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A PRACTICAL GUIDE FOR RETAIL PAYMENTS STOCKTAKING

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A PRACTICAL GUIDE FOR RETAIL PAYMENTS STOCKTAKING

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FOREWORD

Retail payment systems play an important role in the smooth functioning of any economy, and thus any inefficiencies in the retail payments market can send negative effects cascading throughout the financial realm. The World Bank Global Payment Systems Survey 2010 has shown that inefficiencies persist in the payment systems of many middle-income and low-income countries, with cash continuing to be the most widely used instrument for small-value payments. A number of issues are responsible for this pattern, and the lack of a coherent, holistic strategy for the development of retail payment systems is among the most common.

The lessons learned during more than a decade of World Bank Group technical assistance, along with the research findings of other international and national agencies, have been merged into a comprehensive package for the development and reform of the national retail payments system:

1. “Developing a comprehensive national retail payments strategy” aims to provide public authorities and market participants with detailed guidance on how to develop and implement a comprehensive, strategic retail payments reform.
2. “A practical guide for retail payments stocktaking” identifies a methodology for undertaking a detailed stock-taking of a country’s retail payments landscape.
3. “From remittances to m-payments: understanding ‘alternative’ means of payment within the common framework of retail payments system regulation” explores the development of a normative framework to underpin an efficient retail payments industry, including the so-called innovative payment mechanisms.
4. “Innovations in retail payments worldwide: a snapshot. Outcomes of the global survey on innovations in retail payment instruments and methods 2010” presents the results of the first World Bank survey among central banks that collected information on innovative retail payment products and programs.

This paper has been developed by the Financial Infrastructure and Remittances Service Line (World Bank’s Financial Inclusion and Infrastructure Global Practice) led by Massimo Cirasino, in cooperation with the Central Bank of Brazil and the European Central Bank.

The drafting team was composed by Harish Natarajan (World Bank), Hemant Baijal (formerly World Bank), Mardilson Queiroz and César Borges de Oliveira (both Central Bank of Brazil), Thomas Lammer, Francisco Tur Hartmann (both European Central Bank), and Juan Zschiesche Sánchez (formerly European Central Bank), under the overall guidance of Massimo Cirasino and Jose Antonio Garcia (World Bank). Robert Keppler and Maria Teresa Chimienti (both World Bank) also contributed to the development of the report.

This paper has benefited from the comments of a number of World Bank Group colleagues, national central banks and other national and international institutions, as well as private sector entities. We are grateful to those colleagues for providing their valuable insights.

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LIST OF ACRONYMS

ACH	Automated clearinghouse	EU	European Union
ATM	Automated teller machine	IFTS	Interbank Funds Transfer Systems
B2B	Business to business	LVPS	Large value payment system
BCB	<i>Banco Central do Brasil</i>	NCB	National central bank
BIS	Bank for International Settlements	NPS	National payments system
CIP	<i>Câmara Interbancária de Pagamentos</i>	PSDG	Payment Systems Development Group of the World Bank
COGEPS	Contact group on euro payments strategy	RSFN	<i>Rede do Sistema Financeiro Nacional</i>
CPSS	Committee on Payment and Settlement Systems	RTGS	Real time gross settlement
CSM	Clearing and settlement mechanism	PSD	Payment Services Directive
EBPP	Electronic bill presentment and payment	SCT	SEPA Credit Transfer
EC	European Community	SDD	SEPA Direct Debit
ECB	European Central Bank	SDE	<i>Secretaria de Direito Econômico</i>
EEC	European Economic Community	SDW	Statistical Data Warehouse
EMI	European Monetary Institute	SEPA	Single Euro Payments Area
EMU	Economic and Monetary Union	SPB	<i>Sistema de Pagamentos Brasileiro</i>
EPC	European Payments Council	SSP	Single Shared Platform
ESCB	European System of Central Banks	STR	<i>Sistema de Transferência de Reservas</i>
		TARGET	Trans-European Automated Real-time Gross settlement Express Transfer



SECTION I

INTRODUCTION

1.1 MAJOR TRENDS AND CHALLENGES IN THE RETAIL PAYMENTS ARENA

Payment system modernization has become a prominent feature of the financial sector reform agenda of many countries. While a large number of countries have already implemented (or are in the process of implementing) successful payment system modernization reforms targeted at improving the wholesale payments systems, the stronger focus on retail payment systems is relatively recent, driven mainly by a greater appreciation of the latter's importance for overall economic development, technological innovations, increasing volumes and values processed by retail systems, and the general realization of the importance of the central bank being involved also in this area. In most environments, central banks, sometimes in conjunction with other public authorities, are playing the leading role in the corresponding modernization efforts.

During the last decade or so, the debate on retail payments has intensified, with focus not only on payment instruments, user fees, and product pricing, but also on the need for an efficient payment system to support the needs of a growing number of people who are using non-cash retail payment instruments. The growth of retail payments has also led to an increased focus on

the need for public policy goals that aim at striking a balance between safety and efficiency in reference to various aspects of retail payments. In addition there is increase awareness of the need to address key issues affecting major stakeholders in the retail payments value chain: regulators, financial institutions, payment networks and third-party processors, merchants, and consumers.

The changing needs of end users coupled with technological developments have brought rapid innovation in the retail payments arena. There is an increasing role for central banks to monitor and oversee such instruments in order to ensure that all stakeholders are benefiting from innovations. In some countries, these developments have materialized in an extension of the conventional retail payment infrastructure to either increase efficiency in the existing processes, or to reach additional market segments (e.g. prepaid cards being able to use the conventional card network infrastructure; cheque truncation, or automated clearinghouse (ACH) conversion services, to mention just a few). In other areas, where the growth of the conventional retail payments infrastructure has not kept pace with the demand for more efficient and safe alternatives to paper-based instruments, innovations have emerged in the form of new payment mechanisms, like payments made with mobile phones.

In addition to innovation, other factors also pose challenges for central banks to effectively monitor and oversee the retail payment segment. These include: usage of retail payment instruments across national borders, the increasing relevance of e-commerce; emergence of non-bank financial institutions as providers of retail payment services, especially e-money based payment instruments; and market integration as a result of economic and/or monetary unions.

From a payment system oversight perspective, in general central banks are primarily interested in the overall safety and efficiency of retail payments and of the corresponding clearing and settlement mechanisms. Both the scope and the tools available to carry out the oversight function vary significantly among countries, ranging from situations where central banks oversee all retail payment arrangements as in Australia, Belgium, France, Germany, Italy and the Netherlands, to situations where the role is either split between central bank and other public authorities, or the oversight role only extends to systemically important payment systems as in Canada, Japan, Switzerland, and United Kingdom. From another perspective, while in some countries the scope of oversight is narrowly focused on the arrangements underlying individual payment systems, in others the scope is broader and extends to individual payment instruments and/or to certain aspects of the retail payments markets as a whole, such as pricing and consumer protection.¹

To complement their oversight role, central banks also act as catalyst for change, for which they need to monitor the developments in the retail payments market against certain public policy objectives that may have been identified to achieve appropriate levels of safety and efficiency in these markets. Such policy objectives

may address one or more of the following issues:² (i) legal and regulatory impediments to market development and innovation; (ii) competitive market conditions and behaviors; (iii) support to the development of effective standards and infrastructure; (iv) provision of central bank services in a manner that is most effective; and, (v) measures to encourage the adoption of electronic payments amongst government agencies, businesses and consumers.

Many countries still lack an appropriate oversight and policy framework for the retail payments sector. One of the main challenges is the lack of necessary empirical data to enable central banks to derive a proper understanding of the elements that may be undermining the effective development of the retail payments sector.

1.2 MOTIVATION, OBJECTIVES, AND STRUCTURE OF THE REPORT

During the last decade, some central banks have developed stocktaking approaches to monitor the trends in the retail payments sector—including analyzing the development of retail payment systems and the system participants' behavior as well as fostering a systematic collection of data—in order to gain a better understanding of the sector. This exercise became the foundation for the development and implementation of specific policies by such central banks to address the relevant deficiencies effectively and in a systematic manner.

Specifically, the *Banco Central do Brasil* (BCB), and the European Central Bank (ECB) in conjunction with the national central banks of the European System of

¹ CPSS, "Policy Issues for Central Banks in Retail Payments", March 2003.

² CPSS, "Policy Issues for Central Banks in Retail Payments", March 2003, and "Developing a Comprehensive Retail Payments Strategy (consultative report)", The World Bank, 2012.

Central Banks (ESCB³), have (independently from one another) developed unique end-to-end approaches that have yielded positive results in achieving public policy objectives in the retail payments area.

The BCB retail payments stocktaking was executed in two steps. First, it focused more broadly on the impediments for safety and efficiency in the retail payments market. The second step then focused on removing the impediments in the payment cards market to reach an efficient balance between cooperation and competition. The BCB approach also looked at the emergence of innovative payment instruments and the appropriate policy measures that must be developed to address the tradeoffs between innovation and the goals of safety and efficiency.

The ECB's experience, on the other hand, focused on the integration process of the European retail payments market as a second step after the adoption of the euro. Special attention was paid to the catalyst role played by the ECB in this process.

The World Bank's Payment Systems Development Group (PSDG) believes that the experiences of these central banks can provide valuable guidance to other countries wishing to embark on a similar exercise and lay a better foundation to their reform efforts. To this end, the PSDG has produced this report in cooperation with the BCB and the ECB to provide detailed documentation of those experiences, and has, jointly with these central banks, developed a practical guide that can be used as a reference for other stocktaking exercises of this kind. The team has also studied stocktaking experiences from other countries and has included best practices from

their experiences as well. This practical guide, as developed in this document, is summarized in Box 1.

The PSDG also believes that conducting a retail payments stocktaking exercise is an extremely useful tool for exercising effective oversight, which has been identified as one of the six guidelines pointed out in the forthcoming report "Developing a Comprehensive National Retail Payments Strategy."

The next two sections of the paper capture the experiences of BCB and ECB respectively. The detailed experience of the BCB is presented in Section 2, while that of the ECB and the national central banks of the ESCB is presented in Section 3. In both described experiences, the retail payments stocktaking exercise was a key component of the overall retail payments strategy and thereby informed the development and implementation of relevant policy reforms to improve the efficiencies in their respective markets.

Section 4 presents the general guidelines for undertaking a stocktaking exercise in the retail payments sector drawn from the experiences of the BCB, the ECB/ESCB, and other central banks.

³ The ESCB comprises the ECB and the national central banks (NCBs) of all EU Member States whether they have adopted the euro or not.

BOX 1: A PRACTICAL GUIDE FOR RETAIL PAYMENTS STOCKTAKING

Guideline 1: The overall scope and structure of the stocktaking exercise shall be driven by the high-level public policy goals set forth in the area of retail payments. The public policy goals would vary from country to country, but in general are associated with the safety and efficiency of retail payment systems in the country. Some other relevant public policy areas may include increased access and affordability, the availability of a socially optimal mix of payment instruments, and the availability of the required industry infrastructure to process such payment instruments. The retail payments stocktaking exercise should be designed so as to enable a clear understanding of the issues and areas of improvements required for achieving the stated public policy goals. The scope should be broad-based and should be developed in close co-ordination with all stakeholders.

