Journal of Business, 1(2):59-62,2012 ISSN:2233-369X

Opportunities and trends in the development of the international payment system

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Abstract

The movement from cash and checks to electronic forms of commerce has advanced significantly in the early part of the 21st century. This means efficiencies and cost savings for financial institutions, convenience and safety for customers, and less social costs, for governments. Every participant of the effective system gains from it, so its building is extremely important for the welfare of a society as a whole.

Keywords: payment system, non-cash payment instruments, non-cash transactions, retail payment market, electronic payment systems.
JEL: G20

1. Introduction

The purpose of the article is to outline benefits, costs and problems associated with payment systems. The International Bank for Reconstruction and Development's and The World Bank's 2011 survey on payments systems worldwide highlights the importance of the efficient payments system for the world economy: "The creation of networks and systems for retail payments can have a substantial role in supporting financial access in developing countries. Indeed, modern retail payment technologies and innovative programs to channel recurrent payments efficiently can, and are already being used to, integrate the previously underserved and non-served population into the formal financial sector. A well-functioning infrastructure to efficiently and safely process modern payment instruments is necessary to successfully enhance a country's population access to, and widespread use of, such modern payment instruments. 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."

It's extremely important to understand the economic factors driving future developments in retail payment market, which is considered as cornerstone of the payment system, as well as to foresee and avoid risks and security threats also.

Banks should focus to continually improve and enhance their services and be ready for the increased competition on the payments market as well.

2. Development of payment systems

According to The Bank for International Settlements' (BIS) "A payment system consists of a set of instruments, banking procedures and, typically, interbank funds transfer systems that ensure the circulation of money"(2003). The same term according to Barron's Banking Dictionary (2012) is a financial system creating the means for transferring money between suppliers and users of funds, usually by exchanging debits or credits among financial institutions. Checks and drafts commonly are referred to as the paper based payment system; electronic fund transfers, such as Automated Clearing House debits and credits, and Fed Wire transfers, are referred to as the electronic payment system or paperless system. Japanese Professor Nakajima M. gives very interesting and exhaustive explanation, that payment systems are social infrastructures that support all economic activities, including commercial activities and financial transactions.

Important changes in payment systems history started about 150 years ago, when many cash transactions were replaced with paper based instruments. The further shift from paper to electronic payments started only about 20 years ago. In many countries, when the electronic payment systems were first introduced, they were the "Designated-Time Net Settlement" (DTNS) systems, net settlement system, where the settlement of funds occurs on a net basis. Actually it's a designated-time settlement system, in which final settlement takes place at a certain time, typically once, at the end of the day.

Later the central banks made the transition from

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Journal of Business, 1(2):59-62,2012 ISSN:2233-369X

the DTNS system to the "Real-Time Gross Settlement" (RTGS) system, which is far superior to the DTNS system in terms of settlement risk. It achieves finality earlier, thus reducing credit and liquidity risk. On top of this, there is no "systemic risk" in the RTGS system.

As of 1985, there were only two RTGS system observed; namely, the "Fedwire" in the US and the "DN Inquiry and Transfer System" in Denmark. According to the "Global Payment System Survey 2008" conducted by the World Bank, in December 2006 112 countries out of 142 (or 79%) were using the RTGS system.

The second evolutionary step in the payment systems was the emergence of "Hybrid systems", which is the combination of the best features of the DTNS system and the RTGS system. In the Hybrid system, net settlements are made at frequent intervals or continuously and the transfer of funds becomes final at the time of these settlements. The first Hybrid system in the world was the "EAF2" in Germany. Following the EAF2, the "PNS" in France, and the "CHIPS" in the US and others. In these systems, the net settlements were made continuously based on the settlement events, like the receipt of a new payment instruction and the addition of liquidity to the payer's account, instead of at regular time intervals. The next step in the evolution of payment systems was the transition to the Integrated System. The Integrated System is defined as the payment system that has both the RTGS mode and the Hybrid mode. The earliest adopter of an Integrated system was the "Large Value Transfer System" (LVTS) in Canada, which started operation in February 1999 and TARGET2 began operation in Europe in November 2007 (Nakajima, 2012).

But the evolution of payment systems will never stop as the financial market will require more and more sophisticated payment systems with greater safety and efficiency.

3. Trends in the international payment systems

The global payment landscape is quite diverse as it consists of domestic payment systems with their unique history, established practices, business and legislative environments. The differences of various countries payment systems is clearly represented in the D. Hancock, D.B. Humphrey's diagram, for which they used the average percentage electronic payments with respect to total non-cash payments and the average cash to GDP ratio.

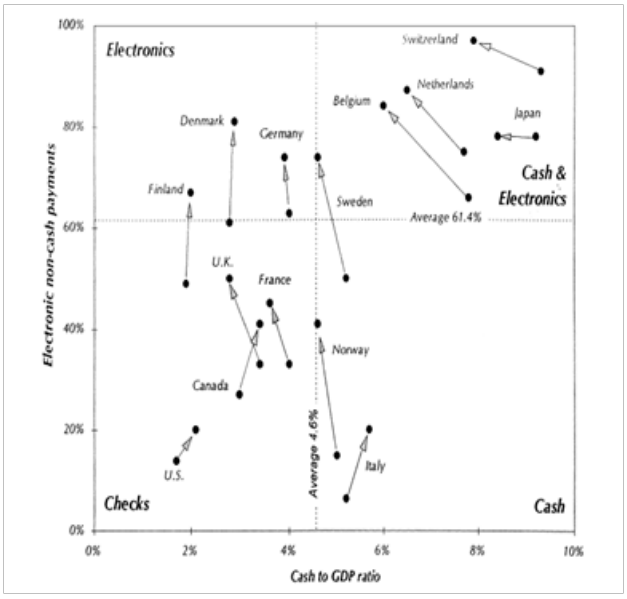

Figure 1. *Percent of electronic payments and cash to GDP ratios, 1987 to 1993. Note: The averages for the percent of electronic payments (61.4%) and for the cash to GDP ratios (4.6%) indicated in this figure are for 1993. In 1987, these averages were 47.3% and 5% respectively. Source: Humphreyet al. (1996).*

