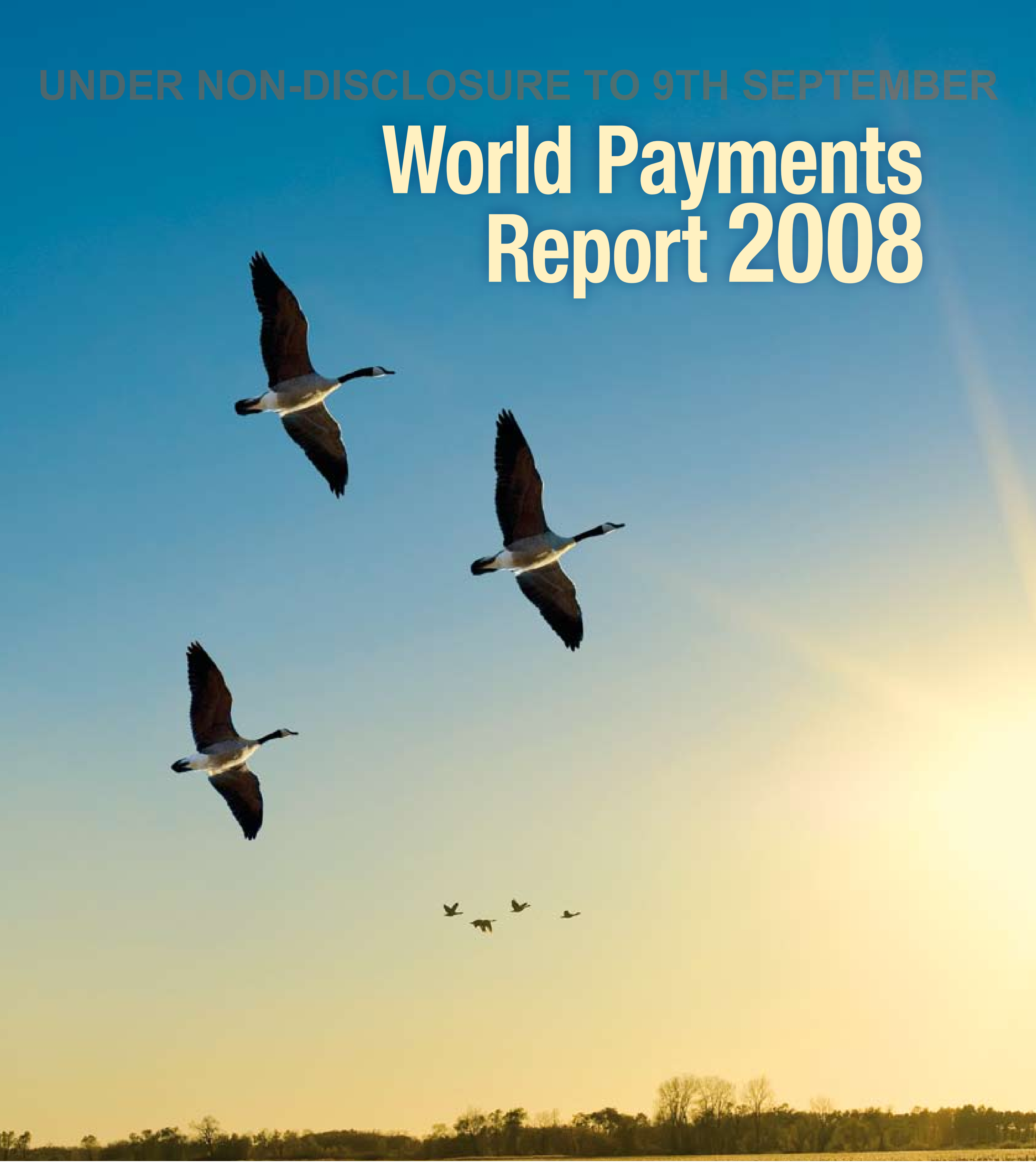
UNDER NON-DISCLOSURE TO 9TH SEPTEMBER

World Payments Report 2008



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UNDER NON-DISCLOSURE TO 9TH SEPTEMBER

CONTENTS

Preface

Now in its fourth year, the *World Payments Report* from Capgemini, The Royal Bank of Scotland (RBS), and the European Financial Management & Marketing Association (Efma) explores the global payments market at a critical juncture. With US and European economies feeling the effects of a slowdown, inflationary pressures, and the fallout from the subprime credit crisis, we are witnessing the restructuring of many industry players and niche activities.

Payments represent an especially important business for banks—and economies—given the likelihood that industry consolidation will continue and economic growth will remain weak.

For banks, payments generate recurrent revenue, though with higher Basel II capital consumption, so that returns on equity are reliable. Moreover, payments services are vital for both consumer and corporate customers, so they can help win customers and drive loyalty if handled effectively. From an economic perspective, investments in the efficiency and security of the payments systems help fuel growth by making funds flow more efficiently, and help protect against systemic risk.

Against this backdrop, this 2008 edition of the *World Payments Report* has a broader global perspective spanning Europe, North America, and Asia. It highlights regional initiatives and potential payments growth areas, and it offers insights and new information aimed at helping industry stakeholders make sound strategic business decisions.