Guideline 2: Adequate attention needs to be devoted to the planning and organization of the stocktaking exercise. Retail payments stocktaking is a complex undertaking requiring meticulous planning and active involvement of numerous stakeholders. A wide range of information sources should be used, including the information available in the broader payment systems community and also other sources. This information helps in benchmarking the status in the particular country. Where obtaining direct data might be difficult, information from other sources will help in assessing the intended aspects or variables in an indirect manner.

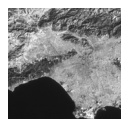
Guideline 3: Industry players should be involved from the very early stages. The retail payments industry will require adequate background information and sufficient time to ensure availability of good quality information when the stocktaking exercise is rolled out. In addition, the central bank should actively seek dialogue with industry participants as the latter can provide valuable inputs in structuring the exercise, including agreeing on certain common terminologies and helping to determine the appropriateness of the data being required as well as the feasibility of obtaining such data reliably.

Guideline 4: Obtaining sufficient, high-quality data and other types of information is at the heart of the stocktaking exercise. The collection, organization, validation and analysis of data is a critical part of the stocktaking exercise, and is probably the most resource-intensive one. Appropriate human and technological resources should therefore be devoted to this element of the exercise, including a strong emphasis on validating the data received from the industry. A retail payments stocktaking exercise is also not a one-off exercise; hence, an approach to enable comparison across iterations to measure evolution should also be considered.

Guideline 5: Devote sufficient time to report preparation and to designing the strategy for the wide dissemination of results. Being able to properly document and communicate the results of the stocktaking exercise as well as the alternatives available to address the underlying shortfalls is of utmost importance. A carefully designed strategy for the communication and dissemination of the diagnosis report should be developed to provide useful feedback to the various stakeholders and relevant information to the overall public.

SECTION II

THE EXPERIENCE OF THE BANCO CENTRAL DO BRASIL WITH RETAIL STOCKTAKING



2.1 BACKGROUND AND MOTIVATIONS FOR UNDERTAKING A STOCKTAKING EXERCISE IN THE RETAIL PAYMENTS SECTOR

In April 2002, the *Banco Central do Brasil* (BCB) implemented the first phase of the project to restructure the Brazilian Payments System (*Sistema de Pagamentos Brasileiro*, SPB), with the intention to improve the structure of payment and securities settlement systems, and to focus on severely reducing the potential systemic risk that could originate from such systems. The first phase included: (i) creation of an adequate legal basis; (ii) creation of the National Financial System Network (*Rede do Sistema Financeiro Nacional*, RSFN) with its own protocol, encrypted communications, and digital certificates as part of message exchanges; (iii) creation of the Reserves Transfer System (*Sistema de Transferencia de Reservas*, STR), a real-time gross settlement systems operated by the BCB; and (iv) implementation of regulations regarding the adoption of appropriate protection mechanisms for clearing, and for providers of clearing and settlement services.

At the end of 2002, the BCB started to develop the second phase of the SPB restructuring, concentrating

on the modernization of retail payments by increasing their efficiency and safety, and eventually promoting the creation of new retail payment instruments and products. In this context, “modernization” was interpreted as achieving a higher usage of electronic payment instruments in relation to paper-based instruments such as cash and cheques.

At that stage of retail payment system development in Brazil, there was still high usage of paper-based payment instruments, which created high costs for the Brazilian financial system, primarily due to the costs associated with the transportation, processing, storage, and insurance of paper instruments. In contrast, the usage of electronic payment instruments was low despite an expanding market for retail payments.

The key rationale behind the BCB’s involvement in the modernization effort was its role as the institution responsible for payment system oversight in the country along with its responsibility in maintaining public confidence in fiat currency. Additionally, just like other central banks, the BCB, due to its neutrality, was (and still is) in a unique position to foster cooperation amongst the great variety of institutions involved in the SPB, and act as catalyst to increase the efficiency and safety of existing instruments and encourage the development of new ones.

However, for the BCB to be properly involved in this modernization effort, there was a need to conduct an extensive diagnosis of the retail payment sector that was both quantitative as well as qualitative in nature. The diagnostic covered all relevant challenges to the modernization of retail payments in the country such as: governance problems, barriers to entry, anti-competitive behaviors and inefficiencies due to an inadequate balance between competition and cooperation, and pointed out the necessary actions for their mitigation.

2.2 BUILDING THE BUSINESS CASE FOR UNDERTAKING A STOCK TAKING EXERCISE

As in any business, following a structured process of institutional planning is critical for ensuring that the Senior Management be fully aware of the objectives, importance, benefits, roadmap, and any expected challenges associated with conducting the diagnosis, and for the implementation of any recommendations stemming from the exercise. Therefore, a business case-like approach for the diagnosis was deemed necessary in order to gain Senior Management approval and ensure a proper supply of human resources, training, and budget.

A Terms of Reference document was submitted to BCB Senior Management for approval. The Terms of Reference aimed to: (i) clearly identify the structure and organization of payment schemes of the main players, including payment system owners, issuers, acquirers, and processors, as well as scheme rules, payment instruments, distribution channels, and infrastructure for clearing and settlement; (ii) make a quantitative and qualitative analysis of the different developmental stages of retail payments, (iii) identify obstacles to

modernization and adoption of electronic payments, and (iv) define the necessary actions for improvements in the sector.

As a strong motivating factor, the business case was presented to the BCB Board positioning the diagnosis as a starting point for setting policy and guidelines, as well as the periodic dissemination of information and statistics on retail payment systems. The following specific items were included:

- Proposals to create or change the legal and regulatory framework relating to payment schemes;
- Disclosure of quantitative and qualitative indicators;
- Creation of working groups or advisory committees to enhance cooperation as a way to overcome the obstacles to modernization, with the participation of organizations representing the various stakeholders involved either directly or indirectly in the retail payments sector;
- Promotion of cooperation with both public and private institutions and associations to reconcile government policies related to modernization of electronic instruments in Brazil; and,
- Persuasion of system participants that provide retail payment instruments to promote the development and revision of technological standards, and take appropriate measures to disseminate information to promote interoperability.

The expected benefits from implementing the project included: (i) optimization of retail payment processing by encouraging the standardization of communication protocols and interoperability; (ii) reduction of operational risks and fraud in the use of electronic payment instruments; (iii) lowers costs for users and payment

solution providers as a result of the popularization of the use of electronic instruments; (iv) easier access to electronic payment services, contributing to financial inclusion of the country's population.

The Terms of Reference presented to the BCB Board emphasized that there would be a need to obtain the necessary external support from various stakeholders and other public authorities to tackle the challenges inherent in carrying out the diagnosis. This support included the following: (i) exchange of information between experts in various areas associated with retail payments (safety, legal basis, interoperability, standardization, etc.); (ii) execution of a national survey of the current status and prospects of various participants within the retail payment system; (iii) domestic and international travel in connection with participation in interviews and discussion groups; (iv) technical missions to learn from the experience of other countries that have effectively modernized their retail payment systems; (v) participation in national and international seminars and training courses; and (vi) acquisition of publications related to the study of retail payment instruments usage.

As part of the development of the methodology for the diagnosis, it was important to rely on studies conducted by international organizations, central banks and research institutions, and to complement this research with fact-finding visits to central banks and retail payments system operators in other countries. These references supported the formulation and consolidation of certain concepts and assumptions for collecting data and information from various sources. This information could then be compared and aligned against international best practice and against the prevalent business models for the provision of retail payments services.

Finally, in terms of structure, it was decided that the diagnosis should at least contain a description of the

payment instruments and distribution channels, the infrastructure for clearing and settlement, qualitative analysis exploring the foundations that guide the industry, the business model, infrastructure arrangements, access, pricing structure, innovation, and the regulatory framework.

2.3 PLANNING AND ORGANIZATION OF THE STOCKTAKING EXERCISE

2.3.1. Scoping exercise

Before the actual launch of the stocktaking exercise, the scope of the exercise had to be defined in terms of the information that was essential to conduct the quantitative and qualitative analysis. It was decided that the information on various payment instruments, including the access channels, would be collected from all the institutions that hold reserve account with the BCB. These institutions comprise almost the entire financial volume held in deposit accounts in Brazil. Therefore, the sample represented a very high percentage—both in value and volume—of all payment instruments used.

The credit unions sector was not included because that total deposits held in these organizations represented only 1.37% when compared to the corresponding figure for the banking sector. At the same time, the number of licensed credit unions represented 58% of all institutions licensed by the BCB, which would imply a high trade-off between the potential benefits from collecting information from such institutions and the cost and effort to undertake this task.

With regard to payment cards, only “universal” cards (i.e., credit cards and debit cards that are open loop and have universal acceptance) were chosen within the scope. Payment cards that are closed loop and not accepted outside a limited network of merchants were

not included in the study (e.g., cards issued by several retailers). Neither payment cards structured as e-money nor mobile payment schemes were included due to small volumes then associated with these products.⁴

Another issue that generated discussions within the BCB on the scope of the diagnosis was the definition of “retail payments.” In general terms, the BCB defines retail payments as payments made in large volumes or massively, but of low unit value. However, this definition is ambiguous since a threshold value would be required to determine what is considered “large volume,” and also to define a monetary value below which a payment would be considered as retail. The solution adopted considered retail payments as “payments that are used to settle all transactions in which at least the payer or receiver is an individual or a legal person other than financial institutions.”

2.3.2. Discussion on the stocktaking exercise with the Brazilian payments system stakeholders

Initially, the BCB consulted several international publications to ensure that the Brazilian payments system statistics would be in line with those published throughout the international community. The main reference documents that were used for defining the methodology and statistics of interest were the “Statistics on payment and settlement systems in selected countries” published by the Committee on Payment and Settlement Systems of the Bank for International Settlements,⁵ and the “Interim Report I - Payment Cards”⁶ published by the European Commission. In some cases, the BCB identified the need to make ad-

justments to reflect peculiarities of the Brazilian payment system, for example the possibility of credit card charges being split into monthly installments.

Upon completion of the previous step, the BCB developed a roadmap that included the types of information that were deemed necessary for the diagnosis. Once the script for data collection was finalized, it was sent to key market participants and a meeting was scheduled to discuss its contents. Meetings were scheduled with each participant individually in order to discuss the feasibility of providing the information as specified in the roadmap. Discussions also included the necessary changes and a common understanding of the issues and terms used. The BCB made the necessary adjustments to the initial roadmap and identified the sources of information for such studies.

