

POLICY BRIEF

FINANCIAL INFRASTRUCTURE SERIES PAYMENT SYSTEMS POLICY AND RESEARCH

FINANCE AND PRIVATE SECTOR, LATIN AMERICAN AND THE CARIBBEAN VICE PRESIDENCY
FINANCIAL AND PRIVATE SECTOR DEVELOPMENT VICE PRESIDENCY



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BALANCING COOPERATION AND COMPETITION IN RETAIL PAYMENT SYSTEMS

1. Why is retail payments efficiency and innovation key to economic and social development?

2. What is the combination of payment instruments usage that can be considered socially optimal?

3. To what extent are efficiency, access and innovation determined by cooperation and competition among market players?

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1. Why is retail payments efficiency and innovation key to economic and social development?

Payment systems and instruments are significant contributors to the broader effectiveness and stability of the financial system, in particular to the confidence in money and to the functioning of commerce. Hence, the efficient and safe use of money as a medium of exchange in payment transactions is an essential function of the currency and, moreover, it is also a foundation of the trust people have in it.

For these reasons, the efficiency and safety of payment systems (large and low-value ones) are of interest to central banks and other public authorities. Payment system oversight is a task that central banks undertake to ensure public confidence in money. The scope of the oversight function (e.g., large-value payment systems, securities settlement systems, retail systems, payment instruments) varies among countries. However, there is an increasing attention, beyond safety issues and systemically important systems, to the efficiency of retail payment systems and their role for the public confidence in money and the economy.

Lack of efficiency and innovation in retail payment systems may have important costs. Recent academic findings based on empirical data reveal that shifting from paper-based payments to electronic ones could entail yearly savings to a country's economy of about 1 percent of its GDP.¹ This is mainly explained by the realization of economies of scale in the provision of electronic payments, the overall increase in the total number of payment transactions, savings in back-office operations as well as by the impact of the technological change in terms of lower telecommunication and processing costs.

However, in many countries around the world the role of cash and cheques is still strong, acting mostly as preferred payment instruments for smaller and face to face transactions. The socially optimal combination of payment instruments differ from country to country given the particular features of the nation-specific production function (e.g., the balance between fixed and variable costs) and the varying pricing strategies applied by commercial banks and other payment services providers. Yet, pricing policies by banks and regulatory actions by public authorities are usually visible drivers steering user's preferences. This Policy Brief looks at the forces shaping retail payments markets. Drawing on an overview of the main issues and four case studies from across Latin American countries (Argentina, Brazil, Colombia and Mexico) and the expertise of the World Bank in payment system projects, it offers a set of policy implications for public authorities to explore in their efforts to balance cooperation and competition in retail payment systems in order to bridge the infrastructure gap enhancing economic and social development.

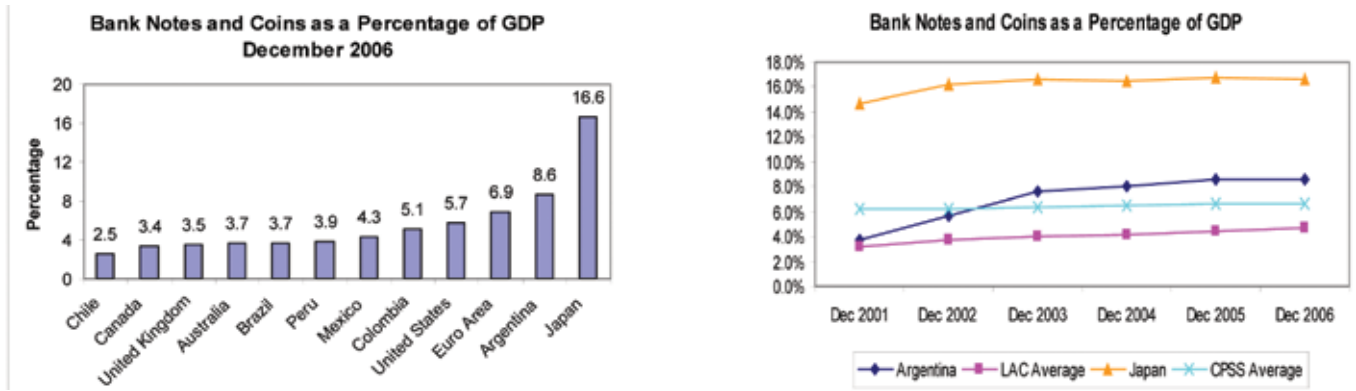
¹ In addition, for the case of Europe, Capgemini Consulting has proved that advancing in the modernization of the retail payments market (the so-called SEPA project) could have a significant market potential of up to 123 million in benefits over six years; a figure that could yet rise even further (up until 238 million) should banks be successful in using SEPA as a platform for the automation of business process linked to the business chain (e.g. e-invoicing).

2. What is the combination of payment instruments usage that can be considered socially optimal?

The socially optimal combination in each country depends on user's preferences that can vary not only among countries but also within countries for different types of transactions. It also depends on the socioeconomic structure of the country and environmental factors (e.g., size, demographics, rural versus urban, etc.).

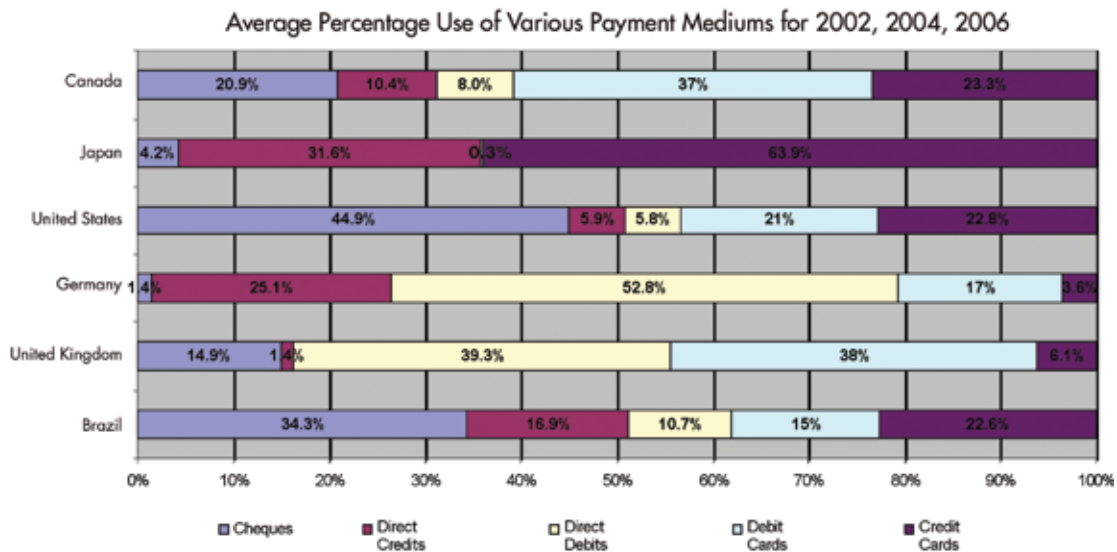
There is an increasing trend in the use of cash in some countries (see graph 1). Use of cash in some G-10 countries has been steady in the latter years between 3 and 6 percent of GDP, with the exception of Japan that has traditionally presented a high level of cash in circulation, between 14 and 17 percent of GDP. Latin American countries present an increasing trend (in part motivated by the establishment of financial transaction taxes) though levels have been similar to those of G-10 countries, except in the case of Argentina with an increase from about 4 percent to 9 percent from 2001 to 2006, mainly caused by the financial sector crisis.

GRAPH 1



1/ CPSS: Australia, Canada, Euro Area, Japan, U.K., U.S.; LAC: Argentina, Brazil, Chile, Colombia, Mexico, Peru Source: WB DDP for LAC and 2006 of CPSS and the rest CPSS from BIS

GRAPH 2



Source: World Bank Global Payment Systems Survey 2008

The usage of various non-cash payment instruments varies among countries (see graph 2). In terms of volume, cheques still represent an important percentage in the American Continent despite the reduction of their systemic importance as demonstrated by their lower relevance in terms of value. Some G-10 countries still keep a high use of cheques (e.g., Canada, UK, US) though there is an increasing trend in the usage of electronic payment instruments, mainly credit transfers, cards and direct debits (the latter especially in European countries).

