

Colombia's Online E-Payments Platform: Private Sector Innovation Inspired by Government Vision

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Spurred by government policy, Colombian banks have come together to create an efficient and cost-saving means of making online e-payments through bank transfers. Whereas many governments may attempt to create their own solution, the Colombia Pagos Seguros en Línea (Secure Online Payments, or PSE for its acronym in Spanish) showcases an alternative approach where a government's vision can incentivize the private sector to collaborate and innovate. Like any electronic payment option, PSE delivers significant cost reductions compared to cash for the financial service providers.

PSE authorizes electronic payments directly from bank accounts to government agencies or businesses in Colombia. This means when a customer or business with a bank account visits a PSE-affiliated government or business website, they can pay electronically. Between 2008-2012 the number of payments on PSE increased more than tenfold to almost a million a month. By March 2014, there were **2 million PSE transactions per month** — remarkable in a country with only 80 million monthly total electronic payments.

For online purchases, PSE gives consumers another option in addition to their existing credit and debit cards — and the fast growth for this purpose indicates that it has become a viable alternative. For utility and

bill payments, PSE is replacing the use of other older payment approaches, notably cash, checks, and bank drafts, which take longer and are more expensive.

The story about how Colombia established the online e-payment platform and increased adoption offers useful insights for countries that are ready for what BTCA calls the 'second shift' in the journey to cash-lite: Large numbers of bill payers begin switching to electronic payments.

Although PSE is a private sector innovation, owned and operated by the country's main private clearing house, the Colombian government played an essential role at every step of PSE's development.

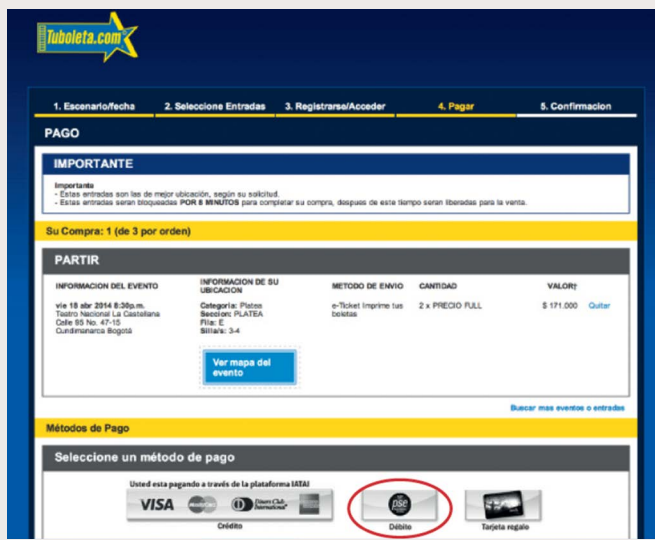


Catalyzed by government action, Colombian banks, with a wide range of profiles and interests, had to define commercial agreements that would support PSE without damaging their existing business. The compromise that resulted in PSE represents a marked success of **public-private collaboration**.

PSE integrates with billers' own websites

PSE is an online payment platform that enables consumers to pay bills and make purchases, and to which almost all of the banks in Colombia are connected.

FIGURE 1 PSE payment option



When visiting the website of a government agency or a merchant or biller, PSE routes the client to his or her bank's website (not necessarily the merchant's bank), using encrypted channels and digital certificates where the client logs in and authorizes a payment of the defined amount; the bank uses its specific security arrangements to authenticate the payer as a client and verifies that the funds are available in the account; the user is returned to the merchant's website to finalize the purchase; and then the funds are routed from the user's bank, via ACH transfer, to the merchant's bank which deposits the funds in the merchant's account.

PSE was driven by public-private collaboration

PSE was developed by ACH Colombia, the bank-owned private clearing house, in response to government initiatives. Government policy was also instrumental in driving usage in PSE's early years, though more recently the platform has been increasingly used by the business sector.

Multiple government agencies set the stage for PSE's success

Three government policies, in particular, were key to the development of PSE: **promoting interoperability, mandating electronic procurement payments by government, and centralizing the acceptance of online social security contributions.**

In 1995 the central bank, Banco de la República, spurred by the Treasury and Ministry of Finance's goal of shifting to electronic payments, asked banks to set up an ACH to enable the transactions.