Like past reports, we concentrate on European payments initiatives, as the landscape evolves dramatically with the introduction of the Single Euro Payments Area (SEPA). However, recognising the forces of globalisation, we also reflect on several emerging European developments that are playing out in other markets around the world—and find that many key trends are universal.

This year's *World Payments Report* also provides a more in-depth analysis of the global cards market where we found double-digit growth in card use in all regions. Cards are by far the fastest-growing means of non-cash payments. We examined the impact of technology and how it is creating new ways for customers to acquire and use cards every day, and the globalisation of the card-acquiring industry, which makes cards a strategic instrument for payments players.

The overall growth trends in cards indicates a complex mix of country-by-country development paths, which are determined by factors ranging from market history to customer habits. The creation, modernisation, and evolution of payments systems will depend in large part on how different countries want to drive card usage, given their unique social and economic situations.

We hope and trust that you will find this year's report useful in forging the critical decisions you must make to succeed in your particular payments environment.

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Summary of Key Findings

In the global payments arena, the drive to increase payments efficiency and security is relentless and based largely on three paperless instruments: cards, credit transfers, and direct debits.

In Europe, it has been eight years since heads of state launched the Lisbon Agenda, aimed at making Europe the world's most powerful economic force by 2010. SEPA, an engine of economic and competitive growth fully in line with the Lisbon Agenda, is progressing from the design to implementation stage, starting with the launch of the SEPA Credit Transfer Scheme on 28 January 2008. The European Payments Council (EPC) continues to drive the self-regulatory aspects of the SEPA initiative, with strong regulatory interest and engagement from the European Central Bank (ECB) and the European Commission.

Several key SEPA questions remain outstanding. The answers to these questions will have a significant impact on the shape of the final outcome and the speed at which it is realised:

- Will SEPA see the emergence of one or more European card schemes as alternatives to the two leading international schemes?
- What growth opportunities exist for the banking industry in a SEPA world, now that it has made substantial investments in preparing for its introduction?
- What else needs to be done to ensure stakeholders will move their current domestic payments volumes, with confidence, to SEPA products?
- Can SEPA truly succeed if no date is set to mandate the move to SEPA products and the phasing out of the old instruments?

In exploring these questions along with other global issues, the *World Payments Report 2008* features the following key findings:

- Across the globe, in both mature and developing countries, cards are the predominant growth driver in the non-cash payments market. The total number of non-cash payments worldwide reached 233 billion in 2006. Volumes grew at a sustained 10% annual rate during 2001–2006, reflecting the ongoing modernisation of payment means and systems.
- Mature economies still account for more than 80% of worldwide non-cash payments volumes, and should keep their dominant position at least until 2013. China, which accounted for 7% of the global market in 2006 and grew 46% annually from 2001–2006, could play a key role in the future world payments market.
- Non-cash payments volumes in the 17 selected European countries will grow at a sustained rate of 9% per year through 2013, with the number of transactions per inhabitant rising from 164 in 2006 to 304 by 2013.
- Eurozone cash-in-circulation has continued to expand sharply despite the strong growth in non-cash payments volumes. Euro cash-in-circulation has increased 11% each year since the currency was introduced in 2002 (even when excluding the most commonly hoarded large-currency notes). There is a huge opportunity in the Eurozone to replace cash, but that process is constrained for the time being by the shortage of equally functional and convenient non-cash alternatives, especially for person-to-person (P2P) and face-to-face payments.
- SEPA became a reality when SEPA Credit Transfer (SCT) was launched successfully in January 2008, and SEPA Direct Debit (SDD) Core and business-to-business (B2B) are both on the way to launch at the end of 2009. The EPC made changes to key aspects of its governance structure during 2007, with a particular focus on scheme management and future scheme enhancements.
- Increasingly debated is the question of whether an end date is ultimately required to stimulate and add incentives to accelerate and make SEPA migration successful.
- To support the realisation of SEPA and the development of a single payments market within the European Union (EU), it is important that the national “transpositions” (legal adoption at the local level) of the Payment Services Directive (PSD) are as consistent with each other as possible.
- Some large corporates have begun to study the implementation of SCT and SDD, and have a more concrete idea of the potential value of SEPA products.
- Cards are the primary element in retail non-cash payments growth in all regions, and are continually increasing their overall market share. The card market’s structure and development path varies by country. Currently, two international schemes with 4-party (cardholders, card issuers, merchants, and merchant acquirers) business models lead global card payments with their brands, rules, and standards, and there are four possible challengers—none of whom are European. The third largest 4-party card scheme in the world (in terms of transaction numbers) is China Union Pay, which is the market leader in China and might evolve from a leading national to a leading regional player.
- Concerning cards, clear and consistent guidance is required from relevant regulators on the approach to interchange fees; this will support the development of a pan-European solution (expected by the European Commission and ECB) that is economically profitable for all stakeholders.
- Default interchange fees are essential for 4-party card schemes to achieve ubiquity of use and universal acceptance. The interchange fee helps balance the investment and operational costs between the different parties in the card industry. Interchange is necessary to assist card scheme evolution and growth, and to balance costs and benefits between all parties.