3. To what extent are efficiency, access and innovation determined by cooperation and competition among market players?

The extent to which efficiency and other important policy objectives such as access to financial services are attained in retail payments systems is partly determined by a complex interplay of cooperation and competition efforts among market players. This interplay is influenced by the relative importance and drivers of costs, risks and market power in the provision of various types of payment services.

Although the dividing lines among payments services are not always clear, the sequence of payment operations can be decomposed generally into:

- *Access services* which provide the payor with the opportunity to select a payment instrument of choice.
- *Messaging services* which transmit payment information in a format that complies with the accepted standards for the entry of that information into the clearing and settlement system.
- *Specific clearing services* and arrangements for the processing of payments that vary by the type of payments instrument and the systems' architecture.
- The *settlement services* provided by a settlement bank (e.g., the central bank) which discharge the payment obligation and provide finality to the process.

There is increasing centralization of operations as the payment moves from its instrument access stage to the settlement stage due to the *natural monopoly* features in the provision of some of these services. For this reason, it is not at all uncommon to see payment platforms being developed through cooperation among competitors. Indeed, payments service providers

often compete directly in the provision of retail payments instruments and services to end-users but they also cooperate in shared payment networks ('upstream cooperation combined with downstream competition'). Balancing cooperation and competition is not easy, there may be coordination failures that do not make always possible to cooperate introducing inefficiencies and duplications. On the contrary, cooperation could lead to collusive behavior among payment system providers affecting the accessibility and affordability of retail payment services.

Market structure in retail payment systems is characterized by:

- *Economies of scale* in messaging, clearing and settlement services due to the fixed costs of the infrastructure.
- *Economies of scope* in clearing and settlement as well as in messaging services due to technology flexibility.
- *Network externalities* in messaging, clearing and settlement services are produced by complementarities of users and/or products and compatibility of products.

Competition takes place at two different levels:

- *Competition across retail payment instruments* (e.g., cheque vs. electronic transfers).
- *Competition across payment system providers for the same payment instrument:*
 - *among platforms* (e.g., different credit card providers) and:
 - *within platform between service providers* (e.g., cards issuers versus acquirers).

The retail payment markets are also influenced by a number of dynamics. Some of these are specific to the end users (buyers and merchants), some are specific to the platforms (networks), and some depend on the intermediaries (for example, in the case of card payments, the buyers' card issuers and the merchants' acquirers):

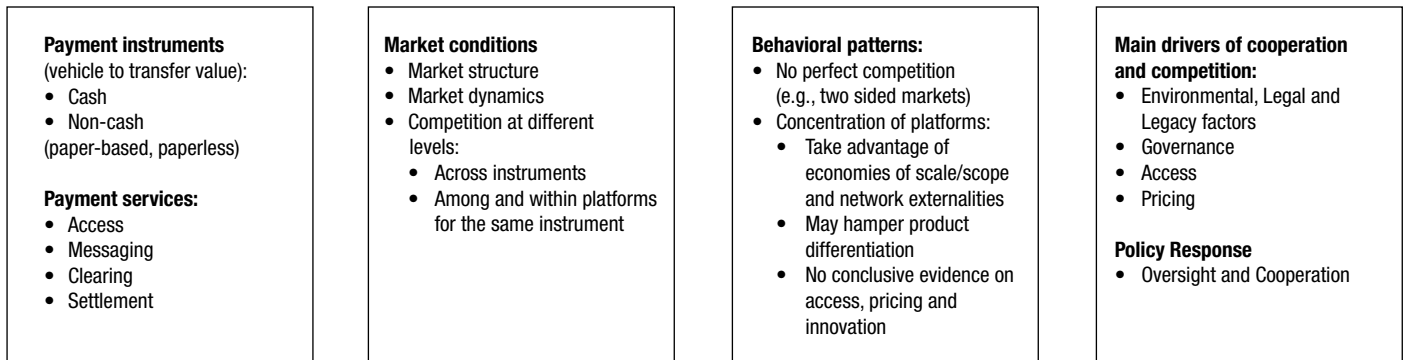
- *Switching Costs* at the platform level (for platform participants), at the cross-product level (among payment instruments) and within the same type of product. Switching costs may prevent the adoption of better technologies and social optimization.

- *Path Dependence* as the legacy of previous technology developments, often determined by transient conditions, does typically influence later choices and outcomes, thus, restricting investment decisions that may negatively affect innovation and adoption of more efficient technologies.
- *Tipping points* as there is a tendency for one system to end up as the dominant one (payment card systems are an exception). Since the network externalities dictate higher utility to each participant by adding more participants, the utility is maximized if everybody participates in one single network.
- *Multihoming and stickiness*. In most cases, both sides in a payments market use several platforms, i.e. they “multi-home”. Consumers have more than one type of payment instruments, and merchants accept several types of instruments. This “multihoming” also takes place within one type of instruments (e.g., credit cards). Often, however, the consumers favor one card over another, i.e. their usage is “sticky”.

Many recent innovations in retail payment systems have been largely supplied by non-banks. Non-banks have proven very successful in enhancing existing payment solutions, improving payments system efficiency and, further, fruitfully identifying and servicing new niche markets.

As in other economic sectors (e.g., telecommunication, energy), market structure, competition and dynamics in retail payments determine behavioral patterns that differ from the situation where a multitude of firms engage in perfect competition with free entry. Economies of scale/scope and network effects have resulted in natural monopoly features that cause a high concentration of payment platforms, sometimes ending up in vertical integration. If this is a positive or negative result is unclear and there is not a definitive answer. Effective cooperation may exploit economies of scale and scope and network externalities in a cost-efficient way and is likewise crucial for setting standards that will secure compatibility between the various products. However, centrally-agreed common features can sometimes hamper product and/or service differentiation and innovation at the individual service provider level. A key question is what factors should the authorities and key stakeholders consider in balancing cooperation and competition in retail payment systems? (see figure 1).

FIGURE 1. RETAIL PAYMENT MARKETS AND DRIVERS OF COOPERATION AND COMPETITION



4. What are the main drivers of cooperation and competition?

Some payments services may be more efficiently provided under competitive conditions (access) versus other that may show natural monopoly features (messaging, clearing and settlement). Vertical integration or joint provision of some of these services by competitors may generate conflicts of interest among them resulting in inefficient governance, access or pricing structures. In markets with similar characteristics (e.g., telecommunication), authorities have resorted to services provision separation by type of service. Those having a natural monopoly feature being provided by entities different from those competing with the final client. In the retail payment systems area this approach may not seem to be a feasible alternative due to the close relation of retail payment services with the core retail banking activity.

However, authorities may resort to *oversight and regulation* to deal with conflicts of interest and balance cooperation and competition. This approach has been recently followed by many central banks and competition authorities and other relevant bodies around the world (see box 1). In particular, through oversight and regulation authorities are able to introduce market corrective measures. These should be targeted to the main drivers of cooperation and competition (environmental, legal, legacy, governance, access and pricing) to achieve the defined policy objectives. Lack of oversight and regulation most surely will end up in sub-optimal availability and affordability of payment instruments (see section 6).

Network cooperation and competition is highly influenced by *environmental, legal and legacy issues*. In deciding the design features of a given payments network, banks and all other relevant players are typically laying the grounds of the industry's future competition game. Therefore, the final strategic approach chosen is likely to come as a result of the combined influence of such diverse factors as the structure of the banking industry, socio-legal, political and macroeconomic (e.g., high inflation) considerations, demographic dimensions, etc.

Governance of the infrastructure has a significant impact on cooperation and competition. Non-proprietary, transparent and open standards that do not impair interoperability can help shift competition to more classic variables such as pricing, distribution channels, brand, customer service and core value propositions. Self-regulation can help keep the infrastructures aligned with the changing needs but ensuring neutrality, ob-

jectivity and contestability normally requires a closer public scrutiny of the self-regulatory scheme.

