop solutions that create value for all stakeholders, something that clearly seems possible. The three examples also emphasize the point made earlier, which is that the right approach to accelerating financial inclusion is to marry the supply-side/product view (e.g., mobile, prepaid) with the demand-side view of bill payments. In all cases, payment efficiency is essential to bill payment for all stakeholders, and is something that is applicable in any market.

3. Bill Payment Has the Potential to Drive Electronification of Other Payment Categories

As mentioned earlier, bill payment is not a one-and-done phenomenon; rather, people have to regularly pay their bills. Therefore, it is logical that using an electronic payment method like a prepaid card for paying bills would be so habit forming that people would start using it for other types of payments like retail purchases. For example, in Mexico and India it is probable that consumers will start using their salary or bill payment cards for other types of retail purchases. This phenomenon of creating stickiness to the payment method by its regular use is also supported by research. Based on a study done by MasterCard, consumers in the U.S. who make recurring payments on their credit cards tend to use their cards more for other spend versus consumers who do not make recurring payments (see Figure 5).

**FIGURE 5: OVERALL SPEND LIFT IN U.S. CONSUMER CREDIT**

<table>
<thead>
<tr>
<th>Recurring Payments</th>
<th>0-499 Pre Adoption</th>
<th>500-1499 Pre Adoption</th>
<th>1500+ Pre Adoption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adopter</td>
<td>19.5%</td>
<td>22.9%</td>
<td>24.0%</td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Bill Payment Has the Potential to Achieve Greater Financial Inclusion by Driving Lending

The potential for bill payment to drive financial inclusion is not limited to providing alternatives to cash for payments. Bill payment could lead to greater financial inclusion beyond payments by driving other financial activity, such as lending. This is because when consumers have access to electronic payment methods to pay their bills, their payments can be tracked by companies. Companies could then analyze these payments to get useful insights into the creditworthiness of consumers and assess their risk for loans. This is true not only in emerging/developing countries, but also in developed countries.

For example, a growing trend over the last several years in India has been microfinance loans, small loans typically made to the lower-income segment of society. Based on a study by ACCESS Development Services, a not-for-profit company that specializes in microfinance, the total outstanding microfinance loan amount in India at the end of 2010 was around $8 to $10 billion with approximately 85 million people leveraging these loans. While this has more than doubled since 2007, the penetration of microfinance loans still remains small, given that 37 percent—or around 400 million Indians—are below the country’s national poverty line, based on data from the United Nations Development Programme.

A key reason for this low penetration is the lack of data needed by lenders to assess the credit risk of borrowers. However, if these borrowers start paying their bills electronically, the information on their payment behavior could be tracked by companies and used as an indicator of their creditworthiness and could drive higher lending. In fact, vegetable traders in Bhubaneswar, India, are already using their bill payment receipts as proof of payment to secure loans. But because this process is paper based, it has significant pain points such as lost receipts; making bill payment electronic could make it much more efficient.

Similarly, in the U.S., the recent financial crisis has irreversibly damaged the credit worthiness of millions of Americans. For these people, the traditional approach of building creditworthiness by taking loans won’t work since they are unlikely to get any new loans. An alternative for them could be leveraging their bill payment behavior as a means of building credit when all other avenues may have closed.

If these borrowers start paying their bills electronically, the information on their payment behavior could be tracked by companies and used as an indicator of their creditworthiness and could drive higher lending.
FIGURE 6: GROWTH OF MICROFINANCE LOANS IN INDIA

CONCLUSION

It is time to look at bill payment in a totally different light that focuses on its ability to transform the global payments and financial markets. Enabling financial inclusion is one approach, and bill payment needs to be a key consideration for those hoping to benefit from it—from governments that want to develop a more efficient society to businesses looking for new sources of revenue. Additionally, given the scale of bill payment and the inefficiencies that exist in bill payment methods today, there could be several other ways in which bill payment can play a role in shaping global financial markets.

ENDNOTES

1-16 MasterCard Advisors Analysis, 2011.

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