The World Non-cash Payments Market

CHAPTER 1 HIGHLIGHTS

- Globalisation is increasingly emphasising the need for widely accessible, seamless, and secure ways of effecting non-cash payments to facilitate world trade and consumer spending, and to reduce fraud and money laundering. More efficient, effective systems could also help lessen systemic risk and potentially provide a source of additional retail revenue for banks. Regional monetary/payments integration plans are under way around the globe, but SEPA represents the most ambitious plan to date.
- The total number of non-cash payments worldwide reached 233 billion in 2006. Volumes had grown at a sustained 9% annual rate during 2001–2006, reflecting the ongoing modernisation of payment means and systems. Across the globe, in both mature and developing countries, cards are the main driver of growth in the non-cash payments market.
- Mature economies still account for more than 80% of worldwide non-cash payments volumes, and should keep their dominant position at least until 2013.
- The US and Eurozone countries accounted for 63% of global non-cash payments volumes in 2006. These countries are well positioned to influence the standards and rules used in the rest of the world, especially in countries that are currently modernising or establishing their payments system infrastructures.
- China, which accounted for 7% of the global volume of non-cash payments in 2006 and grew 46% annually from 2001 to 2006, could play a key role in the future world payments market.

INTRODUCTION: MORE SEAMLESS, EFFICIENT, SECURE SYSTEMS FOR EFFECTING NON-CASH PAYMENTS ARE NEEDED TO FACILITATE GLOBAL TRADE AND CONSUMER SPENDING

The development of non-cash payments is growing more urgent—for the financial sector and for country and regional economies:

- Banks are relying on retail activity to spur growth, and payments is the only retail sphere to grow at a high rate, even in mature markets. Competition to banks from non-bank payment service providers can also be expected to increase in light of such initiatives as the Payment Services Directive in the EU.
- Financial system authorities favour a reduction in cash-in-circulation to address four key issues: fraud, systemic risk, anti–money laundering (AML), and economic growth. Less cash-in-circulation, for instance, lowers the potential for currency counterfeiting and money laundering. The US and Japan are especially active in pursuing AML provisions among anti-terrorism measures. Authorities believe the wider use of paperless instruments would create a more competitive payments landscape—a driving principle underlying the SEPA initiative.
- The globalisation of the world economy requires ever more seamless and efficient non-cash payments systems that are also highly secure. Efficient and effective systems would also enable corporates to develop end-to-end straight-through processing (STP) for payments and collections, and help banks enhance existing services.

Attempts to modernise the low-value payments market are accelerating around the globe. SEPA represents the first and most ambitious regional monetary/payments integration plan, but many other initiatives are under way:

- In North America (the US, Canada, and Mexico), discussions are progressing on creating a single, multi-currency, low-value clearing system that would smooth cross-border transactions.
- The six Middle Eastern countries of the Gulf Cooperation Council (GCC) created a common market as of January 2008, and hope to adopt a single common currency by 2010. This Gulf currency would be used in global trade like the dollar, euro, yen, and yuan, and there would be a payments platform for retail payments. Separately, the Dubai International Financial Centre is developing a real-time gross settlement (RTGS) system for multiple currencies to promote its position as a regional financial hub.
- Southeast Asian countries are also seeking integration by developing a single clearing platform for cross-border trade to support their fast-growing economies.
- Japan, pursuing its objective of becoming the premier marketplace in Asia, is undertaking various initiatives to integrate international standards into its clearing systems and improve their efficiency.

Several private initiatives have been launched, with or without a push from regulators, to define common standards and rules for data exchange within the worldwide financial community, in order to support global economic growth.

OVERVIEW OF WORLD NON-CASH PAYMENTS MARKET AND TRENDS

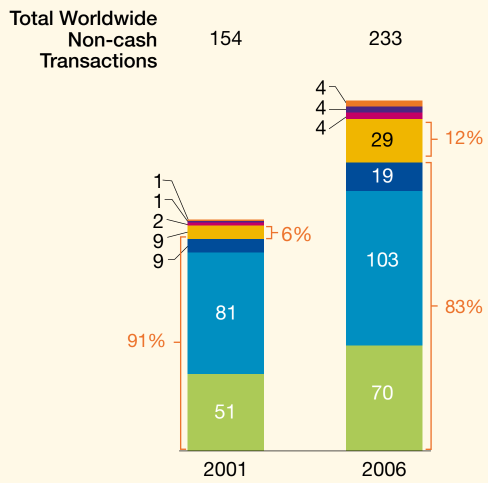
Global market for non-cash payments grew again in 2006, outpacing GDP growth, as payment means and systems evolved

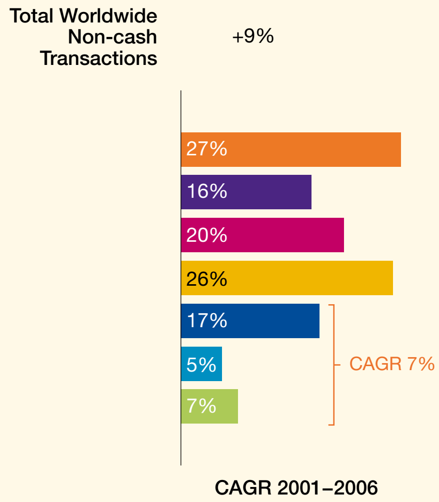
The global non-cash payments market comprised 233 billion transactions in 2006, after market volume grew by a steady 9% each year during 2001–2006—far outpacing the 2% growth in world gross domestic product (GDP) during that period (see Figure 1.1). Developing and emerging countries have experienced double-digit growth in non-cash payments volumes, but mature economies still accounted for 83% of the world total in 2006 (for all sources and methodologies, please see the Methodology section).