Gaining *access* to messaging, clearing and settlement services is of capital importance for the ultimate success of new entrants in the market. Retail payment instruments and services are a critical part of today's banks portfolio strategies. The increasing role played by non-banks makes access considerations even more important nowadays. Players with a dominant position in one infrastructure may have the incentive to create barriers for access to new entrants. Moreover, access requirements should be defined as to ensure that all participants enjoy the same level of financial soundness and are able to cope properly with the technical and operational requirements. Two-tiered membership participation models and certain types of decentralized clearing structures may sometimes be a solution to ensure sound access to the infrastructure, but under certain circumstances they may also create access barriers.

The complexity of *pricing* structures in retail payment systems may be used by some participants to gain a competitive advantage. Membership fees accommodate charges depending on the type of participation, activity level, market share, assets, and prospective contribution to the expansion of the current network. In addition to entry fees, participants are normally subject to usage fees. This complexity may increase switching costs for the participants and their clients, negatively affecting rivalry. Float income earning and cross-subsidization of payment services is furthermore a common practice in retail payment systems. Thus achieving a neutral and socially optimal level of fees in retail payment systems is not a trivial matter. For example, in relation to the cards market, interchange fees² are typically fixed to serve as a complex balancing mechanism that aims at maximizing the network overall profits.

² This study uses the term interchange fee for the cards markets as defined in the CPSS glossary, that is, fee applied for a network organization and paid by the card issuing institution to the acquiring for the cost of deploying and maintaining ATMs and POS. For the ACH market the study uses the term interbank fee, that is, the one applied among ACH participants (normally banks) to balance costs (mostly associated with cash handling) of reaching clients (through bank branches) in different geographical areas. This interbank fee is normally applied on top of the fee for the infrastructure use.

BOX 1. SOME RECENT FINANCIAL SECTOR INQUIRIES ABOUT RETAIL PAYMENT SYSTEMS

Country – Institution	Year	Main Payments Systems-Related Findings	Conclusions / Proposed Remedies
Australia – Reserve Bank of Australia and Australian Competition and Consumer Commission	1999-2000	<ul style="list-style-type: none"> • Cost-based methodologies suggest interchange fees should be much lower than current levels • No surcharge’ rules are undesirable because they suppress important cost signals to end-users • Access restrictions for international credit card schemes lack transparency and objectivity • Competitive pressures in card payment networks have not been sufficiently strong • Incentives structure has encouraged growth of credit cards at the expense of other payment instruments, such as debt cards and direct debits 	<ul style="list-style-type: none"> • The interests of end-users of card payment services need to be more directly engaged in the pricing process • Conditions of entry to card payments networks need to be more open than at present <p>Measures taken subsequently:</p> <ul style="list-style-type: none"> • Elimination of ‘no surcharge’ and ‘honor all cards’ rules on merchants • Establishment of cost-based benchmark (‘standard’) for calculating interchange fees for all payment cards • Establishment of transparent access regime • Greater disclosure on interchange fees and access
European Commission (EC)	2005-07	<ul style="list-style-type: none"> • Fragmented infrastructures along national lines • In general, payment card issuing is less concentrated and more profitable than acquiring, and this is magnified by high interchange fees • Significant competition issues in the payment cards market, with entry barriers stemming from network and standardization requirements, regulatory policies, and cooperative arrangements 	<ul style="list-style-type: none"> • Antitrust enforcement on access barriers, discriminatory rules, fee structures and governance arrangements in some payment card networks and in clearing and settlement systems • Regulatory and self-regulatory measures, such as the establishment of a pro-competitive Single Euro Payments Area (SEPA) and new EC Directives, can address other competition barriers
Ireland– The Competition Authority	2005	<ul style="list-style-type: none"> • The structure of the clearing system has inhibited new banks offering services • Ireland’s continued high reliance on paper transactions (such as cheques) raises costs 	<ul style="list-style-type: none"> • Facilitate new members joining payment clearing system • Improve corporate governance structure of the payment system and increase transparency • Promote more efficient payment system
Netherlands– Dutch National Bank (Wellink report)	2002	<ul style="list-style-type: none"> • Payments market is characterized by efficient infra structure, but it is dominated by a few large banks and a single interbank processor (Interpay) • Consumer usage cost is largely unrelated to actual use of payment services • Interpay’s special position raises concerns about tariff setting and access conditions 	<ul style="list-style-type: none"> • Greater transparency and governance of Interpay • Banks should introduce a choice of different tariff structures to consumers as alternative to current package • Central bank to intensify oversight of payments systems and to offer settlement accounts to non-banks if required • Creation of ‘consulting group on payment services’ to share information and discuss payments market changes
South Africa– National Treasury and South Africa Reserve Bank (Falkena report)	2004	<ul style="list-style-type: none"> • Dominance of big banks in the payments system, related to concentrated deposits market • Entry restrictions and payment processing procedures (including mutual governance arrangements) undermine competition, especially in serving low-income individuals • A big challenge is to develop the payments system so that it caters for the unbanked 	<ul style="list-style-type: none"> • Extend interoperability and transparency of access requirements to payments system • Promote competition by allowing second/third-tier banks and entry of foreign banks • Competition Commission should investigate possibility of complex monopoly in operation of payments system • Bank and payment regulators should be required to consider the competitive impact of their regulation
Sweden– Swedish Competition Authority	2006	<ul style="list-style-type: none"> • Smaller banks have a cost disadvantage in giro and direct account transfers, and in ATM access • ‘Infrastructure clubs’ create potential conflicts of interest due to mutual governance structure • Customer switching across banks is currently limited, costly and complex 	<ul style="list-style-type: none"> • Commercial management of the payment system infrastructure should be separated • Rules should be developed to ensure appropriate terms of access to payment systems • Government should introduce measures (including for payments) making it easier for consumers to switch banks
UK– Treasury (Cruickshank report)	1999-2000	<ul style="list-style-type: none"> • Concentrated (and unregulated) market structure and mutual governance model create artificial and discriminatory barriers to network access, lack of price transparency and of effective competition across payment schemes, high cost to retailers for card use (interchange fees), slow clearing cycles, excessive charges (e.g. ATMs), and lack of innovation • Ineffective (competition law) framework • Lack of competition attributed to network effects that cannot be resolved solely by the “dynamics of the marketplace” 	<ul style="list-style-type: none"> • Introduce new policy framework to address problems • Set up independent payment systems commission • Government should avoid creating regulatory distortions by unnecessarily restricting access to payments systems, and should be intelligent consumer of payment services <p>Measures taken subsequently:</p> <ul style="list-style-type: none"> • Starting in November 2003, Office of Fair Trading (OFT) given enhanced role in payment systems for four years • Establishment of Payments Systems Task Force in 2004, chaired by the OFT, to focus on payments issues • 2006 Competition Commission inquiry into store cards confirms competition problems and proposes remedies
USA– Federal Reserve (Rivlin committee)	1997-1998	<ul style="list-style-type: none"> • The Fed plays a major role in the markets for cheque collection services and ACH transactions • Per its pricing and cost recovery principles, the Fed does not subsidize cheque collection services • Growth of ACH hampered by several constraints 	<ul style="list-style-type: none"> • The Fed should remain a provider of both cheque collection and ACH services in order to enhance efficiency, effectiveness, convenience and access • The Fed should play a more active role and work closely with users and providers of the payments system

5. Lessons learned from LAC country studies

ARGENTINA

This case study has analyzed cooperation and competition issues in Argentina's Automated Clearing House (ACH) market. The market is characterized by the co-existence of four ACH platforms with, in theory, overlapping markets as well as by an increasingly salient role of the RTGS system in the context of small-value payments. Interestingly, an implicit specialization of the various platforms seems to have taken place, thus catering for the needs of specific market segments.