In parallel, another set of meetings were held with the main industry representatives and large merchants to discuss their needs and obtain feedback on the obstacles they face in making payments and accepting electronic payment instruments, as well as to understand their business models. To cover more details on these aspects, technical visits were made to companies that were carefully selected in advance based on the criteria that they handle large volumes in both the issuance and acceptance of payment instruments. The information collected included usage habits, the pricing structure for the services they avail themselves to from their financial institution, shortcomings and advantages of the different types of payment instruments they use and/or accept, pricing policy, vision of the needs of consumers of its products or services, and other information deemed important on a case-by-case basis. Additionally, in order to obtain information on the usage habits of merchants’ customers, a sampling

⁴ At the time the stocktaking exercise was being launched, the majority of these new schemes were operating as pilot projects only. The BCB decided to monitor the quantitative evolution of these schemes, whether through participation in discussion groups with the market or through specific questionnaires.

⁵ Available at http://www.bis.org/list/cpss/tid_57/index.htm

⁶ http://ec.europa.eu/competition/sectors/financial_services/inquiries/interim_report_1.pdf

study was carried out addressing issues involving the relationship of merchants with payment card industry participants and consumers.⁷

2.3.3 Data analysis

Before entering the data analysis process, the BCB defined a process to be used to validate the files containing the required information and data that were received from the various market participants. Files were examined for the following: existence of inconsistencies in file layout, duplicates, incorrect data fields like blanks or “zeroed” fields filled with invalid formats, absence of any file, files with invalid formats, mathematical consistency, and average maximum values greater than or equal to the sum totals.

In order to ensure consistency, integrity and accuracy, several tools were developed to assess the quality of the data received from financial institutions. Using the software “Statistical Analysis Software” (SAS), several methodologies were tested to validate the database. The methodology that best fitted the objectives was the Box-Jenkins. Using this methodology, a code was written to select the best ARIMA model to analyze the behavior of each time series. The code developed for data analysis also allowed identification and exclusion of outliers in the series, whose consistency was checked and confirmed with the source.

Quantitative information from all sources was collected and tested using the above approach to check for inconsistencies. If inconsistencies were detected in the data received, the source was reached by the BCB to either confirm the data provided or correct it. If the data was confirmed, future analysis would consider the value of the corresponding statistic as an outlier and would treat it as such within the model. If revised in-

formation was provided, the new data was tested once again to ensure a satisfactory result from a statistical point of view.

2.4 RELEASE OF THE FIRST DIAGNOSIS

In 2005, a detailed report entitled “Report on the Brazilian Retail Payments System” was released. This report described and analyzed the retail payments systems in Brazil, presenting relevant information on the various factors influencing their modernization, and provided recommendations for developing policies and guidelines on the subject. As mentioned earlier, the report purposely interpreted “modernization” as increasing the participation of electronic payment instruments vis-à-vis paper-based instruments.

The diagnosis was designed to focus on aspects that can contribute to improving the current stage of retail payment system development in Brazil, especially those related to:

- The interoperability of automated teller machine (ATM) and point-of-sale (POS) networks;
- The infrastructure for clearing and settlement of transactions;
- Pricing of payment instruments;
- Access and innovation in retail payment systems; and
- The legal and regulatory framework for retail payments.

The report was divided into five chapters. The first chapter described the characteristics of payment instruments and distribution channels that allow the use

⁷ http://www.bcb.gov.br/pom/spb/Down/ftp/prod/Estatisticas_de_Varejo_Guia.pdf

of payment instruments (ATM and POS networks). The second chapter dealt with the Brazilian infrastructure for clearing and settlement of retail payment instruments. In this chapter, the clearing and settlement of retail payments was covered in detail, including their characteristics, risk management models, and statistics on the transactions processed through different systems.

The third chapter presented a quantitative description of payment instruments and distribution channels in Brazil during the period 1999 to 2004. In this chapter, the BCB elaborated on the degree of utilization of various retail payment instruments, the pattern of utilization of ATM networks, ATM network size and their geographical distribution, industry statistics, and several comparisons at the international level.

The fourth chapter contained detailed discussions on issues relevant to the development of retail payments system such as the interoperability of distribution channels, clearing and settlement infrastructure, access, pricing of payment instruments and the legal and regulatory framework. In this chapter, the discussion of each item was divided into three parts. The first presented the fundamental concepts relating to the efficiency in the payment markets, indicating, wherever possible, the influence of the so-called “network effects” on the subject matter. The second presented the international experiences in this area, and the third presented an analysis of the Brazilian case. The focus of this comparative analysis was to identify how retail payment systems have been developed in Brazil, the recommendations of international organizations and researchers and what is observed in the payment systems of other countries.

Chapter 5 consisted of the main conclusions of the diagnosis of the report. It noted that the main features that characterize the retail payment system in Brazil are the following:

- The continuing large-scale use of paper-based payment instruments;
- The presence of fragmented infrastructural arrangements for clearing and settlement in retail payments; and,
- Low interoperability of the infrastructure of the distribution channels of payment instruments (i.e. ATM and POS terminals), due to the low degree of cooperation among the various providers of payment services.

The report also noted that in order for the various market participants to work towards achieving greater efficiency for the system as a whole, they would need appropriate incentives to act cooperatively.

Regarding the use of payment instruments, it was concluded that despite the growing use of electronic instruments, in particular payment cards, cheques were still the most predominantly used non-cash payment instruments in Brazil, both in terms of number of transactions as well as value.

For payment card transactions, only a limited number of POS terminals were interoperable. This low share of interoperable POS terminals restricted the ability of businesses to accept cards with different acceptance marks, and had to bear the costs of maintaining multiple POS terminals (rental of POS device, maintenance of telephone lines, etc.). As a result, there were multiple infrastructural arrangements for clearing and settlement arrangements for retail payments, implying further inefficiencies in the system. These arrangements made it difficult to take advantage of economies of scale and positive externalities.

The pricing structure of payment instruments was based on cross-subsidies and float income. This pricing model did not provide any information on the real

costs of operating the various instruments. As a result, consumers often chose inefficient payment instruments (i.e. paper-based instruments) over the more efficient ones.

Fundamentally, it was observed that the low levels of cooperation between financial institutions, service providers, payment and settlement system operators, exacerbated by inappropriate governance structures, generated a fragmented arrangement that prevented the Brazilian payments system from benefitting from the economies of scale present in network services. Moreover, this situation was deemed negative for innovation, investment rationalization, and for setting standards for interoperability.

The report and its conclusions were discussed publicly and at length with the various stakeholders. Several measures and initiatives that emerged right after these discussions, including in particular:

- Banks, through the association that represents them, decided to develop a platform for electronic bill presentment and payment (EBPP);
- The settlement of ATM and POS transactions was migrated to the *Câmara Interbancária de Pagamentos* (CIP), a major clearinghouse owned by a pool of banks, thereby reducing fragmentation in the clearing infrastructure; and,
- Through bilateral arrangements, some of the large banks that own ATM networks began sharing these infrastructures. More recently, a joint venture was created to manage the network of major banks.

2.5 KEY LESSONS FROM THE FIRST DIAGNOSIS

The whole process of data gathering, which included the receipt of data from the financial institutions, quality controls, storage of data in the database, validation and reconciliation of potential inconsistencies, was the most demanding task both in terms of effort and time.

The main problems encountered in gathering information were the following:

- Changes in the operating framework of institutions participating in the survey;
- Lack of standardization across institutions;
- Participants not consulting the BCB for guidance on the required data formats, despite the BCB's availability for this purpose;
- Technical difficulties with transmission of data; and,
- Delays from participant institutions when submitting their responses.

The periodic updating of statistics and indicators proved to be an important instrument for the oversight function, particularly in relation to improving the monitoring of the evolution of retail payment systems in the country.

The latter reinforced the need to improve the data collection process. Two actions were recommended: (i) increasing the frequency of transmission of data from annually to quarterly; and, (ii) establishing layouts and developing protocols and scripts to enable automated data transmission, including data validation and consistency checks at the BCB.

The rationale for collecting data on a quarterly basis was to conduct statistical analysis with more accuracy and efficiency, and also to obtain a greater commitment from the participating institutions regarding their internal processes for preparing the data to be sent to the BCB. With several data deliveries throughout the year, there would be a greater interaction with the participating institutions, including additional checkpoints, thereby enhancing data quality. The procedure would also allow for speedy and high-quality annual updates.

Procedures and processes regarding the transmission, receipt, validation, and storage of the data were standardized and automated. A computerized control system for data collection of information was therefore developed, in coordination with the BCB's IT department. The system alerts the information source (i.e. the participating institutions) in case of failed delivery or any other problems with the loading of information in the BCB database. Moreover, a standardized format for file was provided to financial institutions to enable the automatic processing of data, including consistency checks for layout and data format.

The maintenance of a list those within participating institutions who were responsible for preparing and communicating the required data to the BCB facilitated any troubleshooting questions. If needed, these people could be contacted by the BCB to address any issues pertaining to the preparation and/or transmission of data.

The availability of a “frequently asked questions” document that contained an explanation of various concepts as well as instructions on filling out the questionnaire was useful in mitigating errors in data generation.

The process of conducting a diagnosis and its periodic update requires a constant dialogue with the participants and a continuous review and update of the

concepts and products classification in the retail area to ensure that all sources are working under a single methodological standard.

2.6 LAUNCH OF THE SECOND DIAGNOSIS STUDY IN 2006

Based on the diagnosis/report published in 2005, a year later the BCB released a policy statement⁸ disclosing its opinion regarding the infrastructure and usage of payment cards in Brazil. Key aspects included the lack of cooperation between various players in the value chain and barriers to entry. The policy release clearly stated the BCB's intention to closely monitor the card industry and gain a comprehensive understanding of the way it operates. Moreover, the BCB also signaled that it would develop, in cooperation with the authority responsible for competition aspects, a detailed study of the card industry. This was done as a means to correct any market failures or anti-competitive practices.

Therefore, the BCB signed a cooperative agreement with the Secretariat of Economic Law (*Secretaria de Direito Econômico*, SDE) of the Ministry of Justice and the Secretariat of Economic Monitoring (*Secretaria de Acompanhamento Econômico*, SEAE) of the Ministry of Finance, which aimed at developing an analysis and studies of the payment card industry. This would include a study of market structure, market participants' behavior, and profitability of the market.

The report on the card industry would be the first result of the cooperative work under this agreement. The goal of diagnosis was to identify potential market failures arising from structure and market practices, and to serve as a reference for possible measures aiming at promoting greater social welfare.

⁸ http://www.bcb.gov.br/Pom/Spb/Ing/Directive2006_1.pdf

The scope of this second diagnosis was restricted to credit and debit cards and did not include private label cards and prepaid cards. Similar to the first diagnosis, a roadmap was developed taking into account the information needed to carry out the various studies. As part of the BCB's evaluation of the script for collecting information from market players, a copy of the draft was sent to key market participants and a meeting was scheduled to discuss its contents. Once the script was finalized as a layout,⁹ it was sent to various participants in the value chain that had previously been identified as relevant sources of information for the studies. The processes for collecting and analyzing the data received from the participants were the same as for the first diagnosis.

