Executive Summary

Cash has been very “sticky” in Mexico. Despite the availability of non-cash alternatives such as credit, debit, and prepaid cards, online banking, and—most recently—mobile banking, an estimated 90% of transactions in Mexico are still performed in cash. Precise estimates of the number of cash transactions are not available due to the inherent difficulties in tracking cash and a lack of adequate survey data. However, the available surveys on financial inclusion, data on electronic transactions, and industry-specific payments data all make it clear that cash is king in Mexico.

This cash outlook report provides an overview of the places in Mexico where cash is most and least used, who is using it, and why. To do this, the report examines the reach of the banking and payments system, bank account and card ownership, the evolution of cash and cash-alternatives usage, new banking and payment business models, and relevant government regulation. Studying the role of cash in Mexico is a timely endeavor, given Mexico’s current position as co-chair of the G-20 partnership for financial inclusion. The purpose of the report is to pave the way for further research in Mexico on the costs of cash for consumers, merchants, financial institutions, and the government. Consumers invest considerable time and money in managing their money, but the costs of cash for individuals are rarely measured. Likewise, the costs associated with cash operations for merchants and financial institutions have not been studied in depth. In Mexico, like in many emerging markets, much research has been conducted regarding the time and cost associated with consumers’ use of formal financial services, but less attention has been paid to the nature of the cash economy that competes with non-cash alternatives.

Mexico shares with other emerging markets a number of issues that limit uptake of non-cash payments and keep economic agents entrenched firmly in the cash economy. Among these issues are low bank account ownership, a sizeable informal sector and widespread irregular employment. To further complicate matters, the corporate strategy of Mexican banks has not been focused on deploying products that address the payment needs of low-income unbanked populations. Last but not least, poor financial consumer protection and low levels of financial literacy have suppressed growth in demand for non-cash payment alternatives.

Less than one-third of Mexican adults (27%) have a bank account in a regulated financial institution. Even fewer have a debit or credit card. Unsurprisingly, account ownership is lowest among rural, less educated, and low-income Mexicans. However, market innovation in the form of niche financial product segments such prepaid cards, a fast-growing category marketed primarily at the unbanked, have started to close the financial-services divide.
The number of card-based payments, electronic funds transfers, and online banking transactions has increased dramatically in the last decade. However, these electronic payments are limited to a small cohort of well-educated, high-income Mexicans.

Payroll accounts for salaried workers are another fast-growing payment channel: 14% of Mexican adults now receive wage deposits in a payroll account. However, the sheer size of the informal economy means that most Mexicans receive their income in cash. To wit, half of the economically active population in Mexico is employed without a formal contract; nearly one third works in an informal business. Receiving wages in a payroll account, nonetheless, is not consubstantial to escaping the cash-only economy: a large proportion of workers who do receive wages in an account withdraw their full account balance in cash on payday.

Moreover, even at retail outlets that accept card payments, consumers still prefer to use cash. At major supermarkets, 70% of transactions are in cash, which may reflect low card adoption or a genuine consumer preference for cash, even among cardholders. Low card usage is largely explained by consumers’ fears surrounding payment fraud. Issues such as card cloning are top-of-mind concerns for many Mexicans. Consumer protection in financial services, which could help remedy fraud issues, has historically been weak: this has contributed to making cash the preferred payment choice for many.

Over the last decade, the number of ATMs and POS terminals in Mexico has increased, but still lags behind global and even regional averages. The limited number of access points to electronic payments has contributed to the entrenchment of economic agents into the cash-only economy and informal financial mechanisms. Informal merchants often do not have the necessary liquidity or know-how to manage card-based payments. Those who do accept cards find interchange fees too high, and thus often engage in card suppression by assessing surcharges on card-based purchases.

Traditional savings and transactional products are not adequate for the needs of poor Mexicans, who find the fees, surcharges, and other terms and conditions associated with bank account ownership to be prohibitive. While most commercial banks do not offer adequate payment channels or savings products to low-income customers, new niche banks such as Banco Azteca hold some promise in this regard. The business models of these new financial institutions, however, are typically centered not on payments solutions, but on aggressive and expensive consumer-lending product lines. Furthermore, the “popular finance” sector in Mexico, consisting of a wide range of savings and credit cooperatives, microfinance institutions and other nonbank financial institutions targeting low-income populations, has not had much success in deploying small-savings or transactional products.

To address the challenge of poor access and poor products, new banking correspondent and mobile money regulatory frameworks have been launched. Together with new government rules that have loosened Know Your Customer (KYC) requirements for low-value “simplified” accounts, these novel guidelines may hold promise for increasing non-cash payments.

Mobile money is nonetheless still in its infancy, with just two services becoming operational this year. If mobile money is to compete with cash, it must achieve massive scale, surmounting Mexicans’ entrenched preference for in-person payments and customer service.

Bill-pay networks at convenience stores and other retailers have made paying utilities much more convenient, but they are closed-loop systems that require cash payments. Likewise, international and domestic remittances, with transaction volumes totaling about US$23 billion and US$5 billion per year respectively, are still largely paid out in cash.

Tax evasion and money laundering are key concerns for the government in Mexico, and have led to the enactment of a number of regulations impacting the cash landscape. However,
designing and implementing legislation both providing the right incentives to private actors and proving enforceable has proven tricky. To wit, a withholding levy on cash deposits known as the IDE was introduced in 2008, aiming to reduce informality. In principle, this tax would encourage businesses to apply for fiscal registration, thus becoming eligible for IDE deduction, and to accept electronic payments. In close to five years of operation, however, the impact of the IDE was modest at best, and the tax was repealed by the Mexican Senate in late 2013. A number of other regulations aimed at reducing cash-related wrongdoings have also been launched in recent years, yet the extent of their impact remains to be seen. Such is the case of a cash-transactions ban passed in late 2012, prohibiting large cash payments in sectors of the economy, such as real estate, deemed sensitive to money laundering.

**In sum, by and large, cash is still the preferred payment vehicle in Mexico in most contexts and for most transactions.** Going forward, the outlook for cash depends heavily on the success of financial inclusion efforts, innovation in payment systems, new product development, the evolution of government regulation, and developments in consumer protection financial education. Both cash and informal financial practices are here to stay as long as the financial needs of the poor are not adequately addressed through non-cash alternatives.
1. The state of cash in Mexico

Cash is king in Mexico. It is not only the preferred medium for making and receiving payments, but also a store of value for many Mexicans, who save both small and large sums in cash. Officials at the Bank of Mexico, the country’s central bank, estimate that 90% of transactions in the economy are performed in cash. This is a rough estimate, they admit. Indeed, the very nature of cash—a payment vehicle lacking a built-in tracking mechanism, like those of electronic payment media—makes precise estimates of the volume and number of cash transactions elusive.

More precise data are available from industry associations that directly track member companies’ transactions. The Mexican Association of Retailers (ANTAD), which represents all major national retailers, reports that 63% of its members’ sales are performed in cash. At supermarkets, this figure is even higher: 70% of transactions are made in cash, with the rest being split between debit cards, credit cards, and *valess*, or employer-issued food vouchers (El Semanario). ANTAD’s estimates of cash usage exclude purchases made at small stores and informal businesses such as *tiendas de abarrotes*—small, family owned grocery stores—where the prevalence of cash transactions is surely even higher, due to their informal nature. *Tianguis* and *mercados* (traditional markets), almost fully cash-based, make up 60% of shopping centers in Mexico; in all fairness, however, their contribution to total revenue in the retail market is modest, given that they cater to low-income clients (Conjuntos Comerciales Según Los Censos Económicos 2009).

In the last decade, there have been considerable changes in how Mexicans access and use financial services. Well-heeled, banked Mexicans are making more and more payments with cards, and using web-based and mobile platforms to transfer money and pay bills from their online accounts. In the same period, usage of paper checks has declined precipitously, as businesses switch to electronic funds transfers. For the poor and the middle classes, the last ten years have brought an onslaught of consumer lending for homes, autos, and durables—albeit at some of the highest interest rates in the world—which compete with informal moneylending. But savings and transactional products for low-income segments, categories not clearly as profitable, have not multiplied on par with lending. A growing number of formally employed Mexicans receive their wages in a payroll account, but the number of Mexicans with a bank account or payment card remains low relative to global averages and even relative to Latin American peer countries.

In a 2008 nationwide poll in Mexico, 80% of respondents said they prefer to manage their money in cash (Fundación Banamex and UNAM 2008). Even among those who do have a bank account, account usage is low in many cases. It is not uncommon for individuals to only make a few withdrawals per month, preferring to save money in cash and using cash to pay for most transactions. As in many countries where bank account ownership and usage are low, it is common in Mexico to store money at home in cash, or in highly liquid assets. When the time comes to pay a bill or make a purchase, most payments must be made in cash—and customers prefer to make them in person.

As a result, currency in circulation is higher in Mexico than in the United States or Canada, relative to economic output. As of the end of 2010, there were 693 billion pesos (about US$5.5 billion) of notes and coins circulating in Mexico, representing about 5% of the country’s Gross Domestic Product (GDP). Although the amount of cash in circulation has varied according to economic demands and monetary policy objectives, the total value of cash has remained roughly constant. According to the Bank for International Settlements (2010), most of the cash in circulation in Mexico is held outside of banks; of the total cash volume, only about 14% is vaulted in banks.
Another way of looking at cash’s role in the economy is to measure Mexico’s narrow money supply, which is a broader measure of liquidity, including cash issued by the central bank as well as non-cash denominated bank deposits. At the end of 2010, 37% of Mexico’s narrow money supply was in cash. In most developed economies, the proportion of cash in circulation relative to the entire narrow money supply is much lower.\(^1\)

The evidence on financial inclusion, payments, and informal financial practices suggests a number of reasons that cash remains king despite the introduction of electronic payment mechanisms. For one, roughly one-half of Mexicans are employed without a formal contract, and most Mexicans continue to receive their wages in cash. Next, the geographic infrastructure of banking and payment networks, while greatly increased, remains limited, as the next section illustrates. Additionally, commercial banks’ business hours are short, and the organizational culture of banks is not customer-centered. Retail banks are least attuned to the needs of low-income customers, who make up the vast majority of the population. In recent times, this customer segment has been serviced by the so-called “popular finance” sector, consisting of a wide range of regulated and unregulated savings and credit cooperatives, microfinance institutions and other nonbank financial institutions. These niche financial institutions have been very successful in the retail credit space, yet the “popular finance” boom has not extended to transactional products that could compete with cash.