At either point in time, most countries fall into the lower left and upper right quadrants, indicating that most countries either use mostly paper-based non-cash payments and little cash (US, Canada, France, and the UK) or use mostly electronic non-cash payments and have high cash holdings (Sweden, Belgium, The Netherlands, Switzerland, and Japan). In contrast, three countries use mostly electronic methods and have low cash holdings (Finland, Denmark, and Germany)

Although the evolution of payment systems has a long history, rapid improvements and high availability of computer and telecommunication technology through the last decades lead to- financial innovation, i.e. ATMs, credit and debit cards and online payments, which in turn significantly changed customers' paying behavior. American economist and the former Federal Reserve Chairman Paul Volcker named the ATM cash machine as the most successful financial innovation in the past 20 years.

The number of payment instruments held and used by an average consumer nowadays is quite high, e.g. according to Foster, Meijer, Schuh, and Zabek's "The 2008 & 2009 Surveys of Consumer Payment Choice" the average USA consumer by 2008 had 5.1 of the nine common payment instruments, including cash, and was using 4.2 in a typical month, and by 2009 these figures changed to 5.0 and 3.8 consequently. It should also be mentioned that although 2009 figures are modest comparing to 2008 but it, according to authors' opinion, is due to weaker economic conditions, new government regulations, and bank pricing of payment card services that likely contributed to the shift back toward cash.

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As it is indicated in the 2011 World Payments report compiled by consulting firm Capgemini, the Royal Bank of Scotland (RBS) and the banking association Efma, non-cash payments, including electronic and mobile transactions, continue to be on the rise globally.

There is no doubt for industry experts that mobile transactions offer huge growth potential throughout the world. The report found that currently only 2.1 percent of mobile phone users use their devices for non-cash payments. Consequently, it is expected to grow in the next decades due to increasing interest of young generation in mobile appliances.

Although a marked persistence of traditional payment habits can be observed in some countries, particularly in some European countries, where despite the relatively high cost of cash, it remains the predominant means of payment and it is used extensively for day-to -day payments at the physical point-of-sale, non-cash retail payments have witnessed increased popularity over the past decades, even in majority of countries with traditional payment habits, and is expected to continue to do so.

It should be noted that cashless payments are particularly popular in Scandinavian countries. In Iceland, banknotes and coins accounted for only 9% of the purchased value at Points-Of-Sale, other transactions were mainly conducted using debit and credit cards (Liikanen, 2008).

Card payments (both debit cards and credit cards), which are the most popular non-cash payment worldwide accounted for 55.8% of all non-cash payments in 2010, up from 53.4% in 2009 and 35.3% in 2001.

The aggregate use of checks continued to decline (down 6.7% in 2010), while the outright volume of credit transfers and direct debit transactions continued to increase in 2010, though the relative usage of these instruments is gradually declining compared to cards.

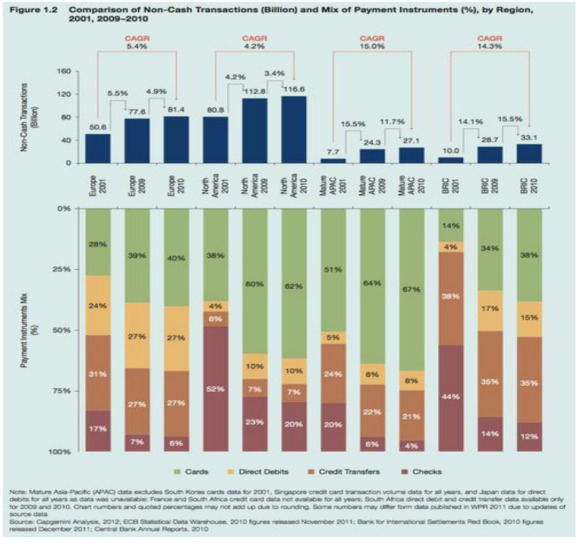

Figure 2. *Comparision of Non-Cash Transactions(Billion) and Mix of Payment Instruments(%), by region*

Non-cash payments are more transparent in fiscal and economic terms, cheaper for society and safe. Since the average bank cost of an electronic payment is only one-third to one-half that of paper based transactions (Humphrey et al. 2006), saving of social costs can be realized in shifting to non-cash payments. Moreover, cash is considered to be a facilitator of the shadow economy. That's why shifting to non-cash transactions is favored by central banks of different countries and by the World Bank, supporting the development of guidelines for government payments and of the legal frameworks for innovative retail payments mechanisms.

Conclusion

Given that the focus should be on the economic incentives and institutional arrangements that determine the use of and problems with different types of payment instruments,-it should also be mentioned that each country's payment system is unique and copying other country's payment system will not give positive results.

One of the goals of governments is to eliminate the "underground cash economy" and provide the unbanked and underbanked access to financial services.

For people not willing or not affording traditional banking system innovations come for help, mobile payments and e-payments are just the examples of how innovations changed the attitude to the traditional banking system.

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Journal of Business, 1(2):59-62,2012 ISSN:2233-369X

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