The second report was organized into three chapters. The first focused on the payment cards market and analyzed in detail the two-sided market for payment cards, including the main characteristics of this market type and how it differs from traditional markets. Emphasis was placed on the problems encountered when a market like the one for payment cards is analyzed using the same criteria as the one used for a traditional market. This chapter discussed the components and peculiarities of two-sided markets, the existing theoretical models, business rules in the payment card industry and the competition between the parties.

The second chapter described the international experience in the adoption of measures to reform the payment cards industry. It summarized the relevant industry rules, industry concentration, and provided an analysis of profits and pricing, highlighting the peculiarities of the industry for the various countries considered.

⁹ www.bcb.gov.br/pom/spb/Down/ftp/prod/Elaboracao_e_Remessa_de_Informacoes_Relativas_aos_Cartoes_de_Pagamento_Credenciadores.pdf and www.bcb.gov.br/pom/spb/Down/ftp/prod/Elaboracao_e_Remessa_de_Informacoes_Relativas_aos_Cartoes_de_Pagamento_Emissores.pdf

Chapter 3 described the way in which the payment cards industry is organized in Brazil, its participants, and their main characteristics. This chapter provided overseers and regulators with the necessary technical and economic foundations to understand the functioning of the card payments market in Brazil. For this purpose, information was collected through specific questionnaires for four different information sources: “scheme owners” (business owners of payment card schemes), “issuers” (issuers of payment cards), “acquirers” (service providers that enable payment cards to be accepted by merchants), and “merchants” (retailers and service providers). At the end of this chapter some conclusions were drawn about the general level of competition and efficiency of the card industry in Brazil.

Once the first version of this report was published, there was a ninety-day public comment period in which industry participants could express their views by sending their comments and suggestions on the contents of the report. The final version of the diagnosis was released later on, taking into account the opinions and suggestions received,

2.7 OVERALL CONCLUSIONS OF THE BRAZILIAN EXPERIENCE AND THE IMPORTANCE OF THE STOCK TAKING EXERCISE FOR PAYMENT SYSTEM OVERSIGHT

Retail payment systems are an integral part of the BCB's oversight. To achieve the BCB's goal of ensuring and maintaining efficient and safe payment systems, it is necessary to have a comprehensive and detailed knowledge of the industry's structure and organization, the underlying economics, and the potential market failures. With the knowledge gained through the stocktaking exercise, the BCB is better positioned to monitor, analyze the industry, and, if necessary, un-

undertake reforms that minimize the differences between the observed outcomes and the desired goals for efficiency and safety in retail payment systems.

A diagnosis like the ones performed by the BCB provides relevant information for monitoring and enables the construction of indicators, both quantitative and qualitative, to assess the system. Frequent data updating and regular publication serve as important tools to communicate the central bank's guidelines and objectives. Such publications are relevant for numerous other parties as well:

- For the financial community and society in general, they play a role in financial education efforts and in promoting greater knowledge and transparency;
- For academic researchers, they are key sources of information for on-going and new studies;
- For lawmakers, they are used as a conceptual framework for understanding the economic structure of the industry; and,
- For market participants, they are important information sources of benchmarked performance indicators.

In terms of the improvements achieved so far in Brazil, there are increased levels of interoperability in ATM and POS networks, increased competition in the payment card acquirer sector, and a consolidated clearing and settlement infrastructure, among others. Several innovations such as electronic bill presentment and payment have been introduced. The market is also working on developing alternative solutions (e.g. mobile payments) to facilitate the inclusion of low-income population.

Last but not least, the whole process of undertaking a diagnosis such as the one described throughout this section significantly improved the knowledge and capabilities of central bank officials, and positioned the BCB at the center of discussions on the Brazilian retail payments system domestically and internationally.

SECTION III

THE EUROPEAN EXPERIENCE WITH RETAIL STOCKTAKING



3.1 THE INTRODUCTION OF A SINGLE CURRENCY AND THE START OF THE INTEGRATION OF THE EUROPEAN PAYMENTS SECTOR

The European experience with retail stock-taking has been a very specific and complex one, owing to the fact that the starting point was not a centralized state or currency area, but a union of sovereign member states, which all had initially their own national currency.

The euro area countries' original payment and securities clearing and settlement systems were created largely before the introduction of the single currency and consequently focused on meeting domestic needs. They were therefore relatively diverse in nature and not designed to meet the needs of a single currency area, where area-wide infrastructures based on common standards, rules and business practices are needed in order to allow an efficient and effective flow of payments and securities at low cost.

The progress towards an economic and monetary union (EMU) in Europe took place in three stages. Stage one toward the EMU (1990–1993) was characterized by the full achievement of a single European market through the dismantling of all internal barriers to the free movement of persons, goods, capi-

tal, and services within Europe. The Committee of Governors of the central banks of the Member States of the European Economic Community (“Committee of Governors”), which had played an increasingly important role in monetary cooperation since its creation in May 1964, was given additional responsibilities.

Stage two (1994–1998) started with the creation of the European Monetary Institute (the predecessor of the European Central Bank), and was dedicated to the technical preparations for the single currency, the avoidance of excessive deficits and public debts, and the enhancement of the convergence of the economic and monetary policies of the Member States (basically, to ensure stability of prices and sound public finances).

Stage three began on January 1, 1999 with the irrevocable fixing of exchange rates, the creation of the ECB, and the transfer of monetary policy competence to this institution and the introduction of the euro as the single currency. The Trans-European Automated Real-time Gross settlement Express Transfer (TARGET) system, the first-generation of real time gross settlement (RTGS) system for the euro, commenced operations on January 4, 1999 following the launch of the euro.

On January 1, 2002 euro banknotes and coins became legal tender in the participating countries and by the end of February 2002 national banknotes and coins ceased to be legal tender in the euro area countries.¹⁰

3.2 STOCKTAKING EXERCISE OF THE EUROPEAN PAYMENTS LANDSCAPE

Unlike in most centralized states, there was no comprehensive set of payments data based on a common methodology available in Europe in the early 1990s. Therefore, already at the very beginning of the way toward the EMU, it was concluded that the assembly of reliable statistical payments data for the monitoring of the European payments landscape was a key success factor of the integration process. As a result the Committee of Governors created an Ad Hoc Working Group on European Community Payment Systems on January 8, 1991. Its mandate included the task of undertaking “a fact-finding review of payment systems in Community countries with a view to current and future issues of direct concern for central banks.” To fulfill this task the Ad Hoc Working Group produced a descriptive guide to payment systems in European Economic Community (EEC) countries, which became known as the “Blue Book.”¹¹

3.2.1 Establishment and maintenance of a common statistical database

The Blue Book was designed to serve two important purposes. Firstly, it provided the foundations for the Working Group’s analysis of issues of common concern to EEC central banks in the field of payment sys-

tems. Secondly, it was intended to meet the growing demands for a reference guide to payment systems in Europe, as well as to serve the needs of the single monetary policy. The intention was to provide a comprehensive description of the principal payment and securities settlement systems operating in the Member States of the European Union (EU) on both a domestic and a cross-border basis.

The Blue Book was never intended to be an instrument reserved solely for the use of central banks. Other institutions involved in discussing payment systems issues or in establishing or using payment systems infrastructures were also among the addressees. The Blue Book was produced in collaboration with the national central banks of the ESCB.

With regard to the structure, in the text edition, the euro area chapter and the individual country chapters follow a commonly agreed outline as follows:

- The first section contained an overview of the institutional aspects which have an impact on payment and settlement systems, including a brief description of the major parties involved;
- The second section described payment media used by non-banks;
- The third section described interbank transfer and settlement systems; and
- The fourth section described the systems for the trading, clearing and settlement of securities.

The descriptions covered both domestic and cross-border aspects of the systems. The text edition has been updated approximately every five years. Each country

¹⁰ For more information on the introduction of the euro and the institutional framework, please refer to <https://www.ecb.europa.eu/pub/pdf/other/10thanniversaryoftheecbmb200806en.pdf?ac2a9e0e66400c785b6ab83f11b6380a>

¹¹ The European Union (EU) was formerly known as European Community (EC) or European Economic Community (EEC).

chapter includes a list of abbreviations and a set of statistical data. The latter are presented as time series in order to facilitate the analysis of recent developments.¹²

In addition to the country chapters, a final chapter dealt with cross-border payment arrangements. Finally, the annexes contained a methodology for the statistical data, cross-border comparative tables, a glossary and a list of members of the editorial group responsible for the co-ordination of this edition.

Four editions of the Blue Book have been published, each of them adapting and responding to particular needs that arose in the integration process.

The first edition (September 1992)¹³ contained thirteen chapters, one for each of the twelve European Community (EC) countries and a final one on cross-border arrangements, in order to cover cross-border arrangements and to avoid repetitive references in country chapters to systems which were common to several EC countries.

The second edition (data for the period 1990-94)¹⁴ was published by the ECB's predecessor, the European Monetary Institute (EMI), in April 1996. It revealed the major changes in the EU payment systems, including the entry into force of the Single European Act on January 1, 1993; the entry of three additional members into the European Union (Austria, Finland and Sweden) on January 1, 1995; and the decision of the EMI Council in May 1995 to create TARGET, a system linking the domestic RTGS systems across the

European Union with the primary aim of enhancing the conduct of monetary policy in stage three of the European Monetary Union.

The third edition (data for the period 1995-99)¹⁵ was published by the ECB in June 2001. Unlike the previous edition, the third edition contained a brief description of the role of the national central banks and the ECB in the area of oversight. With regard to retail payment systems, the section that dealt with it was also expanded in order to include e-money and card-based schemes, thus reflecting the effect that advances in technology had on payment systems.

The fourth edition (data for the period 2001-06)¹⁶ reflected the fundamental changes in payment and securities settlement systems between 2001 and 2006. Following the successful EU enlargement,¹⁷ a separate ECB report on "Payment and securities settlement systems in accession countries," as was published in August 2002, was no longer required since these countries had become members of the EU. This edition of the Blue Book contained a chapter on the euro area and country chapters for all 27 EU Member States. For practical reasons, this Blue Book was split into two volumes: Volume 1 comprised a chapter on the euro area and individual chapters for each euro area country, while Volume 2 comprised individual chapters for each non-euro area country. Among other things, the euro area chapter reported on the Single Euro Payments Area (SEPA) project, as well as on new pan-European infrastructures such as TARGET2 in the field of large-value payments and the EBA Clearing's STEP2 system in the field of retail payments.

¹² Where possible, these tables follow the presentation used in the BIS report "Payment Systems in the Group of Ten Countries" (the so-called "Red Book"). However, some tables have been modified and extended in order to reflect the more particular situation in Europe.

¹³ <http://www.ecb.int/pub/pdf/other/bluebook1992en.pdf>

¹⁴ <http://www.ecb.int/pub/pdf/othemi/bluebook1996en.pdf>

¹⁵ <http://www.ecb.int/pub/pdf/other/ecbbbluebook2001en.pdf>

¹⁶ <http://www.ecb.int/pub/pdf/other/ecbbbluebooknea200708en.pdf>

¹⁷ Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia acceded on May 1, 2004. Bulgaria and Romania joined the EU on January 1, 2007.