Cash possesses a number of features that have proven particularly relevant in Mexico, given the financial history and culture of this nation. For one, the benefits and risks of using cash are well-understood by consumers. Electronic systems, on the other hand, pose uncertainties for consumers that create significant barriers to adoption. Stories of card fraud, such as cloning and identity theft, loom large in Mexicans’ minds when they make payment choices, as do stories of malfunctioning ATMs, hidden or poorly understood account fees, and a lack of consumer protection when something goes wrong. All in all, a past dotted with financial crises, devaluations, and poor financial consumer

\(^1\) Mexico’s “narrow money supply” totaled 1.8 billion pesos at the end of 2010, and was composed of 599 billion pesos of notes and coin circulating outside banks, plus 1.1 billion pesos stored in “transferable deposits,” and 129.7 billion pesos in foreign currency deposits. Thus, 37% of the narrow money supply was currency issued. Of all currency issued, most (87%) circulated outside of banks.
advocacy has left many Mexicans wary of electronic payments and stores of value, and trusting only payment instruments that they fully understand.

Newly expanded bill-pay networks available at convenience stores, supermarkets and pharmacies have greatly increased the expediency of bill payments. These networks, however, only accept cash payments. Historically, most bills had to be paid in person by bringing an invoice and cash to the utility company, service provider, or government, often resulting in long queues on payday. Today, the small group of Mexicans who have access to banking and the Internet are performing more and more transactions using online banking (a lesser number of transactions involve automatic bill pay, in which clients authorize payees to debit their accounts on a regular basis). Alternative bill-pay services, in spite of their limitations, have now become the norm for customers without an account and/or without Internet access. Alternative bill pay services carried out by non-banks were forecast to increased by 44% between 2009 and the end of 2013, according to a Capgemini-RBS report.

The last five years in Mexico have also borne significant developments in prepaid cards, mobile banking, and electronic transfers of wages and government benefits, but these are still in their infancy, and appear not to have eaten away at consumers’ preference for cash.

**Cash is king in the informal sector**

The intensity of Mexico’s cash usage is often attributed to the country’s high level of informality in business and employment. Informal businesses usually do not use bank accounts, and pay suppliers and employees in cash. Furthermore, informal merchants accept only cash for purchases or at best extend informal store credit (fiado) that is later repaid in cash or kind.

About 29% of Mexico’s economically active population works in the “informal sector,” according to Mexico’s national statistics agency, INEGI (2009 & 2012). The informal sector, according to the International Labor Organization, consists of enterprises that not registered as legal entities and typically lack accounting systems to distinguish between business activities and other flows of household income and capital.

According to the World Bank’s 2010 Enterprise Survey in Mexico, 40% of all small businesses in the country do not have checking or savings account. This figure is undoubtedly much higher among informal businesses. Among merchants, even those who do have a bank account may choose not to offer consumers the opportunity to make non-cash purchases. Furthermore, many small merchants who have acquired a point of sale (POS) terminal actively and routinely engage in card suppression by levying surcharges on card-based purchases.
Even when formal enterprises are considered, approximately 54% of Mexican workers are under “informal employment,” meaning they do not have a formal contract, do not receive social security or other benefits, and very importantly are most likely paid in cash.

**Salary payments: As employers shift payrolls from cash and checks to accounts, most Mexicans still prefer cash**

Most Mexicans receive their wages in cash or by check. However, in the last five years the government and employers have begun paying more and more employees electronically by depositing their wages into payroll accounts with linked debit cards, or onto prepaid cards. Today, 14% of Mexicans over the age of 15 have an account where they receive wages or other work-related payments, according to the World Bank’s Global Findex survey. The Mexican Banking Association (ABM) reports that these payroll accounts caused the number of debit cards issued in Mexico to more than double between 1997 and 2003.²

For employers and banks, payroll accounts around the world are a win-win proposition, but not necessarily so for workers. Employers, for their part, save considerable time and money by not having to transport, sort and distribute cash to each employee. Banks enjoy increased loyalty by cross-selling a new service to their corporate clients with large payrolls. Additionally, banks use data from their new salaried client base to promote lucrative consumer credit products. The Mexican Banking Association (ABM) reports that credit to payroll account holders, albeit a very new product line, is growing at 50% annually.

Workers, on the other hand, are not always happy to have their salary deposited into an account. In Mexico, as a small but critical mass of people began receiving their wages electronically, workers and consumer advocates began complaining that salaries were being chipped away by banks’ ATM withdrawal commissions, low-balance charges, and other fees. In response to growing complaints around bank fees and charges, in 2008 the government mandated that commercial banks create zero-fee accounts specifically designed for salary payments. To a large extent, this move was self-serving, as the government was interested in abating administrative costs by depositing public sector employees’ salaries into payroll accounts.

However, even as a new cohort of formal salaried workers crosses the threshold into electronic payments, the evidence points to payroll funds not staying inside the banking system for long. Experts point out that many—if not most—payroll account holders withdraw their salary in cash from a bank teller or ATM on payday. Even a casual observer in Mexico would notice long queues at ATMs and bank branches on certain days of the month. With only 8% of Mexicans reporting that

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² The number of debit cards issued increased from 14 million to 33 million from 1997 to 2003.
they have made some kind of electronic payment in the past 12 months, clearly many holders of accounts are not using these as transactional instruments, but instead solely as precursors of cash. Indeed, it is possible to infer that the expense budget of a low-income worker in Mexico is largely comprised of cash obligations, as alternative bill-pay networks accept only cash payments and other obligations like rent or school fees must either be paid in cash or by depositing cash into a payee’s bank account. Even where payments can theoretically be made electronically, such as through online banking or automatic bill-pay, the hurdles are high for a low-income worker lacking Internet access. Mexican labor law grants workers the right to receive wages in cash, at their place of work (Bankable Frontier Associates and The Fletcher School, 2011). The original intent of the law was to differentiate cash wages from in-kind benefits such as food and transport vouchers, to ensure employees’ adequate cash remuneration. As electronic payments have become more prevalent, however, this legal provision has been disputed. A legislative bill that seeks to re-define wage payments as being either cash or a mutually acceptable electronic payment is currently under discussion in the national legislature.

2. Competitors to cash

In the last decade, a small cohort of upper-income, banked Mexicans began moving away from cash and into cards and online banking for some of their purchases and payments. Likewise, use of other electronic payments such as online banking, electronic funds transfers, and automatic bill pay have all increased in recent years, while the number of paper checks has declined. However, cash continues to be of paramount importance, as evidenced by industry data showing cash payments firmly in first place among payment instruments, even at large retail outlets that accept card payments. The following section examines the evolution of the principal non-cash alternatives and trends in financial inclusion.
The number of purchases and payments made with credit and debit cards increased by 500% between 2002 and 2011. This occurred in an environment where the number of store-based POS terminals increased dramatically (in part due to the massive expansion of both foreign- and domestic-owned national retail chains during this decade), which provided the network for customers with cards to make payments. Simultaneously, the first decade of the twenty-first century saw a huge consumer credit boom in Mexico. The boom was in bank-financed installment plans for consumer durables, extension of credit cards to a rising middle class, and prepaid cards and payroll accounts with linked debit cards to salaried workers.

The banking and payment system
Figure 5: Payment Infrastructure

Payment Terminals (thousands)

Source: Bank of Mexico, Mexican Banking and Securities Commission (CNBV)
Despite gradual increases in the number of bank branches and ATMs in Mexico over the last ten years, access to brick-and-mortar banking infrastructure remains lower than global and regional averages. That partly explains the prevalence of a cash economy in the country. Only 56% of Mexico’s municipalities have a bank branch, according to Mexico’s National Banking and Securities Commission (CNBV).

Moreover, one estimate suggests that one-third of the country’s municipalities have no access to financial services of any kind. In these areas, which tend to be rural, it is no wonder that account ownership and account usage are lower than in urban areas with better banking infrastructure. In rural areas, residents are more likely to manage their finances in cash, at best using a combination of “popular finance” institutions and informal financial services.

The number of ATMs in Mexico has more than doubled in the last ten years, but remains well below global and emerging market averages in per-capita terms. As of 2011, there were just 46 ATMs per 100,000 adults, compared to a high of 250 in South Korea, and over 100 in countries like the U.S., Canada, Japan, and even Brazil. The numbers of bank branches and POS terminals in Mexico are likewise below global and regional averages. These shortcomings interact in ways pernicious to consumers. For instance, due to the modest share of businesses accepting card payments, even banked customers with debit or credit cards need to hold cash balances in Mexico. ATM infrastructure, as before mentioned, is relatively sparse.

Moving forward, the outlook for bank infrastructure growth is mixed. On the one hand, recent legislation forbidding banks from charging ATM withdrawal fees to their own customers, diseconomies associated with building out infrastructure in rural, scantily populated, or otherwise currently undeveloped areas and commercial banks’ reluctance to work with low-income populations may all contribute to the leveling off of growth in bank branch and ATM infrastructure.