A. What are the main drivers of cooperation and competition in ACH market in Argentina?

A.1. Environmental Issues, Legacy and Governance

- Two low-value and two large-value clearinghouses are operating in Argentina. Unlike many other countries, the distinction between large and low-value systems is mainly based on the length of the settlement cycle. Thus, the term large-value is used only to define infrastructures where settlement occurs within 24 hours. Longer processing cycles are typically associated with low value transactions.
- ACH S.A. and the *Compensadora Electrónica S.A.* (COELSA) are the low-value infrastructures. Both are privately-owned companies. ACH has 24 stockholders and additionally 23 users. The ACH features a broad regional coverage as it was originally founded by banks outside the Buenos Aires area. COELSA has 21 stockholders and 17 clients. Conversely to the previous case, COELSA initially provided clearing services only for banks located in the Buenos Aires region.
- Large-value clearinghouses also play a role in the execution of retail payments. In the absence of a formal threshold for discriminating low and large value payments, Interbanking and Provincanje (commonly referred to as a large-value clearinghouses) have also the potential to accept payments of a small size. Nowadays, Interbanking has 10 stakeholders and 36 bank customers, and it was established in 1996 as the result of a merger between Datacash and Newnet (bank-owned companies specialized in the provision of e-banking services to corporate customers). Initially, Interbanking had 15 stakeholders but successive mergers in the market and capital reduc-

tions led to some consolidation in the ownership structure. Provincanje is owned by 15 banks of which 80 percent are private banks.

- Some prices (e.g., interbank fees) are established by the Interbank Committee for Payment Instruments in Argentina (*Comisión Interbancaria de Medios de Pago de la República Argentina*, CIMPRA) for both ACH S.A. and COELSA.
- In order to enhance the financial soundness of the clearinghouses a collateral pool and other risk control measures have been put in place by a Committee of the Clearinghouses (*Comité de Cámaras*) comprising representatives from all the four clearinghouses, the BCRA and CIMPRA.

A.2. Access

- Members of the clearinghouses can be financial entities and other institutions, public or private, explicitly authorized by the BCRA. The BCRA is also a member of the ACH S.A. for the clearing of cheque transactions. In any case, as a general rule, no entity may control directly or indirectly more than 33 percent of the company.
- In principle, the rules of the clearinghouses do not prevent non-banks from becoming participants in the national payment system. To this date, however, very few institutions aside from banks have applied for participation and most of them are represented by a direct participant instead. Among the few exceptions are the Postal Office and the National Social Security Administration (ANSES).

A.3. Pricing

- Common payment products (direct debits, cheques, credit transfers) are subject to coordinated pricing policies at the CIMPRA level. Cost recovery criteria prevail over other considerations. Instead of allocating the decision-making process on interbank fees to the governing bodies of each ACH, banks have opted for a collective price determination in the CIMPRA.
- Nonetheless, discernible differences among the various small-value clearinghouses are reported to exist regarding the pricing of processing services. In the case of COELSA, fixed monthly fees as well as per transaction

ones are levied on all members. On the opposite, ACH S.A. charges each and every single participant a flat fee, regardless of the volume of transactions.

- Large-value clearinghouses apparently apply their own “proprietary” pricing structure substantiated by platform-specific features.
- Interbank fees do further accrue to transactions processed in the clearinghouses, but they typically come in different forms and fashions. Interbank fees are normally expected to flow from the bank of the instructing party to that of the beneficiary.

A.4. Oversight and Cooperation

- The BCRA has a limited-scope oversight function over the four clearinghouses focusing on operational aspects. The *Gerencia de Control de Sistemas de Compensación* approves the operation of the clearinghouses and conducts yearly inspections of them. The BCRA has established specific operational requirements (e.g., capacity, security, contingency plans, etc.). Also the *Gerencia de Auditoría Externa de Sistemas* looks at some aspects related to the participation in the payments system by financial institutions. Finally, the *Gerencia de Sistemas de Pago* is in charge of the oversight in general and cooperation with other entities (e.g., through CIMPRA)
- BCRA’s principal tools for the practical exercise of its oversight function are regulation and moral suasion, in particular in the context of the CIMPRA. BCRA’s regulations have proven a fairly useful tool to provide a formal endorsement and to ensure a wide adoption of industry-supported agreements regarding the structure and future evolution of the national payment systems infrastructure.
- Under the present arrangements, the operational and business layers of payment products (i.e. the interbank rules, practices and standards for the execution of a given payment as well as the commercial framework which enables the authorization, clearing and settlement of said transactions) are regulated independently from the technology platform on which the clearing and settlement process are expected to take place. Therefore, all clearinghouses shall, in principle, be ready to handle the same set of retail payment instruments.
- In 1995, the CIMPRA was launched as a forum to help provide private sector input on the modification and modernization of existing payment media, the creation of innovative instruments, and the improvement of clearing and settlement systems.

B. What are the key issues?

- The factual impact on competition of multiple ACHs along with a regulatory/technical framework tailor-made to foster rivalry has, however, fallen short of expectations. Small and large-value ACHs have clearly opted to position themselves in the market differently, hence developing and leveraging, for the most part, from a distinctive product portfolio.
- Market segmentation due to historical reasons and, to some extent, non-trivial switching costs for banks may further explain the perpetuation of the present landscape.
- A reported lack of conclusive evidence on the existence of increasing returns to scale and other prominent scale effects in the core business of the clearinghouses substantiates the delayed process of consolidation.
- Moreover, the proliferation of a vast range of services in the clearinghouses other than processing and netting may be an indication of an excessive fragmentation of the retail payments market, i.e. a critical mass may be hardly obtainable at individual level due to a limited market size and a multiplicity of competing infrastructures.
- Weak legal foundations, diversity of relevant policymakers and limited scope and institutional coordination mechanisms have stalled the practical exercise of an effective oversight function.
- However, cooperative arrangements (with a limited scope) for the payment systems between the central bank and relevant stakeholders do exist in Argentina (e.g., CIMPRA). Moreover, the BCRA has recently made clear its commitment to step up its oversight responsibilities and, in so doing, to define a plan that helps upgrade the National Payment System.

C. What are the main policy implications?

- In order to take advantage of economies of scale/scope and network externalities authorities and market players could consider consolidation of platforms. The particular strategy, however, needs to be carefully planned as some potential outcomes (e.g., the likelihood of market conduct problems, a greater operational risk concentration, etc.) do have significant downsides. A greater emphasis on central bank oversight and payment systems regulation could help reduce these risks.
- Establishment of institutional mechanisms to promote coordination and information sharing between the various parties: a role that CIMPRA can play.
- Empower the BCRA to consistently address key payment systems issues, thus further acknowledging the relevance of retail payments in supporting economic activity and creating trust in the currency.
- In this last regard, the formalization of a cooperative framework among regulators and other relevant players should be given a high priority.

BRAZIL

This case study has analyzed the implications of cooperation and competition issues in Brazil's retail payments infrastructure on two market dimensions: interoperability and infrastructure fragmentation. Idiosyncratic features and the still-evolving institutional framework have restricted interoperability in distributions channels of certain payment services (ATMs, POS and bank correspondents) and further contributed to a segmented retail clearing infrastructure. Although the current institutional set-up is driven by competition and has facilitated innovation, it has adverse efficiency implications leading to segmented infrastructures that have reduced the exploitation of scale/scope economies and of network externalities.

A. What have been the main drivers of low interoperability and infrastructure segmentation in Brazil?

A.1. Environmental Issues, Legacy and Governance

- During the hyperinflation of the late Eighties and early Nineties, banks were experiencing, on one hand, a demand from costumers for faster services available at any time, and, on the other hand, significant returns on their

holdings of government securities, that were adjusted to the inflation. This allowed for huge investments in technology and introduced the perception in commercial bank management of the competitive advantage that a broad network could have vis-à-vis the clients.