Due to the initial lack of response from the private sector, the central bank decided to establish its own clearing house. Launched in 1999 and called ACH CENIT, it connects the central bank to all private commercial banks, the state-owned bank, Banco Agrario, and other financial institutions such as cooperatives and trust fund companies.

Banks initially had difficulty reconciling their divergent interests. While consolidating card infrastructure would cut costs and increase scale, big banks had invested heavily in building branches and were concerned about the implications of an electronic transfer platform. As a result, the big banks created their own ACH and the small and medium banks created another. These two merged in 2000 to form ACH Colombia, now the only bank-owned electronic clearing house.

In the first years of ACH Colombia's operations, transaction volumes were low, and member banks were concerned that switching fees would not be enough to make ACH Colombia sustainable. So the banks decided to impose a fixed monthly fee, regardless of actual usage, in a tiered structure according to each bank's transactional volume. The resources this monthly fee provided would later give ACH Colombia the financial independence to later invest in the development of PSE.

The creation of the public clearing house and then the private clearing house followed the adoption of an integrated financial management information system in the Ministry of Finance (called *Sistema Integrado de Información Financiera*, or SIIF), created by Law in 1996. The existence of SIIF enabled the Treasury to order that all payments to government vendors be made directly into their bank accounts — and when CENIT came online these payments were executed through that switch.

In February 2000, the government launched an ambitious public policy initiative to promote the use of information technology to improve government operations, facilitate interaction with citizens, and promote transparency. The “connectivity agenda” mandated the creation of a website “*Gobierno en Línea*” (or government online) by October 2000. The policy further stipulated that all public entities should launch their own website by December of that year, and that by December of the following year, they should provide services through their website and accept online payments electronically.

Government goals could not be achieved through a card-based solution

While in other countries debit and credit cards would have played a substantial role in fulfilling the *Gobierno en Línea* mandate, card usage in Colombia is modest. The main use of debit cards in Colombia has been for cash withdrawals, not purchases, and credit cards were limited at the time.

An important factor limiting credit and debit card usage for Internet purchases is the unwillingness of individuals to enter their card’s information on a merchant’s website due to security concerns. For businesses, card usage is hindered by the low penetration of corporate credit and debit cards. PSE’s approach of directing consumers to a bank’s website is perceived as more secure and practical.

The threat of a government solution incentivized private sector collaboration

The banking sector saw a clear business opportunity to build on ACH Colombia’s existing infrastructure and develop an online e-payment system. There was a strong belief that all the banks in the network could meet the government’s needs without having

to pay fees associated with debit or credit cards. Furthermore, the banks were afraid that if they did not collaborate in order to innovate, the government would develop its own solution as it did with CENIT while the banks stalled on ACH Colombia.