On the other hand, a growing marketplace for third-party ATM operators promises to make cash logistics more cost effective. This may very well be the driving force behind ATM infrastructure growth in the future, as, rather than invest in new ATMs, most banks are today upgrading existing ones.
Sparseness of infrastructure is not the only relevant driver of consumer cash procurement costs, however. ATM interoperability is limited, as ATMs are networked, but cash withdrawals carried out at third-party bank ATMs are subject to steep commissions, and customers cannot process deposits at third-party ATMs. In addition to ATMs, Mexican consumers may obtain cash through cash-back services offered at a select few large retailers. This medium of cash procurement is still nascent, however. In 2009, there were 16 million cash advance transactions (Bank for International Settlements 2011); in comparison, the number of ATM withdrawals that year amounted to nearly 1.3 billion.

As before mentioned, one of the main reasons that customers prefer to use cash is the limited number of merchants who accept card payments at the point of sale. The number of merchants with a POS terminal has increased dramatically in the last decade. However, this marked growth has been unequal, favoring urban over rural areas. Indeed, the Bank of Mexico reports that half of POS terminals in Mexico are concentrated in five states, while fourteen states have fewer than 10,000 terminals (El Universal 2012). Terminals are also most commonly acquired by larger, formal businesses, places where many low-income customers are less likely to shop regularly, making cash a necessity for any purchases at small, informal businesses, such as tianguis (markets) and tiendas de abarrotes (mom and pop shops).

The Fund for Electronic Payment Infrastructure (FIMPE), a trust fund created by Mexican banks to support expansion of the POS network, has put considerable effort into the introduction of POS devices to microenterprises, tiendas de abarrotes, gas stations, pharmacies, and taxis. In 2004, a government decree created tax incentives for electronic financial transactions, but this policy expired in 2009. According to FIMPE, the tapering of this tax incentive directly signified slower POS expansion (Consultative Group to Assist the Poor 2010). In the opinion of FIMPE management, additional fiscal incentives will be needed in order to expand the network further (El Universal 2012).

A new banking correspondent regulatory framework introduced in 2008 holds promise for increasing access to financial services, and may eventually decrease cash usage for certain types of transactions. As of now, banking correspondent outlets in Mexico already outnumber bank branches, a testament to the success of this operational model. Additionally, in 2012 two mobile-money networks were launched, spurred by success stories of mobile money in other nations, such as M-Pesa in Kenya and GCash in the Philippines, as well as new regulation authorizing telecom companies to become bank agents.

**Box 1: Mexico’s banking system is concentrated and characterized by foreign ownership**

<table>
<thead>
<tr>
<th>Commercial banks in Mexico</th>
<th>Assets (in US$ billions)</th>
<th>% of sector's assets</th>
</tr>
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<tbody>
<tr>
<td>All banks</td>
<td>$452</td>
<td>100%</td>
</tr>
<tr>
<td>Large banks</td>
<td>$356</td>
<td>79%</td>
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<tr>
<td>BBVA Bancomer</td>
<td>$92</td>
<td>20%</td>
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<tr>
<td>Banamex (Citigroup)</td>
<td>$81</td>
<td>18%</td>
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Throughout Mexico’s tumultuous banking history—which included nationalization in the 1980s, privatization in 1990, followed by the 1994 Tequila crisis, then opening to foreign ownership in 1999—the sector has focused primarily on corporate lending and retail banking for upper-income customers, which partly explains the low levels of bank account ownership among low-income populations in Mexico.

Today, two important features of the commercial banking sector are its high level of foreign ownership, and the concentration of assets among several top players. Of the country’s 46 commercial banks, seven control nearly 80% of the sector’s assets. Among these top seven players, only two have majority domestic ownership: Banorte, the fourth-largest bank by assets and a historically strong player, and Inbursa, a rising star in which the family of Mexican billionaire Carlos Slim holds a majority stake. The rest of the banks in Mexico are divided roughly evenly between locally-owned medium-sized banks and small-sized affiliates of foreign banks. Advocates of financial inclusion criticize Mexico’s large commercial banks for having an “elitist approach,” (International Financial Corporation 2011) with a corporate strategy focused on corporate banking and wealth management for high-end customers.

Recently, a new and growing class of niche banks owned by retail chains has broken into the market, capturing a 2% market share by 2012. Elektra, a home appliance store, was the first retailer to enter banking when it established Banco Azteca in 2002, and now holds 1% of the sector’s assets. Retailers Famsa, Coppel, Fácil, and Wal-Mart de Mexico all followed Azteca’s lead, each obtaining banking licenses.

In addition to commercial banks, a wide range of non-bank financial institutions operate in Mexico, including institutions that target micro-entrepreneurs and low-income populations, collectively known as the finanzas populares (popular finance) sector. There are over 200 “popular savings and credit” institutions that are regulated and licensed to accept deposits (Banco de México 2011). Additionally, a plethora of

<table>
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<tr>
<th>Bank Type</th>
<th>Assets (trillion)</th>
<th>% of Sector</th>
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<tbody>
<tr>
<td>Santander</td>
<td>$63</td>
<td>14%</td>
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<tr>
<td>Banorte (locally owned)</td>
<td>$46</td>
<td>10%</td>
</tr>
<tr>
<td>HSBC</td>
<td>$39</td>
<td>9%</td>
</tr>
<tr>
<td>Inbursa (locally owned)</td>
<td>$17</td>
<td>4%</td>
</tr>
<tr>
<td>Scotiabank Inverlat</td>
<td>$17</td>
<td>4%</td>
</tr>
<tr>
<td>Medium-sized banks</td>
<td>$46</td>
<td>10%</td>
</tr>
<tr>
<td>Small affiliates of foreign banks</td>
<td>$42</td>
<td>9%</td>
</tr>
<tr>
<td>Retailer-affiliated banks</td>
<td>$8</td>
<td>2%</td>
</tr>
</tbody>
</table>

Source: Banxico

3 The IMF and World Bank recent Financial Sector Action Plan for Mexico recommended that regulators take steps to reduce the high levels of concentration in the financial system, by addressing the conglomeration of institutions as well as the concentration of large credit portfolios in a few institutions.

4 “Popular savings and credit institutions” include savings and loan societies (SAPs), popular finance societies (Sofipos), savings and loan cooperative societies (Socaps, which are also known as cajas populares), and credit unions.
financial institutions, numbering over two thousand, populate the “popular credit” space, and are not licensed to accept deposits. These institutions are known as Sofoles and Sofomes, and only a small percentage of them are government-supervised, while the rest remain relatively unregulated (Banco de México 2011).5

By the 1990s, international microfinance lending models reached Mexico. Dominating the microfinance sector is Banco Compartamos, by some measures the largest microfinance institution (MFI) in Latin America (LatinFinance 2013). Compartamos drew wide international attention—and criticism—for its historic initial public offering in 2007, when it was the first MFI in the world to go public. Like Compartamos, many MFIs in Mexico have evolved from non-profit organizations into for-profit companies. Other important MFIs are Came, Finca, and FinComún.

There are 71 Mexican MFIs that report financial data on the MIX Market website, but, as before mentioned, there are upwards of two thousand institutions in Mexico granting credit to micro-entrepreneurs. A recent study (2009) analyzing 141 large MFIs estimates a joint credit portfolio of US$1.5 billion, and an average annual growth rate of 43%.

The popular finance sector in Mexico is largely focused on extending credit, but a number of institutions that do take savings deposits have developed a payments network infrastructure. Many credit unions and cooperatives are linked into L@ Red de la Gente (“the people’s network”), a payment system run by state-owned bank Bansefi.

Box 2: Public and private payment system architecture

In 2004, the Bank of Mexico upgraded its small-value retail payment system (SPEI), a near real-time hybrid settlement system that runs multilateral netting every few seconds, paving the way to make electronic transactions more cost-efficient in a cash-heavy economy. This system is gradually replacing the use of paper checks in the country and has enabled banks to develop online banking platforms.

SPEI is primarily used to settle small-value retail payments, although it is designed for both small- and large-value payments.6 The system uses an open protocol that

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5 Sofoles are limited-purpose financial societies while Sofomes are multi-purpose financial societies. The legal category of Sofomes was created in 2007. There are 41 regulated Sofoles and Sofomes, plus an additional 6 SOFOMES that are regulated subsidiaries of commercial banks. Beyond these relatively few regulated institutions, there are 3,400 Sofomes in Mexico that remain relatively unregulated: they are not licensed by Mexico’s Central Bank but nonetheless are subject to some oversight by National Commission for the Protection and Defense of Financial Services Consumers (CONDUSEF).

6 In 2011, about 85% of SPEI’s transactions were for amounts under US$8,270. “Innovations in retail payments: Report of the Working Group on Innovations in Retail Payments” (Bank for International Settlements, May 2012), 29, http://www.bis.org/publ/cpss102.pdf. That year, the system settled 400,000 transactions per day on average. SPEI participants include 40 banks, 18 brokerage houses, 6
allows participating institutions to develop their own automatic processes to integrate their banking platforms with the central bank system. The Bank of Mexico charges institutions using SPEI less than US$0.01 per payment received by 10:00 a.m., and US$0.05 for payments received after 10:00 a.m. According to the Bank of Mexico, most clients of banks pay around US$0.50 or less for each transfer they make online (Medina Alvarez 2010).

Mexico’s card processing system has been criticized for lack of competition, high barriers to entry for small banks, and high interchange fees, which the government sees as impediments to financial inclusion. Card processing in Mexico relies on just two switches, PROSA and E-Global, which are interconnected. PROSA is dedicated to clearing operations; commercial banks execute settlement for proprietary transactions.

While E-Global is owned by the largest two banks in Mexico, Banamex and Bancomer, PROSA—the oldest switch in the marketplace—is owned by a syndicate of large banks, excluding these two top players. Most credit and debit cards in Mexico are either Visa Electron or MasterCard branded. American Express, however, is also a major market player, and executes its own clearing and settlement operations. The Mexican credit card space is rounded out by a local brand owned and operated by PROSA, known as Carnet.