In terms of market breakdown by instrument, cards are the main driver of global non-cash payments volumes overall, but the use of non-cash instruments is strongly influenced by local habits and can vary markedly by country:

- The global use of cheques, which are used widely in the US, Canada, France, the UK, Australia, India, and South Korea, is shrinking, typically replaced by cards for consumer payments or by credit transfers/ direct debits for corporates.
- Cards (16% transaction growth) and direct debits (13%) grew fastest in 2001–2006.

Figure 1.1 Number of Worldwide Non-cash Transactions by Region (billions), 2001–2006





Developing Economies
- CEMEA
- Rest of Asia
- Latin America without Brazil
- BRIC

Mature Economies
- Japan + Australia + South Korea + Singapore
- North America
- Europe

Sources: ECB Blue Book—2006 figures, released Nov. 2007; Bank for International Settlements—Red Book—2006 figures, released March 2008; IMF database; Capgemini analysis, 2008.

Top ten non-cash payments markets, representing 80% of the world's GDP and 38% of the world's population, accounted for 92% of global non-cash payments in 2006

The top ten non-cash payments markets accounted for 92% of global volumes in 2006, but beyond the top two—the US and Eurozone—the market remains highly fragmented (see Figure 1.2). Still, some regions are beginning to consolidate, with the Eurozone being the prime example.

Among the top ten, mature economies accounted for 83% of worldwide volumes in 2006 and have experienced strong growth rates, far exceeding the overall rate of GDP growth among mature countries:

- Japan, South Korea, and Australia, all mature markets with established payments systems, together accounted for almost 8% of global non-cash payments volumes in 2006, after achieving steady annual growth of 17% in 2001–2006.
- The US accounted for 41% of worldwide volumes in 2006, with 95 billion non-cash transactions, after experiencing steady annual growth of 5% since 2001. The Eurozone, a comparable trading bloc, accounted for 22% of the total market in 2006, with 51 billion transactions, after posting annual growth of 7% in market volumes during 2001–2006.
- Together, the US and Eurozone accounted for 63% of the world non-cash payments market in 2006, so those countries are well positioned to influence the standards and rules used in the rest of the world, especially in countries currently modernising or establishing their payments infrastructures.

BRIC's (Brazil, Russia, India, and China) share of global non-cash payments is still small, but the sustained growth in their use of non-cash payments is very high: 9% a year for Brazil in 2001–2006, 32% for Russia, 13% for India (currently the twelfth largest market), and 46% for China. BRIC countries accounted for 30% of the world's population in 2006, but, with the exception of China, their share of non-cash payments is likely to remain minimal unless the development of their payments systems accelerates.

China is the exception because it has a large domestic market. It already accounts for 7% of global non-cash payments volumes. Its future in the global non-cash payments market might well depend on its development policy, and Chinese authorities decided in 2007 to reduce the use of cash by 40% by 2012. If non-cash payments volumes continue to grow in China as they have in the past, Chinese volumes could reach European proportions in the medium term.

DEVELOPING COUNTRIES

China's non-cash payments growth is rapid, but the rest of BRIC will accelerate as payments infrastructures develop

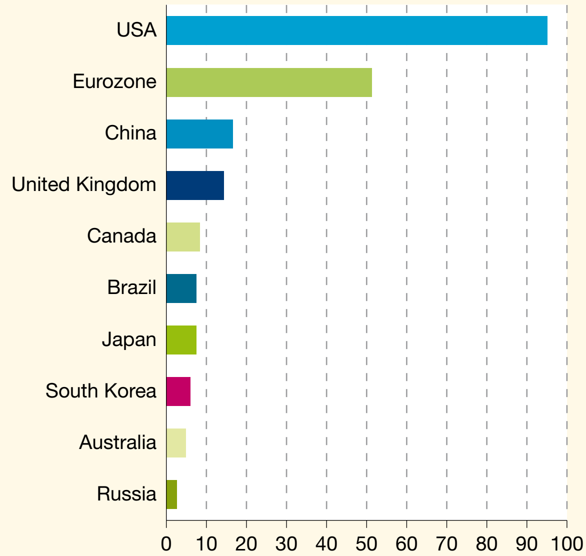
In 2006, BRIC countries accounted for 29 billion non-cash transactions, or 12% of the worldwide total, after averaging a 26% compound annual growth rate since 2001. China alone drove 7% of global volumes in 2006, after sustaining 46% CAGR from 2001 to 2006, largely due to the use of cards. Also notable in this segment:

- Cash dominates in India and China. It is the chosen means of payment for more than 80% of consumer spending in these countries.
- Cards are the most developed of all non-cash payment instruments, accounting for more than 50% of BRIC volumes, except in India, where cheques are still used heavily by corporates (e.g., for paying wages and other bills). Nevertheless, most card transactions are for cash withdrawals, reflecting the limited acceptance network for cards in these countries.
- Credit transfers and direct debits are minimal, reflecting the nascent infrastructure.