- These high initial investment costs to set up the infrastructure (in part caused by the prohibition until 1993 to acquire IT solutions from foreign providers) might have been per se another factor inhibiting interoperability and creating segmentation, even after price stability was achieved. In more recent years, market providers consider that additional and costly IT investments and changes in their business model would be needed in order to reach a compatible infrastructure.
- Low level of bank concentration might also have diluted the benefits and increased the (actual or perceived) costs of cooperation. This, coupled with the asymmetric market structure (few large and many small banks) and the high geographical overlap in networks between the main banks (focus on urban areas), may help explain the unwillingness of large banks to open up their networks to competitors, particularly small ones.
- Inadequate access to financial services, the high interest rates and the customers' poor financial culture have been historically some of the principal impeding factors affecting the use of modern payment instruments (e.g., cards, direct debits). In more recent years, however, the usage of electronic payment instruments is increasing at very high rates, signaling a change in consumers' behaviors.
- The high informality rate of the economy has also posed traditionally difficult challenges to the industry and the policy-makers.
- The ATM market is primarily dominated by larger banks. All large banks operate their own proprietary ATM network, while some smaller banks share ATMs in order to benefit from economies of scale. *Tecnologia Bancária* (TecBan) and *Rede Verde e Amerela* (RVA) are the only non-proprietary shared ATM networks in Brazil. In recent months, agreements are being established between large banks (e.g. *Caixa Econômica Federal* and *Banco do Brasil*) and large banks are also taking an active

role in TecBaN.

- The need to protect the card networks (in particular ATMs) from frauds and other external attacks forced banks to invest heavily. In most cases, each bank adopted specific solutions, which makes more difficult and costly to achieve interoperability.
- Vertical integration and provision of similar product/services are distinctive features of the largest players in the POS market: Redecard and VisaNet. Both companies are in charge of managing the affiliated network of merchants, of capturing, transmitting, processing and conducting the settlement of transactions resulting from the use of card transactions and of developing related or connecting business to any of the aforementioned items. Alongside the international brands, in recent times other players have started to gradually gain momentum in the market (e.g., Hipercard, regional cards).
- The fragmentation observed nowadays in the Brazilian fund transfer infrastructure derives from the complex path of reform of the Brazilian payments system. To the two existing clearinghouses, *Centralizadora da Compensação de Cheques e Outros Papéis* (COMPE) and TecBan, in 2002 another clearinghouse was added, the *Câmara Interbancária de Pagamentos* (CIP), parallel to the launch of the central bank's RTGS system (*Sistema de Transferência de Reservas*, STR). Instrument-based specialization and diverse functional clearinghouses have provided a rationale for the perpetuation of a multifold retail payment infrastructure.
- For some retail payments processing platforms, governance arrangements seem not to have addressed coordination failures properly, thus preventing non-banks from achieving a stakeholder status, thwarting the assignment of shares or partially limiting the accumulation voting rights.

A.2. Access

- The pursuit of sustainable network-based competitive advantages has proven a recurrent and rational strategic behavior. For example, the reluctance of incumbent players to open up the market to competitors and other historical reasons have pushed back the development of a direct debit scheme. Also, hurdles to establish agency relationships do exist, i.e. correspondent networks with non-bank agents remain proprietary to individual banks

and cannot be accessed by customers of another bank.

A.3. Pricing

- Disagreements over interchange fees may have thwarted reciprocal accords. For example, the fee structure for using ATMs belonging to other banks can be prohibitive, which explains the low proportion of shared transactions in “open access” ATMs.
- Also, several middle-sized card issuers have disputed the validity of the pass-through levels of merchant discount fees. These issuers claim that current allocation of rents extracted from the merchants at the POS is, on average, about 300 basis points below the standard international levels. As interoperability would possibly imply a greater competition in the marketplace, this aspect might reveal a source of conflict that would need to be solved as a pre-condition to muster a stable interconnectivity agreement across the various networks.
- In addition, the differential pricing between competing clearing and settlement infrastructure may have impacted negatively innovation (e.g., direct debit) as well as slowed down the migration towards more efficient, electronic payment instruments. One underlying issue may be the lack of an overall normalization of more modern payment instruments in the customer-to-bank domain. This situation has prevented full end-to-end automation from happening and thus, interbank fees for some of these instruments lie paradoxically well above the ones applied to traditional paper-based products. Tax regulation adds to the complexity of the problem by creating exemptions for cheques and permitting charges over electronic instruments.

A.4. Oversight and Cooperation

- The concerns raised by the low levels of interoperability and infrastructure segmentation in Brazil have already triggered some reaction by the central bank (*Banco Central do Brasil*, BCB), with the issuance of a circular aimed at foster cooperation in the retail sector.
- The BCB also signed a memorandum of understanding with the main anti-trust authorities to act jointly in this segment of the financial sector.

B. What are the key issues?

- The consequences of low interoperability are overlapping coverage and inefficiency. In particular, low interoperability complicates the exploitation of economies

of scale and positive externalities. The cost of deploying and maintaining ATMs might also have adversely affected the capillarity of bank ATM networks, with the rural, lower-income and less populated parts of Brazil being at a comparative disadvantage.

- Lack of interoperability is obstructing the modernization of the retail payment systems and its potential benefits are being misplaced. A better allocation of the productive resources in the economy would immediately follow a greater degree of interoperability in the POS market. A study from the BCB indicates that a more intensive usage of electronic-based instruments can produce a potential saving to the country of 0.7 percent of the GDP per year. Such result stems from the economies of scale in the provision of electronic payments, the global increase of payments transactions, and the progressive lowering of telecommunication, software and processing costs.
- Economic efficiency in the provision of payment services is under-optimized by the lack of integrated payment arrangements. Multiple and not necessarily interrelated actors bring in an added layer of complexity to the retail payments landscape in their condition as operators of different infrastructures.

C. What are the main policy implications?

- A more active stance of the BCB in overseeing retail payment systems is starting to activate the development of interoperable networks and diminish infrastructure segmentation.
- Against this background, the central bank should consider the establishment of a working group or forum with representatives of all stakeholders' groups.
- In particular, sufficient time and adequate resources should be devoted to the issue of standardization, seeking both sector and cross-industry cooperation.
- In addition, the BCB could further strive to team up with other authorities with a view to promote interoperability. The recent memorandum of understanding between the BCB and antitrust authorities is an important step in this regard.
- Bankers associations have a bigger role to play to foster cooperation in the banking sector. In fact, there

is a clear need for a rationalization of the roles played by different stakeholders in the settlement infrastructure. Despite firm direction from the BCB (occasionally providing some conflicting signals in different pieces of regulation aimed at different objectives) and long-lasting discussions at the industry level, the future evolution of the settlement infrastructure for retail payments is still unclear.

- If these measures prove to be ineffective, the BCB might have to use “harder” regulation to foster the achievement of the public policy objectives. This might include setting up a tight deadline for the interoperability of networks and for the creation of a unified retail clearinghouse. If forced to do so, the BCB would certainly maintain its traditional stance to minimize interference in the market and ensure that perceived costs of its regulation by financial institutions be not passed unfairly to final consumers.

COLOMBIA

This case study has analyzed cooperation and competition issues in Colombia's Automated Clearing House (ACH) market. The market is characterized by the co-existence of two ACH platforms, one operated by the central bank (*Compensación Electrónica Nacional Interbancaria*, CENIT) and the other one by the banking sector (ACH Colombia, ACHC). Although the presence of two ACH platforms has increased contestability, it is found that direct competition is inhibited by some discriminatory business practices. In addition, oversight arrangements to ensure the right balance between different policy objectives are complex because of the multiplicity of relevant policy makers and the lack of adequate institutional coordination mechanisms.

A. What are the main drivers of cooperation and competition in the ACH market in Colombia?

A.1. Environmental Issues, Legacy and Governance

- ACHC's current shareholding structure stems from the original allocation of shares between the two pre-existing private ACHs and by subsequent merger and acquisition activity. Fourteen banks, one trust company (*fiduciaria*) and one cooperative are the current shareholders. ACHC's statute does not accept non-banks as new members (only the trust company and the cooperative stay as members for historical reasons).

- CENIT's operations are based on the legal foundation for central bank (*Banco de la República*, BR) involvement in the payments system, Central Bank Law 31/1992 (*Ley Orgánica del Banco de la República*). CENIT's governance corresponds to the BR.