For inter-bank checks, electronic funds transfers, and direct debits, a consortium of private banks called CECOBAN operates a private automated clearinghouse called the Cámara de Compensación Electrónica (CCEN). CCEN processes and clears these payments, with final settlement taking place on the Bank of Mexico’s SICAM system, a deferred net settlement system.7

### Financial inclusion

Access to banking and payment network infrastructure is but one ingredient in the recipe for reducing cash usage. One of the main reasons behind cash still being king in Mexico is the very low level of bank account ownership in the country. Until the very recent advent of prepaid cards and mobile money, paying with anything but cash required having a bank account. The determinants of low account ownership are multiple, yet costs associated with bank accounts may be even more important than access in explaining this stylized fact (Demirguc-Kunt and Klapper 2012).
Table 2: Stylized Facts on Financial Inclusion

<table>
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<th></th>
<th>Mexico</th>
<th>Latin America</th>
<th>Developing countries</th>
<th>High-income countries</th>
<th>Global average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has a bank account</td>
<td>27%</td>
<td>39%</td>
<td>41%</td>
<td>89%</td>
<td>50%</td>
</tr>
<tr>
<td>Received credit from a financial</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
<td>14%</td>
<td>9%</td>
</tr>
<tr>
<td>institution in the last year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saved in a financial institution</td>
<td>7%</td>
<td>10%</td>
<td>17%</td>
<td>45%</td>
<td>22%</td>
</tr>
<tr>
<td>in the last year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has a debit card</td>
<td>22%</td>
<td>29%</td>
<td>X</td>
<td>x</td>
<td>X</td>
</tr>
<tr>
<td>Has a credit card</td>
<td>13%</td>
<td>18%</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

* Percent of the population over age 15

Source: World Bank-Gallup Findex survey

Just 27% of Mexicans over age 15 have an account at a regulated financial institution, according to the World Bank’s 2011-2012 Global Findex study. Account ownership in Mexico is lower than the Latin American average, and much lower than elsewhere in the world. Similarly, debit card and credit card adoption is lower in Mexico than elsewhere in Latin America (Demirguc-Kunt and Klapper 2012). This is not just for lack of experience with banks; among those Mexicans who do not have any formal financial product, about one in 10 previously had an account but no longer does (Secretaría de Hacienda y Crédito Público, April 2009).

Moreover, very few Mexicans report saving in a financial institution. Just 7% of Mexicans report using a formal financial institution for the purpose of saving in the last year, a proportion much lower than that reported in other regions. Debit and credit card ownership are likewise low in Mexico compared to the rest of the world (Demirguc-Kunt and Klapper 2012). Mexico’s relatively low level of formal savings is not necessarily so because Latin Americans save less money, but perhaps because they are more likely to save in cash or using other informal methods. Indeed, the World Bank-Gallup study found that 26% of Latin Americans are saving money (relatively on par with 31% in the rest of the developing world). Only 31% of Latin American savers, however, place their savings in a formal financial institution, compared to 58% of savers in other developing countries.

**Box 3: Cash and informal finance**

Many Mexicans save, borrow, invest, and insure themselves using informal methods that largely rely on cash. For example, many people store money at home, give money to a guardar dinero (a professional money guard) for safekeeping, or participate in rotating savings and credit associations (ROSCAs, known in Mexico as tandas and mutualistas). Many also choose to save not in cash but in kind, by purchasing...
animals and storing grain—not only in rural areas, but also in peri-urban areas (Bazán, Hanono, and O’Keefe 2005).

A study by the Mexican association of pension funds (AMAFORE) reported that 57% of Mexicans are saving money, and that 37% of them save at home in a guardadito (“under the mattress” savings) or in a lock box of some sort. Surveys on financial practices provide widely different estimates of the percentage of the population that participates in a ROSCA, ranging from 5% (Findex survey) and 7% (Finance Ministry), to a high of 17% (AMAFORE study).

Low bank account ownership in Mexico is partly due to limited access, as described in the previous section. However, as mentioned above, the high costs associated with bank accounts may be even more significant than access, especially for individuals with low, irregular incomes (Demirgüç-Kunt and Klapper 2012). About 18% of the Mexican population lives under the poverty line, and commercial banks’ corporate cultures and products are not designed to attract low-income individuals.

In recent years, the profitability of consumer lending to low-income clients has driven an important expansion of this product segment. It is more challenging, however, to make the business case for savings and transactional products that compete with cash. As financial inclusion becomes an increasingly hot topic at the global level, Mexico has made strides to keep apace, setting a number of policy goals and transforming existing policy in line with these, in a bid to increase bank account ownership and electronic transactions. Whether these efforts will translate into successful private sector innovation that will significantly reduce the role of cash remains to be seen.

Bank account and card ownership in Mexico vary considerably across socio-economic groups. Like in many emerging markets, low income, limited education, and living in rural areas are significantly correlated with lower levels of account ownership.

8 Mexico has undergone considerable urbanization in recent decades, with 80% of inhabitants now residing in urban areas.
Box 4: Financial Inclusion is a Key Policy Goal of the Mexican Government

In 2012 Mexico held the G20 presidency, and began its tenure at the helm of the group’s Global Partnership for Financial Inclusion (GPFI) initiative. The agenda pushed forward by Mexico at the forefront of the G20 included encouraging the creation of an international consumer protection organization, the development of national financial inclusion strategies, and adoption of minimum guidelines for financial literacy.

At the 2012 G20 summit in Los Cabos, Mexico, G20 leaders agreed to a standard set of indicators to measure progress towards financial inclusion. This indicates some convergence on the importance of financial inclusion as a policy goal, as well as agreement on what financial inclusion ought to entail.

In addition to leading the GPFI, Mexico also holds the subgroup chair for Financial Inclusion Data and Measurement, with France and South Africa. This initiative will benefit a substantive policy dialogue on financial inclusion through the use of meaningful and harmonized statistical indicators across countries.

A joint IFC-GPFI 2011 report summarizes global and national efforts to measure financial inclusion, and proposes measures to fill the gaps in those datasets (International Finance Corporation 2011).

Mexico has also created its own National Council for Financial Inclusion (Consejo Nacional de Inclusión Financiera), which brings together representatives from different government agencies around the linchpin of incorporating the financially marginalized into the nation’s financial system. For many years, different government agencies have carried out proprietary household surveys on different aspects of financial inclusion, and data collection from the banking sector has been handled by different agencies, leading
to disperse, incohesive data. After several years of dialogue, the council recently completed its first National Survey for Financial Inclusion, which is based on the international data standards underwritten by the GPFI. The survey was designed with the input of a variety of public and private stakeholders in Mexico, as well as international donors such as the Alliance for Financial Inclusion and the Bill & Melinda Gates Foundation.

The Mexican government’s financial inclusion policy agenda consists of nine axes: (1) promoting financial education, (2) promoting electronic salary payments, (3) creating incentives for direct debit and automatic bill-pay, (4) promoting POS terminal acquisition among merchants, (5) encouraging mobile money accounts, (6) strengthening credit bureaus, (7) migrating transactions toward banking correspondents, (8) making government welfare payments through debit cards, and (9) measuring financial inclusion.

The government has taken a number of steps toward these goals, such as licensing retailers as banking correspondents, enabling telecom companies to offer mobile money accounts—in conjunction with banks—and simplifying regulation governing account-opening requirements to promote low-value savings and transactional accounts.

**Figure 8: Account Usage Statistics**

<table>
<thead>
<tr>
<th>Deposits made or received in a typical month</th>
<th>% of account holders</th>
</tr>
</thead>
<tbody>
<tr>
<td>o deposits</td>
<td>1-2 deposits</td>
</tr>
<tr>
<td>All account holders</td>
<td><img src="image" alt="Graph showing distribution of deposits" /></td>
</tr>
<tr>
<td>Top 60% income earners</td>
<td><img src="image" alt="Graph showing distribution of deposits" /></td>
</tr>
<tr>
<td>Urban</td>
<td><img src="image" alt="Graph showing distribution of deposits" /></td>
</tr>
<tr>
<td>Secondary education or more</td>
<td><img src="image" alt="Graph showing distribution of deposits" /></td>
</tr>
<tr>
<td>Primary education or less</td>
<td><img src="image" alt="Graph showing distribution of deposits" /></td>
</tr>
<tr>
<td>Bottom 40% income earners</td>
<td><img src="image" alt="Graph showing distribution of deposits" /></td>
</tr>
<tr>
<td>Rural</td>
<td><img src="image" alt="Graph showing distribution of deposits" /></td>
</tr>
</tbody>
</table>

Source: World Bank Global Findex survey

Ownership of a bank account or credit/debit cards does not necessarily imply usage. For many Mexicans, cards are not a payment instrument for regular purchases. Payroll account holders may not have chosen to enroll, but may have been compelled to do so by employers, which may lead to
accounts remaining idle. One in five Mexican account holders says they do not make or receive any deposits in their accounts in a typical month, according to Findex data. About 8% neither deposit nor withdraw. Among rural residents, one third of account holders does not make or receive any deposits in a typical month. In fact, a study by the Mexican finance ministry found 43% of bank account holders had not used their accounts at all in the last month.

Box 5: Online banking and EFT transfers

The number of electronic funds transfers (EFT) more than doubled during the last decade, while online banking-based transactions, such as transfers and bill pay, increased 2500% in the same period, according to data from the Bank of Mexico. Usage of these two payment mechanisms exploded in 2004, when the Bank of Mexico upgraded its small-value retail payment system and banks created online platforms for clients.

The average value of online banking transactions dropped by two-thirds over the last ten years, which suggests that this payment mechanism is being used increasingly for smaller-value P2P payments, bill payments, and B2B payments.

The average transaction value for EFT transfers, however, remains very high and sharply increased over the last decade, suggesting that EFTs are primarily used for B2B transactions. The average value of these bank transfers went from about US$1,000 to US$10,000, suggesting that these transfers are replacing paper checks and cash in B2B transactions. Indeed, the number of paper checks written each year declined by 30% over the decade. Cash-based B2B payments had been the norm in Mexico—even among large businesses—until the country opened to foreign trade, investment, and banking in the 1990s, which ushered in a new era that required businesses to adapt to foreign operational practices, such as electronic banking (Interview data).