At the same time, BRIC countries are in the process of modernising, or planning to modernise, their payments infrastructures, although each has a different approach:

- In China, the clearing infrastructure is still fragmented among intra-city and inter-city clearing systems for low-value, paper-based transactions. The systems are managed and operated by local People's Bank of China (PBOC) branches. The

Figure 1.2 Number of Non-cash Transactions in the Top 10 Non-cash Markets (billions), 2006



	% of Worldwide Market	CAGR 2001–2006	% of Global Population	% of GDP
USA	41%	5%	5%	27%
Eurozone	22%	7%	5%	22%
China	7%	46%	20%	6%
United Kingdom	6%	5%	1%	5%
Canada	4%	6%	0.5%	3%
Brazil	3%	9%	3%	2%
Japan	3%	15%	2%	9%
South Korea	3%	13%	1%	2%
Australia	2%	26%	0.3%	2%
Russia	1%	32%	2%	2%
TOTAL	**92%**		**39.8%**	**80%**

Note: Eurozone comprises the 12 countries using the euro in 2006, Slovenia joined the Eurozone in 2007; all data are rounded, so percentages may not total exactly.
Sources: ECB Blue Book—2006 figures, released Nov. 2007; Bank for International Settlements—Red Book—2006 figures, released March 2008; Capgemini analysis, 2008.

Central Bank is also heavily supporting the creation of in-house clearing infrastructures by the four major banks. Banks also clear and process settlements via in-house mechanisms. However, major improvements have been realised recently, including the roll-out of a small-value nationwide Bulk-Entry Payment System (BEPS), which cleared 70 million transactions in 2007.

- Brazil is the second largest non-cash market in BRIC. It is among the world's top ten, but its infrastructure is fragmented. Its low-value payments clearing and settlement mechanism (CSM) is still fragmented by instrument, with different automated clearing houses (ACHs) for paper-based and electronic clearing. The market is relatively sophisticated for electronic clearing, but there is still a separate ACH for each card brand.
- Russia has two main clearing houses: the Central Bank of Russia's clearing house, which has 78 regional branches and covers 59% of domestic payments volumes, and the Sberbank, which has a network of approximately 35,000 branches and serves as a clearing infrastructure.
- India has 43 electronic clearing houses for bulk credits and debits, but together they accounted for less than 1.5% of total transaction value in 2005. India also has about 800 paper-clearing locations. Initiatives are under way to integrate the semi-urban and rural areas into the electronic clearing system.

In BRIC countries, the development of the payments infrastructure is tightly controlled and driven by the domestic and national financial institutions. In all cases, though, the top priority is to develop wider access to banking facilities.

MATURE ECONOMIES

In mature markets, the desire to replace cash and reduce payment/collection cycle times is driving non-cash market growth

There is significant room to supplant cash in these markets. The US is a prime example, as evidenced by data on the various payment instruments used by US consumers:

- Retail payments (versus large-value payments) accounted for 94% of all US non-cash transactions in 2006, and have been growing at an annual rate of 6% since 2001.
- Cash accounted for 35% of US consumer spending in 2006, down from 43% in 2001, as card payments replaced cash and paper-based transactions.
- As one out of every three purchases was still made in cash in 2006, there is still tangible room for the increased use of non-cash instruments.
- According to the US Department of Commerce's Bureau of Economic Analysis, non-cash instruments could account for as much as 80% of all US consumer spending by 2011.

The use of non-cash instruments is also being driven in mature markets by demand from corporate and public institutions for direct-debit and credit-transfer facilities, which offer various benefits. For example:

- Payment/collection cycles are reduced, enabling corporates to optimise working-capital management and reduce counterparty risk.
- Working-capital optimisation makes liquidity management more efficient and improves cash management by enhancing payments-and-collections planning.
- Counterparty risk is reduced, as transaction values decline when (for example) large annual payments are paid instead in the form of smaller monthly or weekly payments.

Data confirm that the trend towards lower-value direct debits is well under way in the US and Eurozone, suggesting corporates are already starting to capture the cash-management benefits.