A.2. Access

- CENIT members currently comprise all banks, two financial corporations, two financial cooperatives, the National Treasury in the Ministry of Finance (*Ministerio de Hacienda y Crédito Público*, or MHCP), securities depository DECEVAL (*Depósito Centralizado de Valores de Colombia*), and all non-bank information operators.
- ACHC primarily serves commercial banks (except state-owned *Banco Agrario*) and effectively acts as their 'back office' for funds transfers purposes, leaving each bank to run its own business and set client fees as it deems appropriate.
- *Banco Agrario*, which has the largest branch network in Colombia and focuses particularly on rural areas, has chosen to work only with CENIT allegedly due to disagreements with other banks over the setting of interbank fees when using ACHC.
- Thus, membership in the two ACHs has a high degree of overlap, however CENIT and ACHC have traditionally catered to different market segments. This situation is recently changing with some commercial banks increasingly using CENIT.

A.3. Pricing

- Revenue growth in the ACH market has been driven by three main factors: i) banking market concentration and the degree of internalization of payment orders; ii) the evolution of government payments modernization efforts; and iii) the structure of the Colombia's social protection system. The cost structure of both ACHs is characterized by significant economies of scale and scope in their core business.
- The revenue/cost drivers and ownership have influenced the respective pricing policies. ACHC's pricing policy aims to ensure self-sufficiency by covering costs, financing any new investments without having to resort to external funding sources (no debt on its balance sheet),

and providing dividends to shareholders whenever possible. CENIT aims to charge users on a cost-recovery basis (including opportunity and indirect costs).

- The structure and method of determining interbank fees differs between the two ACH platforms. Although interbank fees do not accrue to ACHC and CENIT, both of them act as conduits for notifying such fees to all members and for their collection. However, while recipient members individually define such fees and communicate them to CENIT, it is the ACHC's Board of Directors that determines fees based on the recommendations of a committee drawn mostly from Board members (*Comisión de Tarifas*).
- According to its regulations, CENIT only permits a low single interbank fee for direct debits. Its interbank fee structure for direct credits is based on one of two approaches: either a flat fee per transaction or a 'scaled' fee (*tarifa escalonada*) based on the geographical location of the recipient's bank branch. The flat fee has been adopted by small and mid-sized Colombian credit institutions, while the 'scaled' fee is used by the bigger banks that can leverage their large branch networks. By contrast, ACHC's interbank fees are based on a two-tier pricing structure.
- Finally, it is worth noting that, while CENIT's pricing policy (both ACH and interbank fees) is publicly available via the BR's website, ACHC does not disclose its prices on the justification that its only clients are banks.

A.4. Oversight and Cooperation

- The function of retail payment systems oversight per se has been only partially implemented through a complex intertwine of different authorities' roles. Supervisory responsibility for low-value payments systems lies primarily with the *Superintendencia Financiera* (SF), although it mostly focuses on safety issues. Competition issues in low-value payments systems have recently been taken up by the *Superintendencia de Industria y Comercio* (SIC). While the BR monitors and participates in the payments system as part of its role in preserving financial stability, it has not been responsible for retail payments systems oversight. Although there are various initiatives relating to retail payments, there are no formal institutional coordination mechanisms.

B. What are the key issues?

- Although the presence of two ACH platforms has increased contestability for some market participants, this has been limited by discriminatory business practices. One manifestation of partial market segmentation is distinct ACH access and pricing policies, which can be partly attributed to different governance arrangements.
- Multiplicity of relevant policymakers and absence of adequate institutional coordination mechanisms have hindered the development of an effective oversight function. Oversight is also hindered by the lack of explicit government objectives and by the relatively minor involvement of the BR.

C. What are the main policy implications?

As it is common in retail payments, multiple public policy objectives to maximize social welfare in this market require certain trade-offs to be made. Policy-making in this area is also made more complex by the multiplicity of relevant policy makers. Two high-level policy options to modify the current status quo, driven by different overarching objectives, have been identified. The policy options are:

- Strengthening of competition between ACH platforms. Potential advantages of this option would include lower operational costs and thus better pricing for end users as a result of stronger incentives to become more efficient (X-efficiency), as well as greater product innovation and access (including for non-bank financial institutions) stemming from increased contestability; and
- Consolidation into a unique ACH platform. The major advantage of this option would be potentially lower operational costs by leveraging economies of scale, which would presumably be reflected in lower overall pricing. This option would almost certainly create some dislocation irrespective of how it is implemented. Strong governance arrangements and a robust oversight and antitrust framework would therefore be essential preconditions for the successful realization of this option.

Irrespective of the preferred option, there are two additional policy measures that could be taken to improve the functioning of the ACH market:

- Enhancing transparency in the functioning of the ACH market would be a relatively straightforward way to dis-

pel mistrust and further promote competition. There is a strong case for greater public disclosure of the operating arrangements of ACH platforms (i.e. shareholder structure, decision-making mechanisms, pricing and access policies etc.).

- Strengthening of oversight arrangements, particularly via the establishment of robust institutional coordination mechanisms. A stronger oversight framework would prevent potential regulatory gaps and promote a comprehensive approach to developing a more efficient and accessible electronic payments systems infrastructure.

MEXICO

This case study has analyzed the issue of interchange fees (IFs) in the cards market in Mexico. In recent years the Central Bank of Mexico (*Banco de México*, BM) has devoted increasing attention to the structure of the credit and debit card payment system. Some measures have already been undertaken to promote greater competition (e.g., introduction of new transparency rules for banks' charges, removal of restrictions to access, abolition of the IF for electronic fund transfers). Despite such measures, the market for payment cards remains somehow underdeveloped. The industry's view is that IFs are needed to balance the interests of issuers and acquirers within card networks. In this context, and in order to get a better understanding of whether the current situation requires forms of direct regulatory intervention, this case study looked at the role that IFs play in the credit and debit cards industry (see Box 2 for a theoretical discussion on IFs).

A. What are the main drivers of cooperation and competition in the Mexican cards market?

A.1. Environmental Issues, Legacy and Governance

- The cards market is dominated by the banks. Several store chains issue credit cards as well, but these are not general acceptance cards. Almost all issuers of general acceptance cards are banks. All acquirers are banks, and all issuers and acquirers participate in an interconnected four party system with two switches.
- In the last few years, several banks have entered both the issuing and acquiring markets. The concentration on both sides of the markets has decreased, although it continues to be high. The main issuers are also the main acquirers, and in about one third of the total number of

transactions, the issuer is also the acquirer (“on/us”).

- The Bankers’ Association (*Asociación de Bancos de México*, ABM) governs the pricing structure of credit and debit cards market establishing IFs and other pricing rules. Thus, the current development of the card market in Mexico has been strongly influenced by the rules and regulations set both by banks and card associations.

A.2. Access to Payment Instruments

- Retail payments rely heavily on cash. Among non-cash payments, cheques were the most important instrument until very recently. Although the number of both credit and debit cards has grown, most operations with cards are still cash withdrawals, especially with debit cards. However, the number of card payments at POS has increased significantly in the last few years. In turn, the number of POS and of payments at POS is low when compared with countries of similar development.
- Although card payments are more efficient than cash payments in many transactions, in the early part of this decade they were used in relatively few establishments. The BM identified IFs at point of sales (POS) as a possible cause for the scant use of payment cards, and thus became interested in the mechanism that banks use to set these IFs. See Box 2 for a brief description of the discussion on IFs at the international level.

A.3. Pricing

- The ABM sets the domestic IFs for the four party system, and major card international brands have a very limited role. In 1993, IFs were set as a multilateral charge flowing from acquiring to issuing banks. The scheme dependence on merchants’ transaction value seemed especially unsuitable to promote the POS network development. The scheme was also applying same fees for credit and debit operations. Until mid 2004, the levels of IFs remained almost unchanged.
- The ABM realized that the IF scale was not supporting either the network development or the use of cards at POS and has been applying some changes reducing the average IF and differentiating IFs for credit and debit cards. In 2005 the ABM presented a new methodology to balance the weighted issuing and acquiring banks’ profits and IFs are then adjusted for several business categories.