Many banks have now introduced mobile phone interfaces (through SMS-based systems and smartphone apps) to perform online banking transactions. However, it is important to note that, despite the dramatic increase in online and mobile banking usage in just the last eight years, these services are limited to a very small subset of the population—younger, wealthier, technologically savvier Mexicans—that already had access to bank accounts. Mobile money accounts that do not require previous bank account ownership are only now appearing on the scene, and have not eroded cash usage among the unbanked.

Today, 22% of Mexicans over the age of 15 have a debit card, and 13% have a credit card. This is much lower than global and even regional averages, as the average for Latin American countries is 25% for debit cards and 18% for credit cards. In Mexico, as in other emerging markets, there are considerable differences in card ownership between income categories.

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9 A forthcoming National Survey for Financial Inclusion, commissioned by the multi-agency Financial Inclusion Commission, inquires about customers’ initiative in managing these accounts by asking whether they chose their own bank or if it was assigned by their employer.
There are 127 million payment cards issued in Mexico. This figure, however, does not adequately reflect the number of card users, as many cards are idle, and many card users hold more than one card. Debit cards are the most common payment card type in Mexico, but prepaid cards, which represent 14% of all cards, constitute the fastest growing segment.

The average number of monthly transactions performed per card in Mexico is low. In 2011 there were 75 million debit cards in circulation and 736 million transactions (Euromonitor, Bank of Mexico). Thus, in that year, there were only 9.8 transactions per card, or 0.8 transactions per card, monthly. For credit cards, the average number of transactions is 20 per year, or 1.7 per month.

However, these numbers disguise the fact that many cards are no longer in use; transactions figures may very well be skewed upward by frequent users. Additionally, in the last ten years, the value of the average card transaction did not trend toward smaller payments, but actually increased slightly, suggesting that small-value payments continue to be made in cash, even among bank account holders.

**Box 6: Pre-paid cards are the fastest growing card type**

Pre-paid cards are the fastest-growing type of card in Mexico. According to Euromonitor, payroll cards are set to fully replace payroll checks and vouchers by 2016, but cash will remain important.

Prepaid cards can be issued by banks. They can also be issued by regulated nonbank institutions, such as retail stores, as long as they are only used for purchases in that store. Current regulations limit balances to a maximum of 6,000 pesos (about US$460), and limit monthly cash flows to about 15,000 pesos (about US$1,150). As such, experts believe that banks will increasingly market prepaid cards, as well as credit cards with low credit limits, to younger and lower-income customers (Euromonitor International 2012). Prepaid cards are increasingly used by employers and the government in lieu of checks and benefit vouchers.
Many of the prepaid cards in the market are closed-loop NFC cards for transportation systems in main cities. Other uses of prepaid cards include government welfare payments, as well as employee payroll and benefit cards. The government-run conditional cash transfer program, Oportunidades, disburses some benefits on a Visa Electron prepaid card issued by government savings bank Bansefi, while the Mi Despensa food stamp program uses a BBVA prepaid card. The government of Mexico City is considering issuing a “city card,” a single payment medium for transport and services such as electricity and water that could also be used as an official identification credential (Euromonitor International 2013).

Most recently, prepaid cards became big news during Mexico’s national elections in mid-2012, when the Institutional Revolutionary Party (PRI) allegedly used them to bribe voters. This occurrence, along with the anecdotal association of prepaid cards with money laundering, is likely to bring more government scrutiny to this product segment in the future.

### Box 7: Concern over card fraud keeps people in cash

In casual conversations and interviews with experts on banking and payment systems, one of the most commonly cited reasons for the persistent consumer preference for cash over cards is concern about payment fraud such as card cloning and identity theft.

Popular media in Mexico frequently report stories dealing with card cloning rackets and government efforts to crack down on these offenses. The Mexican Bank Association (ABM), which monitors card fraud at member banks, however, estimated in 2011 that fraud occurred in solely 0.024% of debit cards and 0.030% of credit cards.

To address data security risks, the National Banking and Securities Commission (CNBV) mandated in 2010 that banks convert all cards to chip technology, with added security features to prevent fraud, by 2013 (Euromonitor International 2013). According to Euromonitor, as of 2011 over one-third of cards are chip-based, compared to just 2.5% when the CNBV issued its mandate.

A major technological divide exists between credit and debit cards, with 60% of credit cards having chip technology compared to just 5% of debit cards. Additionally, about 1.2% of cards in Mexico have near field communication (NFC) technology to enable contactless payment.

### 3. Key developments in cash and payments

**Banking correspondents**

Cash access points, particularly in the so-called bank deserts, have rapidly expanded thanks to a new regulatory entity known as correspondientes (banking correspondents). In December 2008, the National Banking and Securities Commission (CNBV) authorized certain banks to affiliate retailers and other merchants, following a successful model adopted in Brazil. Affiliated third parties, or correspondents, may perform some key functions of a bank branch, such as opening certain new accounts, processing payment of loans and bills, serving cash withdrawals and deposits, and fielding balance and...
transaction inquiries. The rationale behind the model is that banking correspondents can serve hard-to-reach rural areas without the brick-and-mortar outlays of a branch.

Already, banks are working with supermarkets and convenience stores, which may be much more accessible for customers who live far from a bank branch. Twelve banks have received licenses to affiliate 660 companies as correspondents, representing 16,000 banking correspondent points as of 2011, more than the total number of bank branches in Mexico. In 2009, the number of correspondents stood at just 4,000, and by year-end 2012, the estimated number had grown to approximately 20,000.

Assuming that correspondent networks can manage liquidity well, the cost of banks’ brick-and-mortar, personnel, and cash operations could fall considerably. The CNBV has proposed that suppliers to small merchants with national distribution networks (such as Coca-Cola, Pepsi Co., and Bimbo) help affiliate banking correspondents (Euromonitor International 2011). The Mexican Banks Association is also researching the possibility of working with large, nationwide distributors such as these recognized brand names.

The CNBV has also proposed that Mexico’s existing networks of state-owned service providers become banking correspondents. Some of these already participate in the correspondent model, such as the state-owned company Telecomm-Telégrafos and the nation-wide chain of food banks Diconsa. Telecomm-Telégrafos possesses a network of 1,598 points of service while Diconsa has 23,226 points of service, many of which are already connected to state-owned savings bank Bansefi through its L@ Red de la Gente network.

Other government networks that the CNBV has analyzed for their potential as banking correspondents include national oil company Pemex, the lottery Pronósticos, and the health ministry’s network of hospitals. All of these networks possess 10,000 points of service or more.

Given the new alliances being formed between commercial banks and merchants, over the next five years there will likely be an increase in the number of financial correspondents, as well as innovation and an increase in the diversity of financial services that can be performed at a correspondent outlet. However, going forward, banks will need to ensure they do not cannibalize their own business, correspondents will need to protect their core business, and both players will need to ensure they do not compromise quality and security in the new model. Euromonitor expects that these new alliances will develop loyalty cards and rewards programs to entice customers and keep them engaged. However, even if service is more convenient, products are offered at the right price point, and attractive rewards are introduced, some Mexicans may still be reluctant to use formal financial services (Euromonitor International 2013).

Prior to the December 2008 CNBV ruling, some banks had used a correspondent model, but without regulatory oversight. This meant that, from a regulatory perspective, consumers did not have recourse to their banks if a transaction went wrong. Instead, the burden of responsibility was on the correspondents, with limited consumer protection. Now, banks bear legal responsibility for all transactions in their correspondent network, rather than merchants. The new ruling sets the bar quite high to become a correspondent. A business has to prove that it is a permanent establishment, that it has appropriate infrastructure and credit history, that employees can operate electronic payments, and that they can authenticate the identity of banking clients. Correspondents are not allowed to charge their own commissions on top of those agreed to with the bank, nor can they advertise on transaction receipts, sell their own products attached to banking transactions, or subcontract agents. Only some correspondents (those located in tourist areas, the northern border, and duty-free shops) can perform foreign exchange operations on behalf of the bank they are affiliated with, and the amounts they can exchange are restricted.
Mobile banking and mobile money

Mobile banking networks in Mexico are still in their infancy, with most products aimed toward existing bank customers who use online banking. Many large commercial banks have launched mobile access to online banking services for smartphone users, enabling users to perform money transfers, make balance inquiries, and make credit card and bill payments.

Telcel, the dominant cellular network operator, equips all of its new cell phones with a mobile banking application. Using this pre-installed app, smartphone users can log onto the online banking platforms of Banamex, Banco del Bajio, Inbursa, and Bancomer. Other commercial banks offer apps that can be downloaded, as well as SMS interfaces to perform certain banking transactions based on an existing bank account.

Two new mobile money systems have recently been launched in Mexico, following a regulatory overhaul allowing telecom companies to become banking agents and open low-value accounts with limited KYC requirements that do not require previous bank account ownership.

- **Transfer** was launched nationally in April 2012 as a partnership between Telcel, Banamex and Banco Inbursa. Banamex is the country’s largest bank, and is a business unit of Citigroup. Carlos Slim’s family are majority stakeholders of Telcel and Inbursa. Transfer allows clients to sign up for a mobile account by making a phone call to Telcel and providing their name and national voter-ID number. Once registered, clients can use an SMS service to pay bills, and send and receive EFTs.

- **MiFon** is an initiative of Banorte, the largest domestically-owned bank, the state-owned network of wire transfer outlets Telecomm-Telégrafos, and MasterCard. After a pilot run in the village of Santiago Nuyoo, Oaxaca, the service was officially launched in several states in September 2012.

In May 2012, the Mexican Banking Association reported one million active mobile-money accounts (El Economista 2012). The Findex survey, conducted in 2011, found that 4% of Mexicans had used a mobile phone in the past year to pay a bill, while 3% had used one to transfer funds.