In contrast with previous editions, the Blue Book, published in August 2007, did not contain statistical annexes. The relevant statistical data was made (and is still) available online in the ECB's "Statistical Data Warehouse"¹⁸ in the "Payments and securities trading, clearing and settlement" sub-section of the "Economic concepts" section.

Advantages of this statistical tool include the faster publication of data. Also, users can compose and download datasets in accordance with their own needs. The format of the text edition remains unchanged. The Statistical Data Warehouse (SDW) also contains pre-formatted tables on payments statistics that present data in the same way as the old Blue Book Addendum publication. The tables contain data for the last five years and provide a convenient link to the full series, also available in the SDW.

3.2.2 Outcome of the stocktaking exercise and resulting concrete actions

The first and obvious focus was the development of a payment service to serve the needs of what would be the single monetary policy and, at the same time, to facilitate the settlement of euro payments across national borders in the EU in central bank money.

In November 1993 the Committee of Governors released a report submitted by the Working Group on EC Payment Systems on "Minimum common features for domestic payment systems." This report concluded with ten principles for EU Interbank Funds Transfer Systems (IFTS), covering the six areas identified by central banks as requiring specification in terms of minimum common features: access conditions, risk management policies, legal issues, standards and infrastructures, pricing policies, and

business hours. The Committee of Governors also agreed that progress made in implementing the ten principles should be evaluated once a year by EU central banks in an annual report to the Committee of Governors (later to the EMI Council).

At the time, the majority of Member States already had their own RTGS systems, but only for the settlement of transactions in their national currencies. Therefore, in March 1995, the Council of the European Monetary Institute (EMI) decided that all current EU national central banks should be ready to connect to TARGET by 1999. The first-generation TARGET system had a decentralized technical structure, linking together the different national RTGS structures that existed at the national level.

In a market environment that evolved rapidly and was highly competitive, the first generation of TARGET proved to have some room for improvement. These challenges called for a redesign of the system. TARGET participants needed an enhanced and more harmonized service offered at the same price across the EU. On October 24, 2002 the Governing Council of the ECB decided on the principles and structure of the next-generation TARGET system: TARGET2.

The migration to TARGET2 was started in November 2007. In TARGET2, the decentralized structure of the first-generation TARGET system was replaced by a single technical platform, the "Single Shared Platform" (SSP). The new system replaced the first-generation TARGET system completely in May 2008.

TARGET and TARGET2 contributed to a considerable degree of integration in the large-value payment segment, due to its design as RTGS system, however, its impact on the retail payment market has been limited. Despite the introduction of the euro and the

¹⁸ <http://sdw.ecb.europa.eu/browse.do?node=2745>

increased integration for interbank payments due to the launch of TARGET, the relatively high level of fragmentation of the retail payments infrastructure has hampered cross-border retail payments. As a result, the complex and fragmented legacy retail payments infrastructure has prevented the euro area from benefiting fully from the considerable economies of scale (and scope) present in the processing of payments and securities within a large currency area.

Each country has had its own national payment instruments and different standards for payments made by credit transfers, direct debits, and card payments. For the Eurosystem, the establishment of an integrated retail payments market with a common set of payment instruments for the euro area has therefore been put at the top of the agenda, since it is the logical consequence of the introduction of the euro. As a result the Eurosystem developed a vision of an integrated market for retail payment services that is subject to effective competition and makes no distinction between cross-border and national euro payments within the European Union.

Since 1999, the Eurosystem has acted as a catalyst in the reforms and produced several reports on the causes of, and possible remedies to, the fragmentation and set out the objectives to be achieved.

The first focus was on infrastructure level: In September 1999, the Eurosystem published a report entitled “Improving cross-border retail payment services in the euro area – the Eurosystem’s view.” The Eurosystem highlighted that, especially for cross-border credit transfers, prices were substantially higher and the execution time was substantially longer than for domestic transfers.¹⁹ These in-

¹⁹ See the ECB publication of September 1999 entitled “Improving cross-border retail payment services – the Eurosystem’s view.”

efficiencies were partially linked to the predominant use of correspondent banking and the lack of adequate euro area-wide interbank infrastructures. The industry was asked to substantially improve the efficiency of cross-border credit transfers, reducing the fee for those transactions, bringing settlement times into line with those for national payments, having the originator bear all fees unless otherwise agreed, and implementing the technical standards defined by the European Committee for Banking Standards.

In 2000, the Eurosystem noted that, despite some progress by the banking industry, customer prices had not decreased for cross-border payments.²⁰ To provide more guidance, the ECB also published a concrete road map for the development of a modern retail payment infrastructure for euro credit transfers.²¹

In December 2001, the European Parliament and the Council adopted a Regulation that included an obligation of equal pricing of cross-border and national euro payments for consumers. While the Regulation²² brought about some improvements from a customer perspective, the banking sector still had considerable work to do in building the pan-European service infrastructure. However, the equal

²⁰ See the ECB publication of September 2000 entitled “Improving cross-border retail payment services – Progress report.”

²¹ See the ECB publication of November 2001 entitled “Towards an integrated infrastructure for credit transfers in euro.”

²² Regulation (EC) No 2560/2001. It was replaced by Regulation (EC) No 924/2009 as of 1 November 2009. Regulation (EC) No 924/2009 on cross-border payments in the Community eliminates the differences in charges for cross-border and national payments in euro. It applies to payments in euro in all EU Member States. The basic principle is that the charges for payment transactions in euro offered by a payment service provider (e.g. a bank) have to be the same whether the payment is a national or cross-border payment. Furthermore, and specifically relevant to SEPA, the Regulation on cross-border payments stipulates that all banks in the EU have to be reachable for SEPA direct debits as from November 1, 2010 at the latest. The Regulation applies to all electronically processed payments, including credit transfers, direct debits, cash withdrawals at cash dispensers (ATMs), payments by means of debit and credit cards, and money remittance. All non-euro area Member States have the possibility to extend the application of this Regulation to their national currency.

charging principle gave the banking community a strong incentive to address obstacles to efficient euro retail payments.

In early 2002 the banking industry met to formulate a strategy to create the Single Euro Payments Area (SEPA). In May 2002 the European banking community published a white paper entitled “Euroland: Our Single Payments Area!”²³ which set out the banking sector’s objective of creating a Single Euro Payments Area (SEPA) by 2010. That paper and the formal establishment of the self-regulatory body, the European Payments Council (EPC), in June 2002,²⁴ were welcomed by the Eurosystem and other European authorities, and the EPC was supported in its SEPA-objectives.

Overall, SEPA vision consists of:

- The single currency, i.e. the euro;
- A single set of payment schemes that were either newly created (credit transfers and direct debits) or harmonized (payment cards);
- A harmonized legal framework – principally based on the “Payment Services Directive” and complemented by “EC Regulation 924/2009” and the upcoming “SEPA migration end date regulation” (see below);
- Greater competition among service providers and more choice and innovation for end users.

The Eurosystem supports SEPA on the basis of its statutory task of promoting the smooth operation of payment systems and its catalyst function, which seeks to facilitate the efficiency of the overall market arrangements for payments, clearing and settlement. In its catalyst role, the Eurosystem encourages change in these market segments and seeks to overcome the problem of fragmentation, which leads to inefficiencies, lower levels of growth and innovation, and unnecessary risks associated with the complexity of the market. Concrete measures include defining development strategies, setting milestones and issuing recommendations, mediating between market forces, helping to address barriers that cannot be fully removed by the private sector alone, and ensuring the effective sharing of information.

In this context, special attention has been devoted to the crucial role played by standardization in the process of integration of the retail payment market in Europe. The Eurosystem attaches great importance to the development and implementation of open and transparent standards. In particular, in the context of the SEPA project, it has supported the development of various technical standards for retail payments. The ECB holds the view that, whenever possible, non-proprietary international standards should be used, or where necessary new common European standards should be developed.

As part of its facilitation of the SEPA project, the Eurosystem has continuously followed and encouraged the standardization work carried out by the banking industry.²⁵ In 2004 the Eurosystem established a set of high-level recommendations regarding standardization work. It asked that the industry formulate and

²³ See the European Payments Council’s White Paper “Euroland: Our Single Payment Area!”, May 2002.

²⁴ The EPC is the decision-making and coordination body of the European banking industry in relation to payments. It consists of 74 members representing banks, banking communities and payment institutions. It has developed the payment schemes and frameworks necessary to realize SEPA.

²⁵ Moreover, the ECB (as well as its predecessor, the European Monetary Institute) has participated in some committees and working groups set up in the context of the European Committee for Banking Standards (ECBS), which was formed in 1992 by the three European credit sector associations representing the interests of European banks and associations.

regularly review a strategic vision—complemented by a detailed action plan—setting out the business and technical standards necessary in order to design and implement safe, efficient, and fully automated payment services using the best available technology with a view to supporting the SEPA project.

Since 2002, the European banking sector has made substantial efforts to increase the efficiency of retail cross-border payments. These have resulted in three main deliverables: a single set of rules for credit transfer, direct debit (based on ISO20022 XML), and a framework for card payments for all participants in the euro payments market; equal access for service providers and users throughout Europe; and equal treatment of market participants. An important milestone has been the migration to the EMV (Europay MasterCard Visa) standard for cards, POS terminals, and ATMs; this migration is well under way. However the Eurosystem is pushing for further standardization efforts in the terminal-to-acquirer and acquirer-to-issuer domains, as well as in the areas of the security and certification of equipment.

Transparency on rules and conditions has been seen as a key element and has been clearly enhanced. The Payment Services Directive (PSD), adopted at the end of 2007, forms the legal framework for payments²⁶ in SEPA and was to be implemented by all EU Member States by November 1, 2009. The Directive aims to generate more competition in payment markets by removing market entry barriers. It also provides a simplified and fully harmonized legal framework with regard to information requirements and the rights and obligations linked to the provision and use of payment services. The PSD is,

however, not restricted only to SEPA but applies to all payment services within the European Union, both at the cross-border and national levels.

While the PSD has played a crucial role in the harmonization of the legal framework, the harmonization of interbank business rules and technical standards has been undertaken by the banking industry. Following the launch of the SEPA credit transfer and SEPA direct debit schemes, of which the EPC is the scheme owner, it had become clear that the actual migration phase requires the closer involvement of actors on the demand side, a broader governance structure, and legislative support from the regulators.

Since 2008, the ECB has drawn attention to the need to set an ambitious but realistic end date for the migration to common European schemes for credit transfer and direct debit due to the fact that the migration figures (as measured by the SEPA indicators), were far below the objective to have a critical mass of payments migrated to the new SEPA formats by 2010.