Non-cash payments volumes have room to grow, even in markets where non-cash means of payment are already quite popular

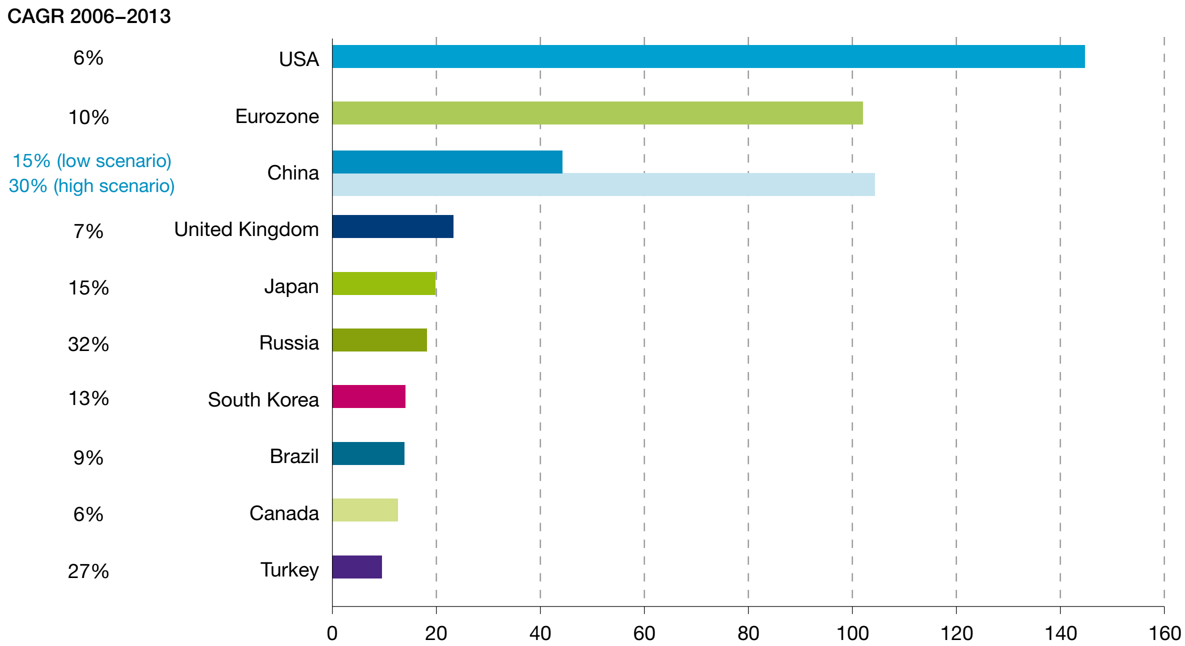
Our projections for the 2006–2013 world non-cash payments market are as follows:

- Given the remaining potential for replacing cash and the likely growth in direct-debit usage, US non-cash payments volumes should maintain a steady annual growth rate of 6%. The decline in cheque usage will be offset by continued growth in the card market and, more specifically, the increased use of debit cards at the expense of credit cards.
- In other mature economies, non-cash payments volumes should also continue to grow. In Japan, for example, usage per inhabitant is low, even though the country is the world's sixth largest non-cash market overall. Non-cash payments are being pushed aggressively by non-financial institutions in mature markets, and their potential to replace cash is very high. Financial authorities are also pursuing initiatives to improve the efficiency of the country's payments and inter-bank infrastructure.

- In China, the future depends on whether the payments market continues to accelerate, or is constrained by the limited access to banking facilities. We therefore offer two potential scenarios:
  - In the "low" scenario, non-cash payments volumes grow by a sustained 15% a year, and assumes:
    - Access to banking facilities develops slowly.
    - Purchasing power improves only among the portion of the population already enjoying a high standard of living.
    - The rate of growth in card usage slows down to levels seen in mature economies, and the use of credit transfers and direct debits does not accelerate until the infrastructure is modernised.
  - In the "high" scenario, non-cash payments volumes grow by 30% a year (compared with 46% a year in 2001–2006) and assumes:
    - Access to banking facilities develops steadily.
    - Purchasing power improves for a larger proportion of the population.
    - The rate of card usage continues to grow steadily, although the use of credit transfers and direct debits does not accelerate until the infrastructure is modernised.

In any case, the US should still be the largest non-cash payments market in the world in 2013 (see Figure 1.3), and mature economies will still dominate global non-cash payments volumes. However, China could account for 11% of global volumes under our low scenario, or 23% under the high scenario—an increase that could push Chinese volumes beyond the flows generated by the Eurozone.

Figure 1.3 Estimated Number of Non-cash Transactions in the Top 10 Non-cash Markets (billions), 2013



Note: Eurozone comprises the 12 countries using the euro in 2006, Slovenia joined the Eurozone in 2007.
Sources: ECB Blue Book—2006 figures, released Nov. 2007; Bank for International Settlements—Red Book—2006 figures, released March 2008; Capgemini analysis, 2008.

Workers' Remittances

WORKERS' REMITTANCES ARE RISING FAST, BUT BANKS HAVE A LIMITED SHARE OF THE MARKET

Migration is a global phenomenon, especially among individuals from developing countries who relocate to developed countries to work. Their remittances (earnings sent home) are rising fast in both volume and value (see graph), and represent a growing market in cross-border payments. However, banks so far have a very small piece of this expanding segment.

According to the World Bank, the world's migrant population is expected to keep growing—from 191 million in 2005 to more than 280 million in 2050. The main remittance-sending region today is North America, although Asia accounts for about 30% of global remittance flows and is likely to be the main driver of future global growth.