**P2P payments: Cash is still king in migrant remittances**

Nearly one in every five households in Mexico receives remittances from migrants living abroad, primarily in the United States (Banco de Mexico). Likewise, some 5 million Mexicans, or 4% of the population, have migrated internally and are sending money home regularly. The following section looks at both international and domestic remittances as a source of income for Mexican households. In both cases, most remittances are immediately converted to cash, rather than deposited into an account. In 2011, Mexican migrants living abroad sent home an estimated US$23 billion in remittances, representing about 2.5% of the country’s GDP, according to the Bank of Mexico. Most international remittances to Mexico are sent through one of 21 remittance service providers (RSPs) operating in the United States (Orozco, Burgess, and Romei 2010) and collected in cash at one of 20,000 payment points across Mexico. Most of these payment points are bank branches and retailers, but foreign

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11 This is considerably lower than a high of 69 RSPs in the U.S.-Mexico remittances marketplace in 2003, which sprang up from just 25 in 2001. Since 2003, there has been considerable consolidation of the sector after a period of intense competition. The companies operating as of summer 2010 were Bancomer Transfer Services, Bank of America SafeSend, Barri International, Coinstar, Dinero Seguro a USPS product, Dolex, Giromex, Grupo Express, Intermex, Maniflo, MoneyGram, Order Express,
exchange bureaus, pharmacies, *Telecomm-Telégrafos* offices, and the offices of many other service companies also provide remittance disbursements.

The mean amount of each remittance sent from the U.S. to Mexico is about US$400, with the average cost of RSP service hovering at around 6% of the amount sent.\(^2\) Roughly 60% of remittances are made in U.S. dollars, which the recipient picks up in cash and then can choose to convert to pesos. The average remittance amount sent by Mexican migrants is highly sensitive to the dollar/peso exchange rate.

Although most international remittances are still paid out in cash, a growing portion of migrants send remittances for direct deposit into their relatives’ bank accounts.\(^3\) An interviewed remittances executive at a bank stated that about 20% of remittances are paid into bank accounts, compared to just 1% ten years ago. According to this executive, the proportion of remittances that are deposited into accounts at this bank has been growing by about 2.5 percentage points each year. This constitutes, however, a unique case—an institution that has actively promoted cash-to-account transfers.

In wider Latin America, only about 5% of all incoming international remittances are deposited into accounts. In principle, remittances deposited into accounts can entail considerable cost savings in terms of cash operations. For example, the bank cited earlier incurs in operational costs at least 9 times greater when paying out a remittance in cash than it does when paying out into an account (US$0.75 to pay out in cash vs. less than US$0.08 for an account deposit).\(^4\)

The effort that many international organizations and governments have invested into encouraging a greater proportion of remittances to be paid into accounts “has not been as successful as once hoped,” according to Hugo Cuevas-Mohr, a former money transfer executive who now runs the International Money Transmitters Association’s Latin American conferences. Many observers point out that financial inclusion is still an extant issue in Mexico, and that most banks are not interested in providing savings accounts to remittance recipients, typically having relatively low incomes.

Orlandi Valuta, Ria Envia, Sigue, Banorte’s Uniteller, Uno Money Transfer of the Omnex Group, Viamericas, Vigo, Wells Fargo, Western Union, and Xoom.

\(^2\) The cost to send varies considerably depending on the remittance service provider (RSP). To send US$200, bank transfers, such as Bank of America’s SafeSend product, cost as low as 1.6%, as of data collected in 2010. At that time, Wells Fargo charged 3.73%, Viamericas charged 4.86%, and Citibank charged 4.9%, for example. The average cost to send has trended downwards in recent years. For example in 2002 a remittance from the U.S. to Mexico cost on average 9.3% of the principal amount sent. Costs also vary considerably by the city of origin. For example, Mexican government agency Profeco found the cost in Houston was 3.6%; while in Chicago it was just 2.3% (to send US$200). One of the cheapest ways to send is through *Directo a México*, an international remittances service that was launched in 2003 by Banco de Mexico (the central bank) and the U.S. Federal Reserve Bank, linking the two countries’ automatic clearinghouses (SIAC in Mexico and ACH in the U.S.) so that customers can send money from their U.S. bank account to a recipient’s bank account or a *Telecomm-Telégrafos* branch in Mexico.

\(^3\) Also on the sending side, the marketplace for Internet-based remittances has grown considerably in recent years with players like Xoom.com, where senders can send remittances from the Internet for payout either in cash or in an account. In the U.S.-Latin America remittances corridor, as of 2010 about 10% of remittances were sent through Internet-based companies.

\(^4\) This is a marginal cost of payment services that excludes fixed costs of marketing and new customer acquisition.
Domestic P2P payments in Mexico likewise constitute a substantial flow of financial resources. Professor Manuel Orozco estimates that some 5-8 million domestic migrants send remittances to family elsewhere in Mexico that could total some 70 billion pesos (about US$5.4 billion) each year. Orozco says that the average amount a domestic migrant sends is about 1200 pesos (US$90), sent on average 17 times per year (Interview data).

Unlike international remittances, which today are largely sent through formal RSPs, about 65% of domestic migrants transfer monetary resources in an informal manner, such as by sending cash by courier, or carrying cash home during a visit. Despite this high level of informality, the supply of formal domestic remittance products is growing. Senders can deposit cash into a recipient’s bank account at a branch or make an inter-bank transfer over the Internet. Some international RSPs like MoneyGram offer domestic money transfers in Mexico. Migrants can also send cash through one of several local companies that have started domestic remittance services in the past five years or so. For instance, the government-owned wire transfer company Telecomm-Telégrafos, Bansefi, which offers remittances through its L@ Red de la Gente network, and branches of banks like Banco Azteca and associated retailer Elektra. Among formal remittance-transfer providers, Banco Azteca has been the most aggressive in promoting domestic P2P payments and has the largest market share in terms of number of transactions. The cost of sending a domestic P2P transfer varies widely by company, from US$2.30 to US$10.80 for a 1000-peso (US$83) transfer (Interview data).

G2P payments: Government pushes conditional cash transfers onto cards

Government welfare payments are an important source of income for many Mexicans. Mexico’s much-hailed conditional cash transfer program, Oportunidades, directly transfers about US$3.2 billion in cash each year to more than six million families, about 20% of the country’s population. In 2008, Oportunidades began transferring money to recipients through Bansefi’s payment cards and its network of correspondents L@ Red de la Gente. In urban areas, beneficiaries received debit cards linked to a no-frills savings account known as Debicuenta, while in rural areas they received prepaid cards, due to the lack of banking infrastructure.

The primary purpose of turning welfare payments electronic was to reduce transaction costs for beneficiaries, who previously had to travel an average of 4 hours to claim their Oportunidades cash transfer (Treviño Garza 2011).

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5 Small-value person-to-person Internet-based transfers have grown as the cost to send has come down. Today, small-value inter-bank transfers take place on the central bank’s SPEI retail payment system.
As electronic transfers ramped up, however, a number of challenges inhibited the program’s success. The program’s design reflected deep disagreements among government ministries about the usefulness of electronic payment systems for the poorest of the poor. Broadly speaking, the Finance Ministry favored electronic transfers, due to the considerable cost savings to be had with electronic delivery. The Social Development ministry, the Oportunidades host organization, on the other hand, remained pro-cash, arguing that conditional cash transfers were intended to be spent on consumption needs, rather than saved, and that beneficiaries needed cash to make payments (Consultative Group to Assist the Poor 2012).

The Finance Ministry forged ahead, and electronic payment distribution began in 2008. By 2010, the Finance Ministry mandated that all G2P payments, representing some 32 different programs, be disbursed electronically by December 2012. In the case of Oportunidades, the program required that the full amount of the transfer be transported in cash to distribution points, even for recipients whose money was deposited to a card. Thus, from an operational perspective, there were no cost savings. Indeed, recent analysis by CGAP estimates the average cost for delivering payments electronically to be 22% higher than the highest fee paid for cash distribution (Consultative Group to Assist the Poor 2011).\textsuperscript{16}

\textsuperscript{16} CGAP estimates that the weighted average cost per payment is 2.5% of the value of the average payment. For Bansefi, which operates the accounts, the business case for providing savings products to Oportunidades beneficiaries is not clear. “Account usage is low, opportunities for revenue are slim, and average balances are not sufficient to generate substantial float income,” according to the CGAP report. Additionally, the bank faces high costs in building the distribution network, is not allowed to charge fees on the accounts, and cannot cross-sell higher-return products such as credit due to a government rule restricting Bansefi from engaging in retail lending. Thus, the business case lies mostly in the substantial government fee income to be gained from operating such as massive scheme, as well as the possibility of earning new government contracts.
Additionally, *Oportunidades* required prepaid card recipients (80% of beneficiaries) to withdraw the entire balance of their account within five weeks, or risk losing it.\(^{17}\) Beneficiaries could re-deposit some or all of their cash into their account, but many recipients were not even aware that they had an account, and program staff were not well-trained to encourage account usage. One study found that *Oportunidades* recipients preferred the electronic payment scheme because it did not require them to pick up cash on a specific day and could send someone else to pick up the money, allowing them more flexibility. This study also revealed widespread confusion among beneficiaries regarding rules for withdrawal from and deposit into the account.

### 4. The regulatory environment

The regulatory environment in Mexico is a mixed bag regarding cash, providing both incentives and disincentives to switch to alternative payment methods. On the one hand, the government has promoted financial inclusion, the use of electronic payments by loosening KYC rules for low-value accounts, licensing of banks to sub-contract many of their functions to banking correspondent networks, and launching of mobile banking models. On the other hand, a (now-extinct) withholding tax on cash deposits discouraged small business owners from putting cash earnings in a bank account, and the national labor law grants employees the right to receive their wages in cash in their workplace.