In December 2010, the European Commission published a proposal for a Regulation establishing EU-wide requirements for credit transfers and direct debits in euro.²⁷ The objective was to establish technical requirements and setting deadlines for migrating credit transfers and direct debits in euro from national to Union-wide standards. The proposal was adopted by the European Parliament on February 14, 2012. This Regulation sets February 1, 2014 as the final deadline in the euro area for migration to European credit transfer and direct debit schemes. In non-euro area EU countries, the deadline will be October 31, 2016 – but only applicable to payments

²⁶ Directive 2007/64/EC of the European Parliament and of the Council of 13 November 2007 on payment services in the internal market. See http://ec.europa.eu/internal_market/payments/framework/index_en.htm

²⁷ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52010PC0775:EN:NOT>

in euro. As of these dates, existing national euro credit transfer and direct debit schemes will have to be replaced by SEPA schemes.

The reasonable transition period applied will allow customers and banks to get used to the adjustments in domestic payment transactions, provide legal certainty, avoid the cost of operating dual payments systems and bring forward the substantial future benefits of SEPA.

However, the establishment of such an end-date and the migration to the SEPA instruments does not mean the finalization of the SEPA project. According to the Eurosystem's long-term view, this achievement, although crucial in the process of the retail markets' integration, is only an intermediate step. Future focus should be on the provision of innovative value-added services, based on the common set of payment instruments that have been implemented for SEPA.

In addition to moral support provided to the industry and direction and timelines for implementing a modern payment infrastructure that responds to the needs of euro area, the Eurosystem has constantly tried to inform and involve all stakeholders.

3.2.3 Adequate communication, information sharing, and stakeholder involvement

The establishment of an integrated euro area-wide market for retail payments, where previously there were only fragmented national markets, has proven to be an extremely complex process involving a large number of stakeholders (i.e. public authorities, central banks, infrastructure operators, many thousands of payment service providers, and hundreds of millions of individual end-users). Each stakeholder group has had a role to play in this process. As stressed before, in the case of the Eurosystem, its

support to SEPA is based on its statutory task of promoting the smooth operation of payment systems and its catalyst function.

While market participants may look to the Eurosystem for leadership on some issues, it should be noted that leadership does not, in the field of retail payments, mean the Eurosystem taking over an operational role. Although the Statute of the ESCB gives the ECB the power to issue regulations addressing payment, clearing, and settlement systems, it has not applied its regulatory power in the field of retail payments, relying instead on cooperation and moral suasion. Such guidance is essential in complex projects like SEPA where definition and implementation last a number of years and involve a considerable number of stakeholders. High-level objectives may nevertheless be complemented over time by more specific guidance (e.g., concrete time-tables) and recommendations on various issues. This approach allows the Eurosystem to address any issues that may arise, as has been done in a considerable number of SEPA-related reports issued by the ECB, mentioned in Section 3.2.2.

The Eurosystem considers it important to keep all stakeholders informed on SEPA in a timely, transparent and consistent manner and involve them into the SEPA process.

In order to reduce the risk of lack of accurate and timely information that is naturally present in such a big project, the Eurosystem helps to coordinate the communication strategy:

- At European level: the Eurosystem, the European Commission and the EPC closely coordinate their communication activities.
- At national level: all euro area countries have set up coordination bodies. These bodies con-

sist mainly of representatives from the national governments, national banking associations, end-user organizations and the national central banks. Their purpose is to ensure the implementation of SEPA by keeping all participants fully informed and preparing them for SEPA.

Moreover, it was considered to establish discussion platforms that allow for an exchange of views between different types of stakeholders. The involvement of all relevant stakeholder groups is important in order to ensure not only that their needs are met by new policy initiatives, but also that they contribute to the successful and coordinated implementation of new measures. The following groups focusing on SEPA are (co-)chaired by the ECB:

- Contact group on euro payments strategy (COGEPS): The COGEPS meetings serve as a discussion forum to exchange views between the banking industry and the Eurosystem on issues of common concern. The focus of the discussions is on strategic issues. The COGEPS was set up in June 2001, at the very beginning of the SEPA project. It addresses issues and developments in the field of payment systems and services that are relevant for the euro area banking industry and for the Eurosystem. This includes developments related to large-value as well as retail payment systems and services.
- High-level meetings on SEPA: SEPA high-level meetings have been organized regularly by the ECB since 2005 as a means to foster the informal exchange of ideas and views on SEPA between high-level representatives of the financial industry and board members of Eurosystem central banks.
- SEPA Council: In several SEPA progress reports, the Eurosystem has considered improvements

to the overall governance of SEPA and also considered setting up a stakeholders' forum (called "SEPA Council") in which both the demand and the supply side would participate. The creation of the SEPA Council was agreed upon by the European Commission and the Governing Council of the European Central Bank in March 2010, and is a joint initiative. Both institutions co-chair this stakeholders' forum, which aims to promote the realization of an integrated euro retail payments market by ensuring the proper involvement of all parties and by fostering consensus on the next steps towards the realization of SEPA. The first meeting took place on June 7, 2010.

In addition the Eurosystem organizes ad hoc meetings with infrastructure operators and their governing bodies, with providers of payment, clearing, and settlement services, and with representatives of users, whenever considered necessary. Finally, the ECB takes part in meetings of the EPC and most of its working groups as an observer.

In relation to cooperation and sharing information with other authorities, the Eurosystem is involved in several of the European Commission's working groups and committees comprising representatives of national governments; conversely, the European Commission participates in a number of Eurosystem working groups. It should be noted that both the Eurosystem and the European Commission are involved in activities facilitating market efficiency and integration. However, while they often have the same public policy goals, they act from slightly different perspectives. While the Eurosystem has statutory responsibilities as regards the euro and the euro area (being responsible, among other things, for its payment, clearing, and settlement arrangements), the Commission aims to create a single market with a level playing field and

equal opportunities covering all of the countries—and currencies—of the European Union. One of the tasks of the Commission is to strive for the further harmonization of legislation within the EU. This includes not only regulations, but also directives.²⁸ The Commission also has responsibilities in the related areas of competition policy and consumer protection. Moreover, it investigates and helps to remove barriers preventing the creation of a single market for banking and finance.

3.2.4 Proper and neutral monitoring of agreed targets

As part of its statutory task of promoting the smooth operation of payment systems, and given its desire to facilitate financial integration, the Eurosystem provides guidance, analyzes developments of payment instruments, processing and settlement of the retail payment market, and the corresponding evolution of technical standards with a view to establishing a single retail payment market for the euro area.

On a regular basis, the Eurosystem provides guidance to market participants through “SEPA Progress Reports”, where it continuously assesses the progress

made and draws attention to the issues that need further work.²⁹ This is complemented by speeches, articles and ad hoc publications.

The following are some of the initiatives from the last few years:

- To facilitate the implementation of SEPA and to increase transparency, the ECB published all national migration plans on its website.
- In 2007, the ECB conducted a survey looking at the economic impact of SEPA. The aim was to gain a greater understanding of the potential economic consequences of SEPA.³⁰
- In 2008, the Eurosystem developed and published criteria (in the form of non-binding “terms of reference”) to assess the SEPA compliance of payment infrastructures, doing the same for card schemes the following year. Payment infrastructures and card schemes were asked, in 2008 and 2009 respectively, to assess their own compliance with SEPA using those terms of reference and to publish the results.

²⁸ Regulations are directly applicable throughout the EU (i.e., without any further action or involvement on the part of national parliaments). Directives must be implemented at the national level (i.e., transposed into national legislation and approved by the respective national parliaments). These legislative instruments are used to harmonize existing rules at the EU level or to establish new legislation where national rules do not exist but are deemed necessary.

²⁹ The Eurosystem has issued several progress reports (see <http://www.ecb.int/paym/sepa/stakeholders/eurosystem/html/index.en.html#reports>) to guide the industry: September 2000, “Improving cross-border retail payment services – Progress Report”; June 2003, “Towards a Single Euro Payments Area – progress report”; December 2004, “Towards a Single Euro Payments Area – third progress report”; February 2006, “Towards a Single Euro Payments Area – Objectives and deadlines” (fourth progress report); July 2007, “Single Euro Payments Area (SEPA) – From concept to reality” (fifth progress report); November 2008 “Single Euro Payments Area (SEPA) – Sixth progress report”; and October 2010, “Single Euro Payments Area (SEPA) – Beyond theory into practice” (seventh progress report). In addition a number of other publications (see <http://www.ecb.int/paym/sepa/stakeholders/eurosystem/html/index.en.html#reports>) aimed for providing the market with additional guidance.

³⁰ The study found that the project phase in which national and SEPA payment schemes coexisted should be as short as possible, as a longer migration period would entail higher costs. The study also indicated that forward-looking banks that used innovation and technology to offer their customers value-added services were likely to gain the most from SEPA.

- The ECB, in close cooperation with the national central banks, conducted four surveys on retail payment innovations, aimed at obtaining a better understanding of which payment innovations are developed and deployed in Europe. The latest one was carried out in 2010, and the results were published in a report in October 2011.³¹
- The ECB recently finalized a project to enhance the general understanding of the cost efficiency of different payment instruments. For this purpose, the ECB, in close cooperation with national central banks, conducted a study on the costs of retail payments. The overall objective of the study was to estimate and analyze the social costs of different payment instruments. Based on a common methodology, the study established a consistent and comprehensive framework allowing for a comparison of the costs of different payment instruments across European countries.

In addition, with the transition from legacy payment schemes to the new SEPA schemes, additional and tailor-made payment statistics were considered necessary. The Blue Book and the SDW provided a useful overview of the existing cash payments and non-cash payment instruments (basically cheques, credit transfers, direct debits, and payment cards) but they do not differentiate between the underlying scheme and/or format by payment instrument. However, the launch of the SEPA project had major implications for the characteristics and use of some of these instruments.

The Eurosystem, in its role as a catalyst for the SEPA project, has been closely following the implemen-

tation of SEPA and the migration towards the new SEPA instruments such as the SEPA Credit Transfer (SCT) and the SEPA Direct Debit (SDD). In this regard, its current interest lies not so much in the overall use of a particular instrument (e.g., a credit transfer), but in the specific scheme and/or format of this instrument (national legacy scheme/format or SCT/SDD schemes).

The so-called “SEPA indicators” were developed for this specific purpose. In addition, it was considered that a monthly reporting period³² was beneficial compared to the annual reporting of the Blue Book (See Table 1), in order to have up-to-date information on the SEPA adoption available and to be able to adapt the migration strategy, if needed. The following SEPA indicators have been introduced:

- Euro area SEPA credit transfer (SCT) indicator: The EPC launched the SCT Scheme on January 28, 2008. This scheme is a set of interbank business rules that have to be observed when executing SEPA credit transfers. The EPC is responsible for the development and maintenance of the SCT scheme as defined in the Rulebooks published by this institution itself. It is also the adherence authority of the scheme. The SCT is based on ISO20022 XML format. Since the launch of the SCT, the Eurosystem has been compiling the so-called euro area SCT indicator. This indicator is reported on a monthly basis and has been designed to focus on the bank-to-bank domain, and more specifically on the credit transfer transactions processed by the euro area interbank payment system infrastructures. It presents the share of SCT transactions in the total volume of all credit transfer transactions

³¹ In addition to the regular analysis, this report also clarified the concept of “e-SEPA”, which is the Eurosystem’s long-term vision of the Single Euro Payments Area (SEPA), namely an integrated payment market in which payment service providers make use of advanced information and communication technology when offering payment-related services, building on the core SEPA payment instruments.