- Despite some problems, the BM recognized important advantages in the proposal. It further reduced the IF scales for credit and debit card payments and, since IFs for debit card payments were reduced by a larger extent than for credit cards, the lower costs for debit card transactions reached merchants. Also, the proposed scale is based on type of merchant rather than on merchants’ transaction value.

- Also, the ABM originally adopted the “no surcharge rule”, the “honor all cards rule”, and the “only issuers may become acquirers”. These rules, however, have been changing since the early 1990s in part as a response to regulators’ concerns and demands.

A.4. Oversight and Cooperation

- In Mexico, the Central Bank Law establishes among the main functions of BM “promoting the sound development of the financial system and fostering the proper functioning of payment systems”. The same law gives BM powers to regulate payment systems. To accomplish this mandate, the BM seeks to promote efficient payment systems.
- In 2004, the Mexican Congress issued the Law for Transparent and Orderly Financial Services (*Ley para la Transparencia y Ordenamiento de los Servicios Financieros*, LTOSF). This law, which was amended in 2007 gave BM explicit power to assess competition in the banking industry and to regulate retail payments systems, in particular, IFs. In the last few years, the BM has taken several measures: (1) making banks’ charges more transparent; (2) removing any restriction to market participation and entry; and (3) using moral suasion to influence fees.
- Additionally in November 2004, the Federal Government set the Electronic Payments Infrastructure Fund (*Fondo de Infraestructura de Medios de Pago Electrónicos*, FIMPE). The FIMPE is a private, non-profit-making trust fund formed by acquirers. It aims at promoting and extending access to the electronic payments through the POS network among small and middle size business, as well as to increase consumers’ usage of them.

BOX 2. DISCUSSION OVER IFS IN CARDS MARKETS

- The interchange fee (IF) is an inter-bank transfer that occurs every time a card payment is realized in an open network. This transfer typically (but not always) flows from the acquirer to the issuer. It reallocates the total cost of the card payment between the two providers (issuer and acquirer). This fee can be set bilaterally by the two banks or globally at the level of the association of banks. In this case it is known as a multilateral interchange fee (MIF).
- In a four party system the payment service is provided jointly by two providers (the issuer of the card and the acquirer of the payment) to the two users (the cardholder and the retailer). There are also proprietary cards that are provided by closed (or three party) systems. By definition, the question of IFs is only relevant for four party systems.
- The levels of IFs and their determination mode vary a lot across countries and across systems, but they are often collectively determined at the network level. The collective determination of IFs, as well as rules such as the “honor-all-cards” or the “no surcharge rule,” have been challenged by retailers associations, antitrust authorities and regulators.
- There is some variation (over time and across systems) in the official doctrine of the card networks, but they essentially view IFs as a way to ensure a “fair” allocation of costs between issuers and the acquirers. Accordingly, a card network is a joint venture between a large number of banks, and that such a joint venture can only function properly if each participating bank gets a fair share of both the costs and the benefits.
- Merchants’ associations claim that IFs are just an artificial way to put the burden on them. They argue that, for commercial reasons, retailers are somehow forced to accept cards even if merchant services charges are higher than the benefit they (the merchants) obtain.
- Networks and merchants are not the only ones to have strong views about IFs, public authorities also do. Indeed, the price structure of card networks has lately become the object of scrutiny of several Regulators, Competition Authorities, and Courts of Justice around the world. While there is no unanimity among Competition Authorities about how to “deal” with IFs, and whether they should be regulated, the dominating doctrine is that card issuers incur costs for some activities that do not benefit (directly) their customers but benefit instead the customers of the acquirers (the retailers). Therefore IFs are viewed by these Competition Authorities as a “justifiable” fee that remunerates these services and compensates the issuers for the costs incurred on behalf of the customers of acquirers. However, regulators are also worried that networks may set excessively high IFs that--by setting a floor to merchant fees--may be instrumental to extract monopoly rents.

B. What are the key issues?

- Given the importance of IFs in determining payments instruments usage is there a practical set of “rules of thumb” that can be developed to reach a socially optimum payments instruments usage?
- There is also an open question about the impact of IFs changes on both the merchant service fees (MSFs) that acquirers charge to merchants and the benefits provided

by issuers to card holders.

- What is the relative importance of IFs determination versus other measures in order to promote a broader use and availability of payment instruments.

C. What are the main policy implications?

- Card systems are two-sided markets, and the price structure really matters in cards systems. The balancing act that results from a careful reallocation of costs between the two sides of the market is fundamental to maximize network externalities.

- There is an asymmetry between the two sides. The fact that retailers internalize some fraction of consumers' benefit (because the better quality of service offered to consumers by the option to pay by card makes their stores more attractive) implies that they are less resistant to high fees than cardholders. But this is not necessarily bad for social welfare. A skewed price structure where one side of the market (retailers) pays more than the other may be socially efficient.
- Card system operators and bank associations may sometimes have an interest in inflating credit cards IFs. Empirical evidence suggests that higher IFs often result in higher profits for banks (especially for credit cards). This comes from the fact that price reactions to changes in IFs seem to be asymmetric.
- IFs are needed even in mature payment card systems. The need to subsidize membership to internalize network externalities disappears when networks mature and cover a large fraction of potential users. However, payment networks are dominated by usage externalities. Even if all consumers hold cards, they need to be encouraged to use them. Price elasticity of card usage by consumers seems to be much higher than that of card acceptance by merchants.
- Substitutability between credit and debit cards needs to be considered when determining the IFs level. Some preliminary studies indicate a need for capping the difference between credit and debit IFs, in order to discourage the socially inefficient behavior of "convenience users". In any case, any cost based regulation of IFs needs a fairly complete understanding of this substitutability and the incentives of payment card networks to inflate the difference between credit and debit IFs.
- IFs discussion should be placed in the context of the broader retail payment objectives of achieving a socially optimal usage of payment instruments. In addition, it should be taking into account that some payment instruments also provide other services than payment (e.g., credit cards).

6. Policy Implications

Retail payment instruments and circuits are crucial for the development of a market economy and to build a more inclusive financial system. The standard setters and implementation agencies have already provided a useful framework to guide reforms of retail payment instruments and circuits. In particular, the CPSS identified a set of overall strategic goals and objectives for retail payment systems and the World Bank has elaborated a comprehensive Reform Agenda (see Box 3).

This framework identifies efficiency and reliability as the general public policy objectives for retail systems. In addition, at least three important policy goals should be considered:

- Achievement of a socially optimal use of payment instruments.
- Deployment of an efficient infrastructure to support payment services.
- Affordability and ease of access to payment instruments and services.

In part, the achievement of these goals is related to an adequate balance between cooperation and competition. The main results from the study summarized in this Policy Brief show that some payment services present natural monopoly features (messaging, clearing and settlement) while others (access) benefit from broad and deep competition. Thus, the intuitively and often mentioned statement "cooperation in the upstream market and competition in the downstream market" could be considered a general guideline in balancing cooperation and competition. However, this statement needs to be qualified. The four guidelines below provide a set of tools to help authorities to adequately balance cooperation and competition and achieve the broader retail payment system objectives and goals, ensuring that the institutional framework (e.g., legal, environmental issues), governance, access and pricing of the infrastructure are aligned with the mentioned objectives and goals.

Guideline 1. Market complexities need to be recognized and analyzed in detail before any action is decided and implemented

- Environmental, legal and legacy factors are important issues shaping the evolution of retail systems.

- Governance of the infrastructure has a significant impact on cooperation and competition. Ensuring neutrality, objectivity and contestability normally requires a closer public scrutiny.
- Gaining access to messaging, clearing and settlement services is of capital importance for the ultimate success of new entrants in the market. Players with a dominant position in one infrastructure may have the incentive to create barriers for access to new entrants. The authorities' analysis should go beyond traditional payment system providers (e.g., banks) and consider the role of new players (e.g., non-financial sector providers) and new instruments (e.g., mobile payments).
- Pricing of some retail payment systems are subject to network economies (e.g., two-sided markets) and traditional cost structures are not appropriate to analyze these markets as pricing structures matter. Interchange fees (e.g., cards markets) and interbank fees (e.g., ACH markets) are mechanisms to balance different interests in payment networks but can also be advantageously used by dominant infrastructure players. In order to determine a socially optimum level, competition at three different levels needs to be considered (across payment instruments, across platforms, across service providers of the same platform) and, also, the different nature of payment instruments (e.g., credit cards providing a payment and a credit service).