As in many developing nations around the world, in Mexico the desire for greater financial inclusion and more widespread electronic payments is offset by concerns over tax evasion and money laundering. Regulators must also strike the right balance between consumer protections (which for many observers involves caps on fees), while creating the right enabling environment for private sector innovation. The following section examines Mexico’s regulatory environment.

**Payment system competition and interchange fees**

The Bank of Mexico requires that banks disclose all fees, and that they allow customers to pay their credit balances through interbank electronic transfers. The government also regulates credit card minimum payments: in 2011, new regulation was introduced to gradually increase minimum payments, so that consumers cover not only interest charges, but also part of their outstanding principal, each time a payment is made (Euromonitor International 2013).

The central bank has been concerned that fees charged for debit transactions at small merchants and the prevailing structure of interchange fees across different payment systems discourages the use of electronic forms of payment. However, as former Bank of Mexico governor Guillermo Ortiz put it at a conference in 2006, “It is not obvious what the socially optimal interchange fee should be,” (Pacheco and Sullivan 2005). Thus, instead of setting fees outright, authorities have used the threat of regulation to encourage the private sector to take voluntary action on fee structures. “A credible regulatory threat is helpful […] and policymakers need to be aware that improving efficiency in retail payments is a long and continuous process,” Ortiz said, noting that banks had unilaterally agreed to reduce some interchange fees and introduce fee categories for different retail sectors.

The government and many of the smaller players in the financial system have also expressed concern over the payment system being characterized by high barriers to entry and unfair competition. “Some observers think there is an oligopolistic control on payment systems, with only two switches in the country [EGLOBAL and PROSA] that are controlled by banks, making it harder for smaller nonbanks to get into the market … and high market entry costs,” one expert explained.

\(^{17}\) A few pilot programs allowed recipients to store money longer.
In May 2010, the government required that these card switches interconnect, and not charge any interchange.\(^{18}\) The regulation also gave the central bank the authority to veto any increases or additional fees on financial services and interest rates that it wishes (Medina Alvarez 2010). According to the National Banking and Securities Commission (CNBV) prior to this reform, the payment network exhibited a discriminatory pricing structure, which effectively excluded small participants, discrimination against banks that did not have equity stakes in card switches, barriers to entry for new switches, and a slew of other anticompetitive practices on behalf of the dominant participants. The goal of the reform was that purchasers would gain more bargaining power, thereby lowering discount rates and increasing the penetration of point-of-sale terminals, through greater competition and specialization and the entrance of nonbank participants (Comisión Nacional Bancaria y de Valores 2010).

In the future, the banking system may remain dominated by foreign-owned banks; some experts expect consolidation to occur, in the form of important mergers among mid-sized banks. Regardless, the expectation is that mid-sized banks will continue to be forced to pay for access to payment networks owned by large banks.

**A tax on cash deposits**

In 2007, the government implemented a 3% withholding tax on all cash deposits, known as the *Impuesto a Depositos en Efectivo* (IDE), which went into effect in 2008. Authorities hoped the tax would discourage the use of cash, and promote check and electronic payments. The tax was automatically applied to all cash deposits over 15,000 pesos (about US$1,150, either per deposit or the sum total of all deposits in a month) at all regulated financial institutions. The tax was then reimbursed to tax-registered businesses in the form of a deduction from their income tax liability.

Some experts interviewed for this report believe that the tax had the unintended consequence of discouraging both individuals and businesses from using the banking system. They believe that it may have even pushed the informal economy further underground, making tax collection all the more difficult for a country that already has one of the lowest rates of tax collection in Latin America. Indeed, the revenue the government collected through the IDE tax declined from 5.4 billion pesos in the first seven months of 2011 to just 1.9 billion pesos in the same period of 2012; a 65.5% contraction.

The Calderon administration argued extensively in favor of the IDE, stating that the purpose of the tax was not primarily to collect revenue, but to help authorities investigate where tax evasion is taking place (El Universal 2012). Nevertheless, the tax was widely unpopular throughout its lifetime, which eventually led to its repeal in late 2013.

**ATM fees**

Previously, it was the banking industry norm in Mexico to offer customers unlimited withdrawals at proprietary ATMs. Banks soon limited free withdrawals to 2-4 per month, however; as a result mean withdrawal amounts began to steadily increase. In May 2010, the government regulated ATM transactions, forbidding banks from charging their own customers for ATM transactions and only allowing them to charge clients of other banks. Additionally, banks are required to disclose all fees charged to ATM users, as previously it was common practice to reveal the charges levied by the ATM proprietor, but not fees assessed by account holders’ banks.

As a result of new fee disclosures and the prohibition on charging clients using their own bank’s ATMs, customers have changed their habits. According to Alejandro Garcia, a Latin America financial

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\(^{18}\) The regulation modified the *Ley para la Transparencia y Ordenamiento de los Servicios Financieros* (LTOSF), the law on transparency and order in financial services.
institutions analyst at Fitch Ratings, the value of transactions at ATMs has dropped by roughly 40%. ATM revenue has thus gone down, and banks are not investing in installing new ATMs; instead, they are focusing on upgrading technology at existing ATMs.

**KYC rules for small-value accounts**

New regulation introducing “simplified” bank accounts may hold some promise for financial inclusion and increased usage of electronic payments. In 2008, as mentioned before, the government allowed looser KYC requirements for “simplified” low-value accounts. For these simple accounts, KYC may be outsourced to third parties, and the requirement to keep paper records of account origination is waived. The goal of this regulatory overhaul was to pave the way for banks to open small-value accounts through banking correspondents or mobile platforms. CGAP called this a “bold move”, as anti-money laundering rules were, for once, relaxed for the sake of financial inclusion (Faz and Dias 2011).

The new KYC rules specify tiers of accounts. The most basic account level contemplated in the regulation is strictly capped in value, regarding both deposits and withdrawals, and allows anonymous subscribers, but cannot be operated through a mobile phone. If a client wants to deposit or withdraw more than the specified lower-level cap, she must supply the bank with additional personal information in order to comply with the next “level” of KYC rules.

**Consumer protection: perceptions of trust and risk matter**

Studies of Oportunidades recipients and other low-income populations in Mexico reveal deep mistrust in the banking system, confusion and even anger over fees19, distrust of ATMs, and even frustration that ATMs do not dispense small-denomination bills.

Whether these consumer perceptions are well-founded may be beside the point, given the country’s historical experience with payments and lack of consumer protections. For most of Mexico’s history, consumers of all socio-economic classes paid their bills in person, in cash. The fact that in-person payments were the only option for years best explains consumers’ slow adoption of electronic systems, according to Mary O’Keefe, a former president of ProMujer Mexico who has conducted numerous studies for the government and private sector about the financial habits of the poor in Mexico.

O’Keefe explains that payments in Mexico have always been highly “personalized.” This is very different from what occurs in the United States, where for decades consumers have written checks and trusted in the U.S. Postal Service to deliver their bill payments. Three historical factors in the U.S. “depersonalized payments” and paved the way for broad adoption of impersonal payment systems like credit and debit cards and, later, web-based bill pay, according to O’Keefe: (1) trust in the postal system, (2) trust that sending a check by mail meant a bill was “paid,” and (3) confidence that “I can remedy a [payment] problem” if needed.

In Mexico, until very recently, the government agency tasked with consumer protection in the financial services industry (Condusef) “had no teeth,” according to O’Keefe. Thus, for example, a payment that did not go through became lost income and had to be paid a second time. Despite the fact that Condusef is now more proactive, O’Keefe argues that what matters is consumers’ perception regarding trust and risk in payment processes. She suggests that any analysis of transaction costs in payments rest not only on nominal costs, but also on the costs associated with perceived risks.

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19 Technically, the Bansefi accounts do not have fees. However, when clients use an ATM machine, a standard fee is automatically charged, and later reimbursed, leading to confusion.
5. Conclusions

Status
Cash is indispensable to the vast majority of households in Mexico. Rates of cash use could actually be much higher than the >90% reported levels, depending on how many “micro” payments (less than US$10) are omitted due to measurement error—as suggested by recent diary studies.

World Bank and FDIC estimates of financial access in the United States range from 88% to 91%; whereas in Mexico, bankarization stands at just 27%. Thus, it is surprising that only 70% of transactions among ANTAD grocers are in cash. Government vouchers for food (vales) account for an important component of stated payment-medium choice. Left to their own account, unsubsidized, consumers might do even more business in cash. And in regions of the country where banks are scarce, the proportion of cash transactions might be even higher. As it is, more than 90% of the population claims not to make electronic retail payments at all.

Income payments are often received in cash and so are household balances for short-term consumption. Only 14% of Mexicans claim to receive salary and wages deposited into accounts. Paychecks and payroll cards are frequently cashed out, and anecdotal evidence suggests that demand for cash periodically outstrips ATM capacity on pay-days. Households must therefore manage relatively large balances for current consumption and prudential savings, placing longer-term savings into valuables and financial assets.

Trends
Financial access is broadening and deepening in Mexico. New types of financial products are being developed, providing greater consumer choice, and somewhat expanding the consumer base for financial services. It would be naïve to suggest, however, that no-frills accounts could comprise a source of immediate competitive advantage for depository institutions. Payroll accounts with low balances provide little revenue from float and gratis cash access transactions, and at the margin still draw on the bank’s cash distribution network. The higher value-added financial services demanded by Mexico’s expanding middle class may, however, prove more immediately profitable.

Hybrid cash transactions appear to be the first categories on the rise. Electronic benefits transfers and payroll cards transform cash access transactions from over-the-counter settings such as banks and benefits offices to ATM and retail POS access. Remote bill payment services permit users to settle bills such as utilities in cash at a point of sale, sparing the time and expense of a trip to the payee’s office.

While the vast expansion of ATM, remittance, and corresponsales infrastructure has tapered off, the cost of access to cash has fallen dramatically in the last decade. In terms of pecuniary costs, consumers have a better chance to receive payments with no fees for access. In terms of shoe-leather costs, greater densities of cash access points, particularly in rural areas, should reduce the time and expense of travel to the point of access.