³² Quarterly in the case of payment cards.

(i.e., credit transfers in legacy format plus SCTs) processed by the clearing and settlement mechanisms (CSMs) located in the euro area.³³

- National SCT indicators: For the purpose of monitoring individual countries' migration progress, national SCT indicators complement the euro area-wide SCT indicator. The national SCT Indicators present the share of SCT transactions in the total volume of all credit transfer transactions initiated in a country (i.e. credit transfers in legacy format plus SCTs). The Indicators assess the situation in all euro area countries and selected non-euro area EU countries.³⁴ They are compiled semi-annually by the euro area national central banks (NCBs) from all euro area countries and reported to the ECB with a time lag of maximum three months. The first set of results refers to the first half of 2008.
- Euro area SEPA direct debit (SDD) indicator: The EPC launched the SDD scheme on November 2, 2009. In fact, there are two schemes, the SEPA "Core Direct Debit Scheme" and the "Business to Business (B2B) Direct Debit Scheme". The EPC is in charge of the development, maintenance and adherence of these schemes. The euro area SDD Indicator presents the volume of SEPA direct debit transactions (for both Core and B2B Scheme) in the interbank domain, both in absolute terms (i.e., the number of transactions) as well as the share of SDD transactions in the

total volume of all direct debit transactions (i.e., direct debit transactions in legacy plus SDDs). Similar to the euro area SCT indicator, the SDD Indicator is calculated based on aggregate data from the clearing and settlement infrastructures/systems located in the euro area. Likewise, SDD transactions that are cleared bilaterally or processed within the same institution are excluded from this indicator.

- SEPA card indicators: In addition to credit transfers and direct debits, SEPA has a strong focus on cards as well. Therefore SEPA Card Indicators for individual euro area countries and the euro area and EU averages are published to provide market participants and the general public with up-to-date information on the progress regarding the single euro area for card payments ("SEPA for Cards"). In contrast to the SCT and the SDD where completely new European payment schemes were developed to replace existing national instruments, no such approach was taken for card payments. For this reason, it is necessary to monitor progress made in the area of SEPA for Cards on the basis of other relevant developments in the payment cards market. The SEPA Cards Indicators were developed explicitly for this purpose and monitor the following areas:
 - Indicators following the migration towards the EMV standard for cards, POS terminals and ATMs.³⁵ These indicators reflect the share of EMV-compliant cards, POS terminals and ATMs, respectively, in the total number of cards in circulation, POS termi-

³³ It should be noted that counting only the transactions processed by these clearing and settlement mechanisms leaves out other clearing and settlement practices such as bilateral clearing of transactions, correspondent banking, and the processing of so-called "on-us" transactions (i.e., transactions between accounts at the same bank). These other practices were deliberately excluded from the scope of the euro area SCT Indicator since their importance differs strongly from country to country; and also because the collection of the relevant data would take significantly longer and would imply the involvement of a considerable amount of additional entities. Nevertheless, these alternative clearing and settlement channels are included in the "National SCT Indicators".

³⁴ Non-euro area EU countries participate voluntarily in this exercise.

³⁵ EMV stands for "Europay MasterCard Visa". As recognized in the EPC's SEPA Card Framework, the EMV standard is the technological platform for Europe-wide acceptance of payments with cards with very high levels of security. This standard enables the implementation of CHIP and PIN security for card transactions.

**TABLE 1: SUMMARY OF THE DIFFERENCES BETWEEN THE BLUE BOOK
AND SDW STATISTICS, AND THE SEPA INDICATORS**

	Blue Book – Statistical Data Warehouse	SEPA Indicators
Objective	To show trends in payment behavior by compiling the overall number of payments by payment instrument	To monitor the uptake of the new SEPA payment schemes by comparing the number of SEPA transactions with the total number of transactions for each payment instrument
Purpose	General monitoring of the European payments landscape; important source of information for interested public	Specific purpose: monitoring the SEPA migration process
Updates	Annual	Usually monthly
Continuance	Intended to be permanent	Only useful as long as migration has not been completed

nals and ATMs in every country. These indicators are compiled on the basis of quarterly data collected by the EPC.

- Indicators monitoring the share of EMV transactions in the total number of transactions.³⁶
- Indicators presenting cross-border payment transactions for which payment cards were used, that is, cardholders' actual use of their cards when travelling abroad. This indicator is calculated as the number of POS transactions conducted using cards issued outside the country divided by the total number of POS transactions.

³⁶ An "EMV transaction" is understood to be a card payment transaction in which the following criteria are satisfied: an EMV-compliant card is used at an EMV-compliant terminal, and EMV technology is used in the processing of the transaction.

3.3 CONCLUSION FROM THE EUROPEAN EXPERIENCE

The European experience has shown that it is essential to have a proper basis of statistical data for the purpose of analysis. This data should ideally be made public, for example, in the form of a statistical data warehouse that can be accessed by the interested public via the internet.

The diagnosis should result in concrete actions for the improvement of the retail payments market, whereas—depending on the segment of the payment market—roles can differ. While in the field of RTGS systems, central banks are likely to be operationally affected; their role in the field of retail payment integration might be the one of a catalyst.

Should self-regulatory measures by market participants not lead to the desired result, regulatory in-

intervention could be considered. If the central banks' regulatory power in the field of payments is limited, it is even more important that its objectives are aligned with the appropriate regulator.

An early stakeholder involvement is beneficial and should include the supply side as well as the demand side. Central banks or other public authorities have a role to play as moderator between both sides and should ensure appropriate communication measures. Finally, the achievement of the objectives should be properly and neutrally monitored.

SECTION IV

RETAIL STOCKTAKING: LESSONS FROM INTERNATIONAL EXPERIENCE



4.1 RETAIL STOCKTAKING AS AN ELEMENT OF A COMPREHENSIVE PAYMENTS REFORM STRATEGY

Based on the detailed experiences of the BCB and the ECB in conducting their respective stocktaking exercises as well as relevant experiences from other central banks, this section develops a broad framework that can be used by country authorities to conduct their own retail stocking exercise and implement relevant policy measures to improve the environment for retail payments. In doing so, this section first looks at the broader context of the activities related to the reform of the national payments system (NPS)³⁷ of which a retail stocktaking exercise is a subset.

In the context of developing a strategic NPS development plan, the Committee on Payment and Settlement Systems (CPSS) has identified five key elements:³⁸

1. A vision of a desired end state over the planning horizon that articulates the consensus view of key stakeholder groups regarding the high-level objectives, guiding principles, properties, benefits, risks, and costs of the future payment system;
2. A statement of the roles, commitments, and responsibilities of the key public and private sector stakeholders in the development process;
3. Observable milestones that can be measured against critical and objective success factors;
4. A presentation of the conceptual design of the planned infrastructure for payment and securities settlement, which could include the relation to the existing system with reference to its structure, key characteristics, functionality and potential for further expansion and re-engineering as future financial developments warrant; and,
5. A statement of the implementation strategies, which includes the specific implementation priorities and procedures, as well as timelines, budgetary allocations, and financing schemes, critical milestones, and observable measures of achievement for public progress reports.

³⁷ In the context of this document, the term National Payments System has a broader connotation in the sense that it includes regionally integrated payment systems such as the Single Euro Payments Area (SEPA). A payments system in this context is referred to in its broader sense, that is, a set of rules and standards for the execution of payment transactions by payment service providers and not the concrete operational/technical service offerings of specific payment service providers.

³⁸ CPSS, "General Guidance for National Payment Systems Development," BIS, January 2006.

The peculiarities of retail payment systems should be duly taken into account. For example, unlike large-value payment systems, where transaction volume is typically low and the systems are, in general, developed by central banks or collectively managed by banks, retail payment systems handle a high transaction volume and comprise several individual components, which in most cases are owned and/or managed by private sector entities of varying nature (e.g., banks, banks consortia, other non-financial institutions such as providers of IT services, multinationals, etc.)

Therefore, when it comes to reforming the retail payment systems, the role of a central bank is more likely to be that of a catalyst for change. In this regard, a structured approach would include at least the following key elements:

- Establish appropriate organizational arrangements, including those that are necessary for the effective oversight and monitoring of retail payment systems;
- Develop a coordination framework that identifies the needs of all stakeholders in the retail payments value chain; Adopt a stocktaking approach to gain relevant information from the retail payments market, including identification of issues that must be addressed to improve safety and efficiency in the existing environment for retail payments;
- Develop a common vision and objectives that are consistent with the public policy goals set forth for the country or region;
- Develop an implementation plan with a realistic timeline and which counts with the appropriate buy-in from the stakeholders;

- Establish an effective controlling function that continually monitors the implementation of reforms as well as any emerging issues.

Some of these key elements are further elaborated below.

4.1.1 Establish appropriate organizational arrangements

A retail payments system development plan ideally needs to be part of an overall NPS development plan and hence can leverage the organizational arrangements already in place. Moreover, reforming retail payments system in isolation without consideration to other aspects of the payment systems (e.g. LVPS) may not yield the intended results.

For example, several structures that are created for the overall reform such as internal and external working groups and other cooperation bodies can be leveraged with some minor rearrangements to also support retail payments system reform efforts.

Central banks would also need to ensure appropriate internal staffing before embarking upon a comprehensive retail payments system development plan. For example, a payment systems policy department or unit with no operational responsibilities is typically well-positioned to lead the retail payments system reform. Where such a step is not possible right away the central bank may consider, as an interim measure, creating an empowered committee comprising senior central bank officers from the various relevant departments such as legal, policy management, operations, and technology.

4.1.2 Develop an appropriate coordination framework with key stakeholders in the value chain

Comprehensive reforms of retail payment systems require significant coordination with many stakeholders. These include the supply side (such as commercial banks, some non-banking financial institutions, and retail payment services providers including any new players such as telecoms), public administrations (including the Ministry of Finance and other Government ministries involved in social benefit transfers), major billers (like utility companies, telecoms, or public administrations) merchant associations, and representatives of the demand side (including consumers).

A national payments council (NPC)³⁹ led by the central bank and which includes all the relevant institutions previously described has proven an effective arrangement for coordination of such a variety of stakeholders. For retail payment reforming, a specialized committee within the NPC is normally in the best position to discuss the specific matters related to this sector. Appropriate levels of representation for effective decision-making and the active involvement and leadership from the central bank to build wide support for the various reform initiatives are among the key elements to this committee's success.