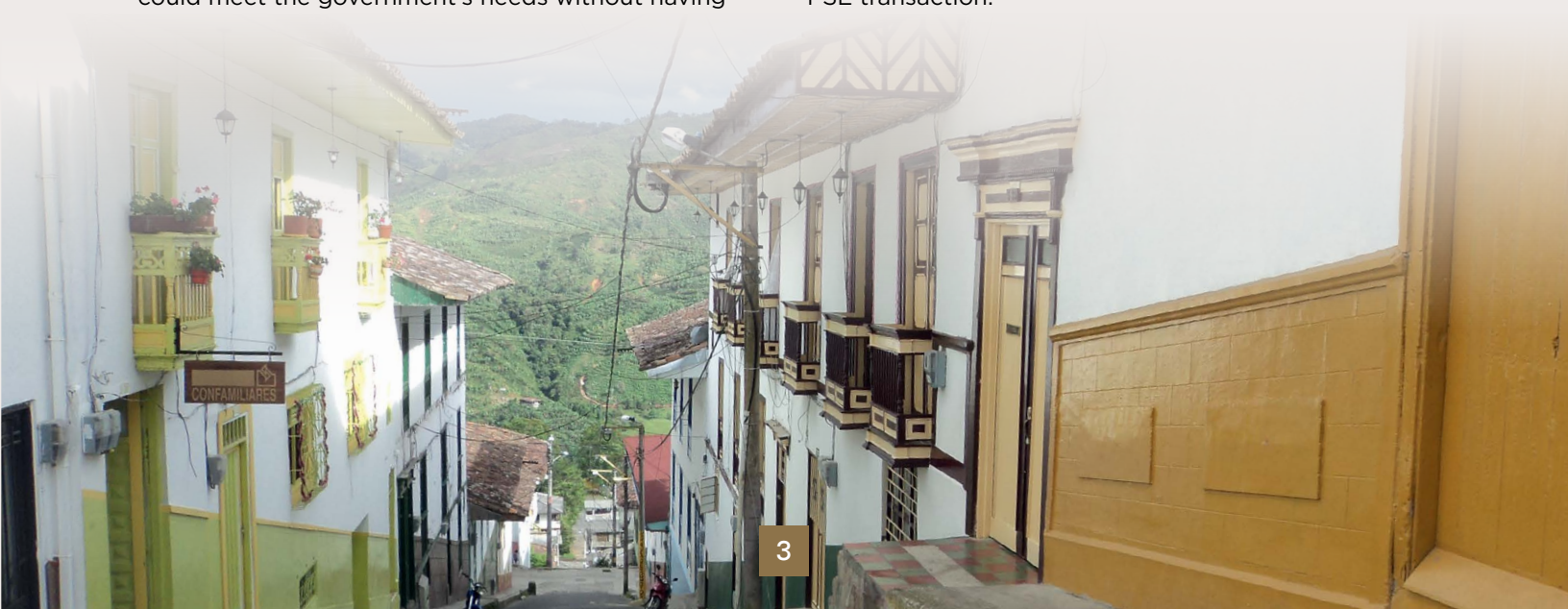
Beginning in 2004, ACH Colombia worked with its technology provider to design a custom solution based on the basic concept of a Web service provider. PSE’s start-up and operating costs were funded out of ACH Colombia’s revenues and did not require additional contributions from ACH Colombia’s member banks.

PSE adapted an online payment platform, designed mainly for government bill and fee payments, that later evolved to allow purchases online.

Once PSE was designed, the next technological challenge was the development of secure interfaces with the websites for banks, government, and businesses. This explains the time that elapsed between PSE’s original launch (2005) and the time that all banks were connected and using PSE (2009-2010).

The main negotiations between the banks were not about technology. Finding the correct incentives for all participants and deciding who would be responsible for signing up merchants — and who would therefore receive commissions — generated tensions.

The final fee structure for PSE was designed explicitly to match the costs of cards and other payment mechanisms (cash, checks, and bank drafts) so as not to favor PSE. Regardless of the type of transaction, banks would pay ACH Colombia a fixed fee per PSE transaction.



Despite political changes, new government policies helped build trust and drive adoption

Unfortunately, just as ACH Colombia and its member banks were addressing the technical and financial barriers to implementing PSE, the government's "Connectivity Agenda" ground to a halt when a new government took office in 2002. By then, most of the changes were in place, but public entities did not prioritize receiving payments electronically through their websites.

It was a different government initiative that gave PSE a significant push in the form of **social security contributions**. This is cited by many as a turning point for electronic payments generally, in Colombia, and it was decisive for PSE.

The timing was fortuitous. At the end of 2004, the Ministry of Social Protection issued a Decree aimed at creating a unified electronic platform that would electronically calculate social security contributions and facilitate the electronic payment of those contributions through e-filing. The platform, *Planilla Integrada de Liquidación de Aportes* (PILA), would interface with the various operators for health and pension payments.³

For PSE, PILA plays the role of one "merchant," receiving one payment from each employer which encompasses health and pension contributions for all its employees, and that payment is then divided and disbursed into each social security provider, using ACH transfers.

"By the end of 2012, business transactions nearly equaled social security contributions by volume, and in 2013 for the first time there were more payments to businesses."

As of 2012, on average one PILA e-payment contribution to the social security system using PSE generated 5.2 ACH transfers to the accounts of each social security operator. This means that by the end of 2012, the 6.4 million annual PSE transactions made by social security information operators translated into 33.3 million ACH transfers — a big increase in the volume of electronic payments. According to BTCA's country diagnostic of Colombia, an estimated 80

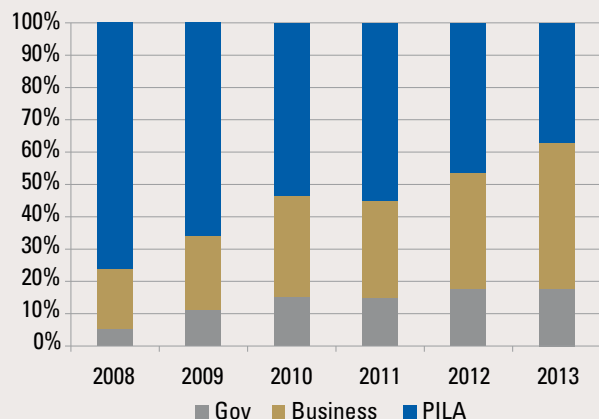
percent of all social security contributions on behalf of employees were paid electronically by 2013.