A variety of formal channels exist for workers' remittances, and electronic cash is increasingly replacing paper-based payments for those who use banks. An estimated 40% of remittances still flow through informal channels. For example, friends and family carry cash from one place to another, or groups of migrants organise combined fund transfers. Banks currently account for only about 15% of this market.

Options for entering the remittance market

The global remittance market is currently led by money transfer operators (MTOs), who offer the convenience of a wide distribution network, secure dedicated systems, and competitive pricing. However, other providers are entering this potentially attractive market, including banks (particularly in the US and Western Europe to Latin America) and mobile network operators (MNOs).

The key to success for those entering this market is accessibility for both sender and receiver to physical and remote channels, systems, and competitive foreign exchange. A majority of banks find themselves able to provide some but not all of these ingredients.

Most pursue one of three approaches to providing an end-to-end remittance service, namely:

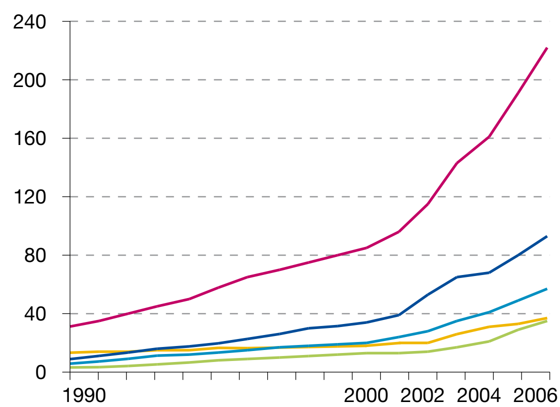
1. Build the capabilities—significant hurdles if the bank does not have a presence in both send and receive countries.

2. Acquire the capabilities—through the acquisition of a technology provider/MTO/bank enabling it to offer a complete in-house service.
3. Complementary partnership—a bank with a retail presence in a significant send country could partner with an MNO that has subscribers in a significant receive country.

Regulation in the receiving country is often a hurdle for banks seeking to serve an un-banked population. Although the situation is improving as more citizens gain access to basic financial services (such as via microfinance banks—institutions that provide low amounts of credit in emerging markets to support income-generating businesses), banks need robust client identification and verification processes to gain a significant market share of any new remittance channel.

The remittance market, then, presents a significant opportunity for banks to develop new revenue streams and customer acquisition in new markets. While many banks do not yet have the necessary global infrastructure to "go it alone", some are correcting this situation by acquiring the needed capabilities via partnership and acquisition.

Worldwide Workers' Remittances Market Evolution, Receiving Regions ($ billions), 1990–2006



	CAGR 1990–2006	CAGR 2000–2006
Total	12%	18%
Asia	15%	18%
Latin America	14%	19%
Africa	14%	19%
Europe	6%	14%

Sources: World Bank 2007; Capgemini research and analysis, 2008.

Trade Finance

IN A GLOBAL ECONOMY, TRADE FINANCE IS IMPORTANT TO CORPORATE RELATIONSHIPS

Trade finance has long been an essential offering for banks to support their relationships with international corporate customers, but traditional products have failed to evolve with the changing face of global trade.

As a result, while international trade has grown at a sustained and rapid rate—6% a year in 1990–2005, and twice as fast as consolidated global GDP (see graph)—the use of letters of credit and documentary collection has dropped, covering only 20% of cross-border trade volume in 2005.

Amid the forces of globalisation and the integration of national economies, corporates know their customers and suppliers better than they once did, and they have greater access to reliable credit information about foreign trade partners. Accordingly, they are less willing to pay the fees associated with traditional trade finance services and have moved to open account trade terms. This has increased the demand on banks to provide cross-border trade finance solutions able to leverage the different relationships throughout the supply chain.

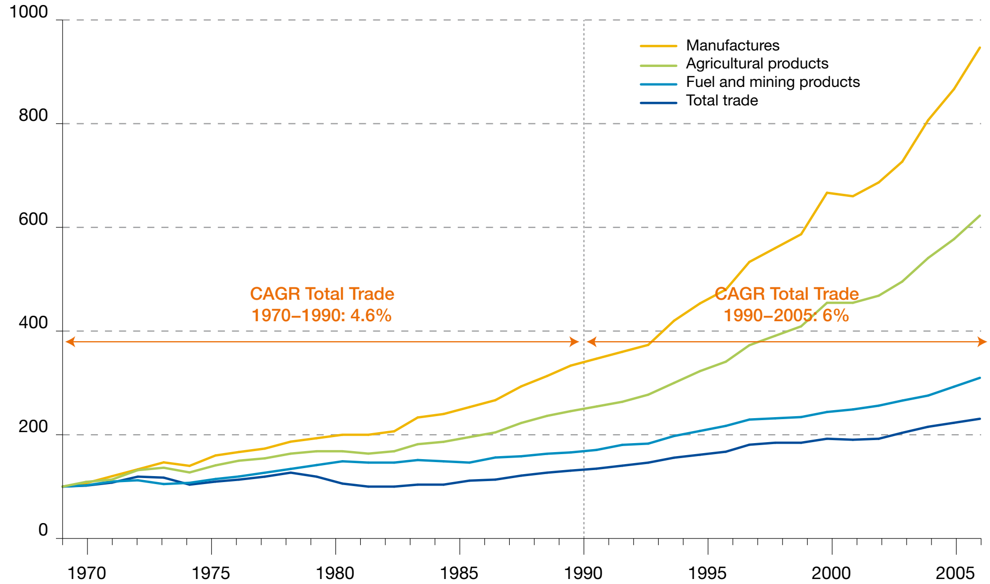
Nevertheless, corporates spent about €12 billion on trade finance services in 2005 (equivalent to 0.5% of the processed trade value).

