Measuring Payment System Development

The payments system is the infrastructure (comprised of institutions, instruments, rules, procedures, standards, and technical means) established to enable the transfer of monetary value between parties discharging mutual obligations. Its technical efficiency determines the efficiency with which transaction money is used in the economy, and the risks associated with its use. An efficient payments system reduces the cost of exchanging goods and services, and is indispensable to the functioning of the interbank, money, and capital markets. A weak payments system may severely drag on the stability and developmental capacity of an economy; its failures can result in inefficient use of financial resources, inequitable risk-sharing among agents, actual losses for participants, and loss of confidence in the financial system and in the very use of money.

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Introduction and Background

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For all these reasons, for more than 12 years the World Bank has been paying increasing attention to payment system development as a key component of the financial infrastructure of a country, and has provided various forms of assistance to over 100 countries.

Following international trends which encourage the measurement of a country’s performance or level of development in various economic and social areas, the World Bank’s Payment Systems Development Group (PSDG) has made a first attempt to measure payment system development levels across countries. This exercise is based on the data obtained from 142 country responses to the Global Payment Systems Survey carried out by the PSDG in 2007 and 2008. Country-by-country answers to each of the questions included in the Survey have been published as an appendix to the World Bank publication "Payment Systems Worldwide: a Snapshot. Outcomes of the Global Payment Systems Survey 2008".

The working paper, Measuring Payment System Development, prepared by the authors of this article is available at www.worldbank.org/paymentsystems, and is the first of a series of products and research papers drawn out of the Global Payment Systems Survey 2008 and published as part of the Financial Infrastructure Series – Payment System Policy and Research.

Overview of the Measurement Methodology

The measurement exercise aims at providing a broad picture of the level of development of each country with regard to payment systems. In essence, this measurement exercise intends to synthesize a complex set of qualitative and quantitative payment system characteristics into categories reflecting various levels of development. In turn, the categories reflect a range of scores for each component of a national payments system that is measured. Specific scores are given to individual payment system features, and a total score is then calculated for

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each area subject to measurement.

Also, the exercise intends to provide central banks, in particular in developing countries, with a tool to monitor developments in their payments systems and to compare them with other countries - a need expressed to the PSDG on many occasions.

At the outset, it is important to mention that the Global Survey was not intended originally for the purpose of obtaining indicators to measure relative levels of payment system development. Due to the design of the survey questionnaire, some important elements and components of a national payments system were less prone to measurement and, hence, have been excluded in the calculations. Moreover, in several areas there is still no wide international consensus on what the best practices ought to be.

As a result, this exercise focuses exclusively on four components of the national payments system, as follows: i) legal and regulatory framework; ii) large-value payment systems; iii) retail payment systems; and, iv) payment system oversight. Other important elements of a national payments system such as securities settlement systems and foreign exchange settlement systems, among others, have not been included.

Each of the four components of the national payments system mentioned in the previous paragraph is measured independently. For all the components, and where applicable also to relevant subcomponents, countries are classified into four different categories reflecting a certain level of development: i) high; ii) medium-high; iii) medium-low; and, iv) low.

Countries that according to the PSDG’s methodology fall in each of these categories are then listed in strict alphabetical order.

As mentioned earlier, each of the four different categories of payment system development comprises a range of possible scores. Therefore, two countries with relatively different levels of payments system development (i.e. one closer to the cutoff defined for the superior category and the other closer to the cutoff for the inferior category) may actually be shown in this exercise as belonging to the same category. Future exercises of this kind may be presented in a different form, including the possibility of presenting individual country rankings.

The methodology was developed, to the extent possible, on the basis of international standards and well-established practices. The PSDG is therefore confident on the overall soundness of the individual payment system features being scored and the relative scores used thereto. This view has been reinforced by the positive comments received from peer reviewers.

Concluding Remarks

"Measuring Payment System Development” shows that several countries in Latin America, Southern Africa and Central and East Asia are catching up quickly with developed economies with regard to developing the necessary infrastructure underpinning a robust payments system. The most notable outcome is the widespread implementation of real-time gross settlement (RTGS) systems, a mechanism for limiting risks associated with high-value payments among financial institutions, in particular counterparty and systemic risks. High-value payments processed in a year worldwide are equivalent to more than 50 times the global GDP, or US$330,000 per person. The survey finds that adoption of RTGS systems is on the rise, from fewer than 10 in 1994 to 112 countries in early 2008, thereby providing a solid foundation to the operation of financial markets and other economic activities that use these payment services frequently.

However, payment systems used by the average citizen still lag far behind in many countries. The benchmarking exercise finds a large gap between developed and developing markets: while a typical individual in advanced economies performs 100 or more cashless payment transactions per year, the same indicator ranges between 10 to 20 in Latin America and the Caribbean; 5 to10 in Asia and the Pacific; and less than 1 in Africa (South Africa excluded).

As, besides promoting financial stability and economic development, a robust payments system that is affordable and accessible can lower the cost of everyday transactions for a country’s entire population,” the authors urge governments and the private sector to use the benchmarking exercise and the overall survey results to inform future reform efforts.

Indeed, there is significant incentive to speed-up the pace of reform—developing countries could save up to 1% of their GDP, or some US$160 billion, on a yearly basis, if they undertake deep reforms to develop electronic payment systems that are safer, more efficient and accessible to a larger proportion of their population. This is a significant opportunity for people in developing countries when reforms like the Doha round and its estimated $130 billion in annual global savings are under stress.
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Paying bills without standing in line, sending money home to relatives in the countryside or abroad, receiving salaries into an account rather than cash are all services that are taken for granted in the developed world, but which still are a luxury to most in developing countries.

Providing the necessary policy guidance and market conditions is another critical aspect for the private sector to make necessary investments and to ensure affordable yet efficient access to payment services. Upper-middle income countries are improving their oversight capabilities, while progress in lower-income countries is slower. Findings also show central banks that have adopted a broad scope for payment system oversight having a safer and more efficient set of payment arrangements in all areas - 73 percent of high-income countries as opposed to only 39 percent of low-income countries.