4.1.3 Adopt a Stocktaking Approach

To get a good understanding of the prevailing state of retail payments system in a country and to achieve the desired state for retail payment systems, it is important to fully understand the dynamics that prevail in existing market for retail payments so that appropriate reform initiatives can be designed. Stocktaking of the prevailing state of retail payments system would

involve: (i) identifying and unambiguously classifying the various types of retail payments instruments available for retail payments, the institutional as well as the clearing and settlement arrangements for processing these instruments, and their usage statistics, including the typical processing costs; (ii) the payment needs which are currently met largely through cash-based payments, paper-based payments, and electronic payments; (iii) the general trend in the processing costs, recent improvements, and new features introduced for these payment instruments; (iv) the level of customer disputes, frauds, and other risks related to usage of these payment instruments; (v) patterns in the usage and adoption levels of these payment instruments—geographic, socio-economic, transaction size; and (vi) the levels of overall population access to the payment instruments under the overall context of financial inclusion objectives.

4.1.4 Develop a common vision and joint objectives

Finally, envisioning the desired state of retail payments system assists in catalyzing action and serves as a reference point for all future endeavors. The desired state of the retail payments system might vary from country to country or region to region depending on a variety of factors (including demographics, industrialization of the region, etc.).

In general, developing a vision for a retail payments system should consider the following dimensions: (i) the desired level of penetration of electronic payment mechanisms; (ii) reduction of costs of retail payments to the society; (iii) payment mechanisms being able to meet the payment needs of customers (individuals and businesses); (iv) appropriate levels of customer satisfaction; and (v) continuous innovation and improvement in the retail payments area.

³⁹ Where the integration process covers more than one country (like in the case of SEPA), region-wide payment council should be considered.

Creating a set of general objectives to guide the development of the various individual retail payment systems might be useful to ensure that each of these is positioned to meet the overall vision. In other words, achieving the overall vision for the national retail payments system will be extremely difficult without ensuring each of its components individually adheres to the general guiding objectives.

It needs to be noted that in some cases, the boundary between the third and fourth elements might be blurred. Conducting a stock taking exercise in itself would need to have an objective and an idea of what is the desired state. However, developing a vision and identifying practical objectives would need the information that would be collected in a retail payments stocktaking exercise. In addition, the stocktaking exercise can also help in validating the appropriateness of the vision and practicality of the objectives. One way of addressing this mutual dependency, could be to consider establishing some initial vision and objectives as part of the stocktaking exercise and use the outcomes of the stocktaking exercise to refine and develop fully the vision and joint objectives.

The following section discusses guidelines that central banks can use to undertake their own initiatives for retail payments stocktaking.

4.2 GUIDANCE FOR RETAIL STOCKTAKING

This report has captured the essence of the stocktaking experiences of the *Banco Central do Brasil* (BCB) and the European Central Bank (ECB). Based on both experiences, the following guidance can be provided.

4.2.1 Setting high-level public policy goals for retail payments development

Before embarking on the stocktaking exercise, the central bank, together with other relevant public authorities if applicable, must identify the key concerns that wish to be studied in detail through the stocktaking exercise. It is highly likely that such key concerns will be derived from certain high-level policy goals, such as ensuring appropriate levels of safety and efficiency in retail payments markets.

Based on its experience in over 120 countries throughout the world, the PSDG considers that, in addition to overall safety and efficiency, the following specific issues/goals should also be considered to determine the scope and structure of the stocktaking exercise:

1. Affordability and ease of access to electronic payment instruments and services;
2. Provision of an efficient payment processing infrastructure that adequately supports a sufficient variety of payment services; and,
3. Availability of a socially optimal mix of payment instruments.

The scope-definition process must properly articulate these policy goals and the overall process by which they will be addressed through the stocktaking exercise. This is particularly important since the various stakeholders in the value chain will have to be convinced of the benefits of conducting this resource intensive exercise.

It is also recommended that the scope be broad-based in the sense that the stocktaking exercise goes beyond the collection of statistics to also include a de-

tailed theoretical analysis and a qualitative analysis through questionnaires and interviews with relevant market players.

4.2.2. Planning and organizing the stocktaking exercise

A stocktaking exercise is a complex undertaking that requires meticulous planning and active involvement of numerous stakeholders.

A very first step for effective planning is to translate the agreed scope of the exercise into specific requirements to determine the level of effort that will be required both from the central bank as well as from all the other parties that will participate in the exercise.

A wide range of references from literature and other information sources should be used. These may include the following:

- Consulting relevant publications on topics relating to retail payments, including in particular materials from the Bank for International Settlements (BIS), the World Bank, other central bank publications and relevant academic papers;
- Organizing technical missions to learn from countries that have advanced tools and methodologies for oversight, monitoring, and stocktaking;
- Participating in relevant industry conferences and seminars to learn about various international experiences and best practices relating to innovation and growth of retail payments;
- Undertaking preliminary discussions with industry stakeholders to gauge the level of their interest for participation in the stocktaking exercise; and
- Developing the business case for the stocktaking exercise in order to obtain buy-in from the senior management within the central bank, other relevant public authorities, and the retail payments industry including commercial banks and non-bank financial institutions is another critical step for adequate planning and organization. The business case should clearly present the benefits expected from this endeavor, as well as the human, financial, and technological resources that will be needed both from inside the central bank as well as from other parties involved.

4.2.3 Involving the industry early in the organization of the stocktaking exercise

To a very large extent, the purpose of the stocktaking exercise is to ensure that the appropriate information needed for policy decisions is gathered. Retail payments industry participants that are expected to participate in the stocktaking exercise by providing data and other information should be provided with adequate background information to ensure a proper understanding of the requirements. They should also be given enough time to prepare their answers so that they are able to produce good quality information.

Therefore, to the extent possible the specific requirements of the stocktaking exercise should be discussed with and agreed upon by with key participants and industry representatives. Issues such as the data variables intended to be included in the exercise, definitions, frequency of data collection, formatting, and so forth are likely to require strong inputs from the industry. The same must be applied to any survey questionnaires intended for obtaining qualitative information.

Industry participants are typically cooperative in providing information to the overseer and, hence, formal powers to gather information are rarely relied upon in practice. However, the mere existence of such formal

powers may play an important role in both the quality of data obtained and the willingness of certain industry participants to cooperate in providing those data. Wherever possible, central banks should automate the data collection processes to improve efficiency and reduce the burden of the exercise for the industry.

That the central bank clearly delineate the roles and responsibilities of the various stakeholders involved in the process is critical. In most cases, these roles and responsibilities will depend upon the level of involvement of a particular stakeholder (for instance, if they are a direct system participant, merchant, or other type of stockholder). Emphasis on a formalized structure that lays out common objectives for the stakeholders involved is of fundamental importance since this will influence the quality of interactions and ultimately the information collected from the system participants. In particular, having each contributing institution designate one or more persons within their staff that will be responsible and accountable for the submission of information to the central bank is of critical importance for the success of the process.

4.2.4 Data collection, validation and analysis

As both central bank experiences captured in this document have shown, the quality of information collected is critical for the stocktaking and any monitoring and/or implementation of policy measures.

Some of the key lessons in this regard include the following:

- The data collection and validation processes can be extremely demanding. It is therefore highly important that the central bank assigns the appropriate resources, both human and technological, to this task.
- There needs to be a strong discipline and rigorous methods for the validation of the information received from the various stakeholders. Errors may range from small typos or formatting issues, to more serious problems associated with the integrity of data set.
- Also, as noted above, assigning individuals that are responsible for data integrity is an important part of the process. If errors are found, then these individuals can be reached by the unit at the central bank responsible for processing the information for correction or updates.
- Developing a detailed methodological note that is available through the central bank website may be a helpful tool for solving questions and also for the training of industry staff responsible for data submission. For any data subsequent data updates, this mechanism may also be beneficial in communicating any procedural changes as a result of process improvement.

4.2.5 Preparing the diagnosis report, publication and dissemination of results

The contents of the actual report presenting the outcomes of the stocktaking exercise may vary depending upon the needs of central bank. The following basic of table of contents is provided solely as a general reference:

1. Definition of scope and objectives of the exercise;
2. The methodology and process for data collection including definition of metrics and indicators that will be monitored;
3. Presentation of both qualitative and quantitative data/information;

4. Analyses of issues, trends, structure and behavior of market players, price structure, etc. which adversely impact the public policy goals;
5. Analysis of international best practices to address such issues or market failures;
6. Recommended policy actions including timeline for implementation;
7. A discussion on key stakeholders that will be impacted as a result of these policy actions and possible range of actions; and,
8. Any other aspects deemed relevant.

After the completion of report, the central bank must focus on the development of an effective communication strategy that will be used to disseminate the findings to all stakeholders and to the overall public.

All of these guidelines can be summarized as follows.

Guideline 1: The overall scope and structure of the stocktaking exercise shall be driven by the high-level public policy goals set forth in the area of retail payments. The public policy goals would vary from country to country, but in general are associated with the safety and efficiency of retail payment systems in the country. Some other relevant public policy areas may include increased access and affordability, the availability of a socially optimal mix of payment instruments, and the availability of the required industry infrastructure to process such payment instruments. The retail payments stocktaking exercise should be designed so as to enable a clear understanding of the issues and areas of improvements required for achieving the stated public policy goals. The scope should be broad-based and should be developed in close co-ordination with all stakeholders.

Guideline 2: Adequate attention needs to be devoted to the planning and organization of the stocktaking exercise. Retail payments stocktaking is a complex undertaking requiring meticulous planning and active involvement of numerous stakeholders. A wide range of information sources should be used, including the information available in the broader payment systems community and also other sources. This information helps in benchmarking the status in the particular country. Where obtaining direct data might be difficult, information from other sources will help in assessing the intended aspects or variables in an indirect manner.

Guideline 3: Industry players should be involved from the very early stages. The retail payments industry will require adequate background information and sufficient time to ensure availability of good quality information when the stocktaking exercise is rolled out. In addition, the central bank should actively seek dialogue with industry participants as the latter can provide valuable inputs in structuring the exercise, including agreeing on certain common terminologies and helping to determine the appropriateness of the data being required as well as the feasibility of obtaining such data reliably.

Guideline 4: Obtaining sufficient, high-quality data and other types of information is at the heart of the stocktaking exercise. The collection, organization, validation and analysis of data is a critical part of the stocktaking exercise, and is probably the most resource-intensive one. Appropriate human and technological resources should therefore be devoted to this element of the exercise, including a strong emphasis on validating the data received from the industry. A retail payments stocktaking exercise is also not a one-off exercise; hence, an approach to enable comparison across iterations to measure evolution should also be considered.

Guideline 5: Devote sufficient time to report preparation and to designing the strategy for the wide dissemination of results. Being able to properly document and communicate the results of the stock-taking exercise as well as the alternatives available to address the underlying shortfalls is of utmost importance. A carefully designed strategy for the communication and dissemination of the diagnosis report should be developed to provide useful feedback to the various stakeholders and relevant information to the overall public.

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