Drivers
Several regulatory initiatives have led to growth in uptake of financial services. Direct investment by the government of Mexico in electronic payments to consumers has greatly expanded the number of individuals receiving electronic payments, regardless of their ultimate preference for cash as a short-term payment instrument. The introduction of corresponsales and graduated KYC requirements for no-frills accounts demonstrates thoughtful innovation on the part of the government. With high-profile engagements in the G20 rotating chair and the Global Partnership for Financial Inclusion,
Mexico has stood by its commitment to see financial services improve both in quality and breadth of offerings.

Product design has emphasized consumer protection, perhaps to the detriment of operating margins in the short term. More than likely this is a necessary pill for financial services to swallow in service of broadening and deepening financial services for the consumer. As future consumers grow up entrusting key financial transactions to depository institutions, opportunities to cross-sell higher value-added services in credit, investment and risk management should expand as well.

Macroeconomic growth has not been the main driver of expanded access to financial services. National output has largely risen and fallen in accord with the most important export market and destination for migrant labor, the United States. Apart from two brief economic contractions in the Tequila crisis (1994) and the great recession (2009), Mexican GDP growth has been positive and income per capita has been rising steadily. Fertility rates have fallen dramatically since the mid-1970s, transforming the population pyramid into a classic bottle shape. The share of the population under age 15 has begun to come down; and this trend is expected to continue for years or decades into the future, Mexico’s Human Development Index is comparable to the most developed of the BRICS, and approaching the levels achieved by Chile and Argentina.

Remittances from the United States and other host countries have dropped off since the 2008 financial crisis, as unemployment remains high in a number of high-income countries, and especially so for migrant workers. Despite these falls in remittance income, adoption of financial services and Mexico’s financial infrastructure have expanded.

Questions

This study of the outlook for cash in Mexico leads to a number of specific hypotheses we will test in our consumer and business studies.

Shoe leather costs. Can we document the degree to which expanded infrastructure has lowered the shoe leather cost of access to cash for Mexican households? Reduced shoe leather costs could have a number of interesting effects, ranging from greater willingness to entrust assets to banks, to less absenteeism from work for salary and bill payments.

Cash in transit. What effect has the corresponsales business and the rise of rural ATMs had on the cash in transit business? Can we observe any changes to the spatial distribution of services provided, either to individual businesses or to the regions served by the new distribution networks? What result has that had on demand for cash in transit in both financial and non-financial businesses?

Corresponsales’ cash operations. What effect has the entry into bank-correspondent activity had on corresponsales? Have they seen increased traffic to retail outlets, or simply greater concentration of customers on the days when cash demand is highest? Have the central bank’s requirements on corresponsales imposed new costs, and how do those compare with additional revenue from the new business line?

Remittances. How did remittances fare in the Great Recession, and have they recovered since? Have households experimented with receiving remittances into bank accounts rather than cashing out? Which remittances trends, in the aggregate, has had effects on the net demand for cash?

Cash in the household asset portfolio. Do households assign a maturity to cash balances? Are lockboxes and safes used to differentiate maturities and concrete saving targets? Can we observe the shares of household cash inflows being allocated to short-term consumption, formal financial assets, tangible assets, and informal financial assets?
Implications

Cash-heavy. Mexico’s payments and financial services are predictably cash-heavy. Despite pronounced differences with the United States and Canada, Mexico’s share of assets and payments in cash reflects observable differences in bank infrastructure and payment institutions. Large areas of the country were until recently bank deserts. Banking crises in the 1980s and 1990s created large incentives for households to hedge currency risks in the household portfolio. These trends have inertia on their side; and it will take some time for consumer finances to tip into formal assets. Market incentives could reinforce the status quo, if the private sector is ambivalent about the profitability of serving households with low stocks of assets.

That said, Mexico has instituted a number of policies that clearly aim to promote confidence in noncash payments. Oportunidades promotes familiarity with electronic payments and trust in the convertibility of payment instruments. Payment risk is nontrivial for households that learned to distinguish between promises to pay and the tangible delivery of currency. Worries about financial fraud, exemplified by card cloning and identity theft, preoccupy new users of payment and EBT cards. These risks are hard to estimate ex ante, and horror stories suggest that the upper bounds on these liabilities might be large. So, the government is right to prioritize confidence in new payment systems. Until households are in a position to judge the rarity of these downside risks, they might be unimpressed with reductions in shoe leather costs to which they are habituated.

Bifurcated. Consumer finance in Mexico appears sharply divided into the haves and the have-nots. Card concentration among adopters closely resembles US, Canadian, Australian and European rates. What differs sharply between Mexico and these wealthy nations is the share of the population who has entered into a rich web of financial services. The share of the population holding debit cards is slightly over a quarter, but the number of cards per capita is more than triple that rate. This implies average card holdings (among those with at least one card) of roughly 3.5, versus about 4 in rich countries.

Infrastructure. The rapid expansion of cash access points greatly enhances the value of any gateways to the cash economy. The prototypical gateways between cash and the financial system are the bank teller and the ATM. The geographical reach of bank branches in Mexico is limited. With the rapid expansion of bank corresponsales, any new offering that is designed to convert noncash payments into cash or vice versa benefits from this enlarged footprint. International bank remittances would be of little use to households located in bank deserts; now, these services can and should target households within easy travel of a corresponsal. Similarly, new offerings in the domestic-remittance provider space can leverage the same enlarged footprint to enhance their value proposition for far-flung households and businesses.

Dirty money. There is a widespread presumption that cash is attractive for tax cheats and organized crime. To keep transactions off the books—either out of sight of the tax man or out of sight of the police—cash is understandably accused of simplifying life for crooks. It provides a precise store of value and medium of payment without any pesky paper trail to cover up. In rich economies, outsize sums of cash represent a business problem. Unless expenses such as payroll and supply chain can be settled in cash, “dirty” cash must be reinserted into the banking system at some point. Professionals that engage in these services cost a pretty penny. They exploit quirks of the financial system, such as international borders and gambling, to mask the sources of cash payments.

Cash, however, is not the only way to conduct business that robs the tax man; nor is it the only way to remunerate the pimp, the pusher and the bookie. In a world with no cash—as surely a fairy tale as is King Midas—service businesses such as restaurants, beauty parlors, and white-collar professions could function perfectly well as middlemen for crooked payments. Over-invoicing for business services would mask profits just as well as failure to report cash income. Conversely, payment for services not
rendered would provide an easy way to remit payment for illicit goods and services. It remains to be seen whether the preoccupation with cash transactions is the optimal way to police tax cheats and illicit commerce.

**Innocent bystanders.** This brings us to the unintended consequences of regulation. Quite a number of motives have been suggested for certain consumers’ preferences to transact with cash. While some of these explanations specifically suit the prototypical retail cash payment, such as the convenience of cash for small transactions or its near-universal acceptance, distinct motives have been put forth. Financial privacy is a libertarian argument for preferring cash payments to bank-based payments, as banks can only report to Big Brother on the financial dealings they know about. The more reputable commerce conducted through anonymous means, the greater the problem of a surveillance state in identifying and intimidating potential adversaries or dissidents.

Easy money in an era of rising prices also tends to squeeze savers. When the state can compel assets to be held in bank accounts and denominated in local currency, inflation is a device for expropriating the value of those accounts. Thus taxes and bans on large cash deposits or large, private cash transactions drive a wedge between the cash economy and the financial economy.

We anticipate new findings related to these questions and implications in our forthcoming research on Mexico. This academic year, IBGC plans to publish studies of consumer cash habits and case studies of business cash operations. These studies will assess similarities and differences between Mexican and global patterns of cash use. We welcome inquiries from industry, regulators, academics and civil society with regard to our current agenda.
Appendix 1: Surveys on financial inclusion and payments

Existing studies in Mexico provide rich data on savings and credit, some data on insurance, limited data on payments, and very little on cash *per se*. The following section examines the kind of cash data that could be obtained from the raw data in these surveys.

Most payments surveys ask whether people save money, and if so where they save it. One of the common multiple-choice options given to Mexican respondents is that of a *guardadito* (under-the-mattress savings). Other cash-based savings methods in Mexico include *tandas/mutualistas* (ROSCAs), other types of savings, a *guardadinerito* (money guard), and investing or buying assets (such as property, animals, grain, jewelry, and gold) that can be liquidated. Unfortunately, only some of the existing surveys on financial habits in Mexico allow respondents to cite multiple savings methods. Often, they ask, "do you save" and then ask "where/how?" Questionnaire wording, in this context, is very important.

Several surveys ask about how long it takes to get to reach a bank branch/ATM (CGAP/McKinsey study, Bansefi studies, Findex). The government’s National Survey for Financial Inclusion (published in April 2013) instead asks why people go to the branch/ATM and how much money they spend to get there. Using the survey’s raw data, it would be possible to isolate those who use branches and ATMs for withdrawals, then calculate how much they spend to get there, cross-tabulating by demographic traits.

The World Bank/Gallup Findex survey asks bank account holders how they usually withdraw cash from their account (e.g. at an ATM, branch counter, retail store counter, from some person associated with a financial institution, or if they do not withdraw cash), as well as the method used to deposit cash into accounts. This survey also asks whether respondents have used checks or electronic methods, including a mobile phone, to pay bills, make purchases, or send or receive money.

The National Income & Expenditure Survey asks about specific household expenses, at a minute level of detail: quantity, unit cost, purchase location, and—very importantly—whether cash, a credit/debit card, or store credit was used for purchase. This is a two-part survey, composed of a monthly or semi-annual recall exercise and a daily expenditure exercise that asks about purchases in the previous day.

To determine whether people earn their money in cash, some studies ask people if they are payroll-account holders. Loans constitute an important part of a consumer’s cash flow, and are often paid out in cash.
Appendix 2: Mexican regulatory framework

Laws, circulars, etc. that affect cash and the payment system

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