Not only did the development of PILA allow PSE to reach large scale, but because businesses were forced to use PILA, employers and employees learned to trust the PSE system. PSE also reduced complexity and resources for companies making social security payments on behalf of employees.

Payments to private merchants now represent the most dynamic segment of those using PSE

In PSE's early days, social security contributions were the predominant payment type. Though these and payments to government agencies continue to grow in volume, payments to private businesses make up an increasing share of PSE's transactions.

FIGURE 2 PSE's annual transactions by volume



Source: ACH Colombia

A business's decision to accept payment over PSE takes many factors into account. Businesses like PSE because it ensures that the purchaser's funds are confirmed at the time of purchase. Further, businesses do not have to have an account at all their customers' banks to receive bill payments.

Through PSE, they can accept payments from any bank. PSE also gives businesses control over the amount paid, since the transaction originates on their website, reducing mistakes and the need to confirm the match of the funds to an actual sale or invoice. And once funds are confirmed, the transaction cannot be charged back, thus strengthening businesses' trust in the system.

On the other hand, connecting to PSE entails a high degree of technical complexity for merchants, especially smaller ones. Managing and upgrading technology can be difficult and expensive, often requiring an outside hosting or payment gateway service. These services have benefited from and fueled PSE's development.

Benefits and Lessons

PSE exemplifies a way in which public/private partnerships can work and in the Colombian case develops a unique and successful solution. However, PSE is not a perfect solution that could work throughout any context. In comparison to other available bill collection mechanisms, PSE transaction cost represents for the financial service providers only one-third of the cost of cash. When a corporate client receives a cash bill payment at a branch it can cost the bank \$1.30. The cost to the bank when a corporate client uses PSE ranges from \$0.30 to \$0.40.

Governments, providers, and businesses in other contexts where card usage has not taken off, either because of trust issues (purchases) or because other payment mechanisms are more established (bills), should follow these lessons to maximize the chances of success for an online credit transfer platform:

For governments:

- A long-term policy commitment can spur financial service providers to develop effective, efficient payment products. In this case, banks and the bank-owned ACH responded to government pressure and a market need to collaborate and create the PSE.
- Government mandates can be effective in driving usage and generating wide acceptance of electronic payments.

For providers and businesses:

- PSE has facilitated B2B payments and reconciliation processes. Nevertheless the interface between PSE and its merchant users is not easy for banks to develop and offer alone, providing an opportunity for third parties to offer these solutions and spur usage; and
- Opposing interests have to be aligned; merchants' business models can vary, so incentives should, too.



About the Better Than Cash Alliance

The Better Than Cash Alliance is an alliance of governments, private sector and development organizations committed to accelerating the shift from cash to electronic payments. The Better Than Cash Alliance is funded by the Bill & Melinda Gates Foundation, Citi, Ford Foundation, MasterCard, Omidyar Network, USAID and Visa Inc. The UN Capital Development Fund serves as the secretariat.



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- ¹ Content and data in this document are based on information gathered during the fourth quarter of 2013, and therefore represent data prior to this date.
- ² The lead authors of this case study are Beatriz Marulanda and Mariana Paredes for Marulanda Consultores, which is part of the Bankable Frontier Associates-led consortium responsible for the Better Than Cash Alliance's Development Results Focused Research Programme. For the full case study, see betterthancash.org.
- ³ Today a private savings model for pensions is managed by 5 funds which coexist with a public solidarity fund, and workers are allowed to choose between them. For health social security, workers can choose between 24 providers. Employers also have to contribute to professional risk insurance; they choose between 10 companies. Until 2006, employers had to fill out one form per provider and pay each one independently, which could mean processing 10-15 forms and payments each month. Payments had to be made through institutions (mainly banks) approved to collect social security contributions, as well as the low-value payment systems.

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