Guideline 2. Policy trade-offs are relevant in this domain. Therefore, policy priorities will have to be determined and the type of public intervention should depend on the main public objective(s) pursued

- Public policy objectives in retail payments are multiple and none of them is in principle more important than the other. They include efficiency, safety, reliability, competition, access, and consumer protection. These objectives might need to be reconciled and prioritized, also taking into consideration the policy goals of other segments of the National Payments System (e.g. the need for a safe centralized system for the settlement of large value transactions).
- The justification for intervention depends upon the main public policy objective(s) pursued and upon evidence of perceived market failure. For example, in pres-

ence of a sufficient number of service providers and lack of interoperability, efficiency might well be the primary objective to be pursued. On the other hand, the insufficient access to and excessive cost of payment services, coupled with an insufficient degree of innovation, might be a call for more competition, including on networks and clearing arrangements.

- An ex-ante and transparent determination of policy objectives clarifies different actors' roles and avoids mistrust in the development and operation of the infrastructure. This is especially important if the public sector is one of the infrastructure providers.
- Market transparency is key to promote competition and dispel mistrust among market players.
- Any policy solution should be considered in a dynamic rather than static context as these markets are constantly changing.

Guideline 3. Effective Oversight of retail payment systems by the central bank is crucial to balance cooperation and competition issues

- An effective payment system oversight is the tool authorities have to address market and coordination failures and achieve an appropriate balance between cooperation and competition in the National Payments System. In particular, the overseer plays the role of a central agent who is best placed to solve the coordination problems that typically plague multi-agent decisional contexts by mobilizing efforts from individual participants, prompting them, to act collectively when circumstances so require, and facilitating the development of private sector institutions equipped to deal with these problems.³
- Central banks are the natural overseers on payment systems and should persuade themselves (or be persuaded) to play a central role due to their stake on the confidence in money and functioning of commerce and the economy in general.
- Other authorities might have an important role, as well,

³ See Bossone, B. and Cirasino, M. (2001): "The oversight of payments systems: a framework for the development and governance of payment systems in emerging economies", Payments and Securities Clearance and Settlement Systems Research Series, CEMLA/World Bank, July.

due to multiple implications of retail markets (e.g., competition authorities, financial supervisors, Ministries of Finance, etc.). The central bank, as primary oversight authority, should ensure all public policy goals are aligned.

- The scope of the oversight function should extend over the totality of the payment arrangements to ensure that new instruments and players (such as non-bank financial institutions and non-financial service providers) be appropriately covered.
- There is a broad range of oversight instruments, ranging from regulations and incentives (including on access and pricing) to moral suasion and policy dialogue, from antitrust enforcement to structural measures (e.g., government-owned service provision).

Guideline 4. Institutional mechanisms to promote cooperation and information sharing are essential

- Policy making is complex due to the institutional fragmentation of relevant policy makers as well as by the different—and sometimes overlapping—scope of their mandates.
- Sometimes authorities have already established cooperative arrangements but normally with a narrow scope that has to be broadened, other times these arrangements are inexistent and need to be established.
- In particular, it is essential to count with a good cooperative framework between the overseer and the anti-trust agencies that rule against uncompetitive behavior.
- The public authorities should use Payment Councils, industry associations groups and similar bodies as important cooperative tools.

BOX 3. RETAIL PAYMENT SYSTEMS GOALS AND REFORM AGENDA

CPSS Public Policy Goals

Legal and regulatory framework: policies relating to the efficiency and safety of retail payments should be designed, where appropriate, to address legal and regulatory impediments to market development and innovation.

Market structure and performance: policies relating to the efficiency and safety of the retail payments should be designed, where appropriate, to foster market conditions and behaviors.

Standards and Infrastructure: policies relating to the efficiency and safety of retail payments should be designed, where appropriate, to support the development of effective standards and infrastructure arrangements.

Central bank services: policies relating to the efficiency and safety of retail payments should be designed, where appropriate, to provide central bank services in the manner most effective for the particular market.

World Bank Reform Agenda (Defined by the Payment Systems Development Group)

The following remarks, stemming from the experience of the reforms implemented in developed countries can be seen as an agenda for developing countries to improve payment system arrangements in a given jurisdiction and across countries.

- Central banks and all stakeholders in the retail arena must work together in a clear strategy to promote the intensive use of retail electronic payment instruments and reduce the importance of cheques.
- Central banks should take a leadership role to achieve the necessary agreements among banks and other participants so that there is at least one ACH operating in the country that is able to process modern payment instruments such as credit transfers and direct debits.
- Central banks should coordinate efforts under way in order to achieve a system that encompasses all relevant players and that processes as many services as possible, avoids duplications and operates on a full scale.
- Central banks and other relevant government agencies should foster coordination and communication to ensure that collection and disbursements of the public sector institutions that are major players in the payments system be processed electronically and in a timely manner.
- Central banks, in coordination with other authorities, should ensure customers protection and foster a safe and efficient provision of remittances services in line with the CPSS-WB General Principles for International Remittance Services.

In sum, central banks and other regulatory authorities should act as catalyst for the development of market solutions:

- Fostering cooperation among market participants and integration/interoperability among circuits and expand access to financial services.
- Raising awareness of the general public on new instruments and circuits.
- Promoting the intensive use of electronic payments e.g. integrating government and business payments in the retail system infrastructure.
- Encouraging the use of high security and technological standards to increase reliability and efficiency.

Direct intervention (regulation, operational role) should be considered in presence of:

- Strong coordination failures (e.g. inability of the market to develop appropriate arrangements to process electronic payments, failure to reach agreements to perform efficiently payments at cross border level).
- Strong information asymmetries (e.g. benefits of security devices such as the microchip on cards, actual cost of paper based transactions).

7. For further reading

This Policy Brief is based on the following specific studies:

- Guadamillas, M., Stephanou, C., Gorjón S. (2008), *Balancing Cooperation and Competition in Retail Payment Systems: Overview and Policy Issues*, Financial Infrastructure Policy and Research Series, The World Bank.
- Gorjon S., Guadamillas, M., Cirasino, M., Vanasco V., (2008), *Cooperation versus Competition in Argentina's Automated Clearing House (ACH) Market*, Financial Infrastructure Policy and Research Series, The World Bank.
- Cirasino, M., Gorjón S., Stephanou, C., (2008), *Cooperation versus Competition: Efficiency Issues in Brazil's Retail Payment Systems*, Financial Infrastructure Policy and Research Series, The World Bank.
- Stephanou, C., Guadamillas, M. (2008), *Cooperation versus Competition in Colombia's Automated Clearing House (ACH) Market*, Financial Infrastructure Policy and Research Series, The World Bank.
- Castellanos S., Cordella, T., Medina R., Mendoza A., Negrín, J.L., Rochet, J.C., Solís F. (2008), *The Role of Interchange Fees in Mexico's Retail Payment System: from Theory to Practice*, Financial Infrastructure Policy and Research Series, The World Bank.
- Hwang, J.C., Guadamillas M., (2008), *Main Trends in Payment Instruments and Infrastructure Usage in Selected Latin American Countries*, Financial Infrastructure Policy and Research Series, The World Bank.

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- Overview and policy paper: Mario Guadamillas.
- Argentina case study: Sergio Gorjón (sgorjonrivas@worldbank.org), Financial Sector Specialist in the World Bank's LAC Region on secondment from the Bank of Spain.
- Colombia case study: Constantinos Stephanou (cstephanou@worldbank.org), Senior Financial Economist in the World Bank's Financial and Private Sector Development Vice Presidency.
- Brazil case study: Massimo Cirasino (mcirasino@worldbank.org), Head of the Payment Systems Development Group, World Bank.
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