International trade is expected to keep expanding, particularly in the Asia-Pacific region, according to international institutions such as the World Trade Organization (WTO). Corporates have typically sought more assurances in trading with emerging markets, but even those counterparties are perceived to be safer than they were. While there will always be a need for trade finance facilities to secure trade deals with emerging markets, currently just above 20% of world trade transactions are materialised through traditional trade finance products, the other 80% being managed through open accounts trade relationships.

For banks, the economics of traditional trade finance business are challenging. Increasing costs and scarce well-trained resources in a tightened compliance/regulatory environment are just some of the issues that make customer service a tough proposition. Many existing services are inefficient and costly for banks to provide, because many processes have yet to be automated so are labour-intensive, and much of the supporting documentation is paper-based. Error rates are also high because of manual processing, with more than 65% of documents reportedly containing mistakes. Most of these problems are solved through less invasive trade finance solutions that allow corporates to keep their current operating process unchanged while providing security and financing throughout their supply chain.

While in the Open Account Financing market just a handful of global and regional banks are able to provide these larger cross border solutions in an efficient way, the market for traditional trade finance is already concentrated. The top 20 banks account for 55% of trade finance volume, and the remaining 45% is spread among more than 400 banks. Given the challenges, it is quite likely that market consolidation will continue, leaving just a few banks able to provide the full range of services profitably.

International Trade Volume (Indexed), 1970–2005



Sources: World Trade Organization (WTO), United Nations (UN), EU, Coface, French Ministry of Foreign Affairs, Company data, Capgemini research and analysis, 2008.

TO BE COMPETITIVE, BANKS NEED A LOW-COST, EFFICIENT, AND QUALITY OFFERING

For banks to offer quality traditional trade finance at a low cost, and still generate profits, they must overcome three main challenges:

- Providing a wider range of services, from traditional letters of credit and documentary credit to value-added services supported by new technologies.
- Developing geographic coverage to encompass the continual expansion of global trade.
- Coping with the continuous squeeze on margins.

The first imperative, then, is to cut operating costs and improve efficiencies. For example, banks can:

- Migrate to a common, fully integrated global trade platform to replace outdated systems. (But this kind of infrastructure change can be prohibitively expensive and complex to implement.) In recent years, many have turned to outsourcing of the trade finance business. Key providers, typically big players in transaction banking, are now offering the low-cost operational and technology infrastructure required to continue operating in the trade arena.
- Lower operating unit costs by in-sourcing volumes from small or regional banks that cannot afford to implement expensive new systems.

To overcome the limitations of traditional trade products the main of players in the trade finance arena are already migrating to a value-added services business model. This change in their business model is allowing them to provide products that link more deeply into corporate supply chain management, such as open account and other innovative structured trade finance forms of supply chain financing. Beyond that it would also be advantageous for banks to identify services whose fixed costs can be amortised across a high volume of commodity services.

The European Non-cash Payments Market

CHAPTER 2 HIGHLIGHTS

- The European non-cash payments market continues to grow. A total of 70 billion non-cash transactions occurred in Europe in 2006, the equivalent of nearly a third of the global market. Eurozone countries accounted for nearly 73% of that total, and five countries accounted for 85% of all Eurozone transactions.
- Our analysis of 17 selected countries (which together account for 97% of the volume of European non-cash transactions and 98% of the value) indicates that local habits still shape the relative preference for payment instruments by country. However, two key trends hold true overall: (1) cards are the main driver of non-cash payments, with usage having grown by a steady 11% per year in 2001–2006; and (2) the use of cheques is declining, although there is still no real alternative for some types of P2P payments.
- The growth in non-cash payments should continue across Europe, and SEPA could especially help to boost the usage rates per inhabitant in countries where volumes are low. Nevertheless, local habits persist, helping to delay the day when users across Europe all favour the same relative mix of non-cash payment instruments.
- We expect non-cash payments volumes in the 17 selected countries to grow at a sustained 10% per year through 2013, with the number of transactions per inhabitant rising from 164 in 2006 to 304 by 2013.
- Despite the strong growth in non-cash payments volumes, Eurozone cash-in-circulation has continued to expand sharply. Even excluding the most commonly hoarded large-currency notes, euro cash-in-circulation has increased 11% each year since the euro was introduced in 2002. There is a huge opportunity in the Eurozone to replace cash, but that process is hampered by the shortage of equally functional and convenient non-cash alternatives, especially for P2P payments.

2006 MARKET ANALYSES

Use of non-cash payment instruments is growing broadly, but at different rates in different countries

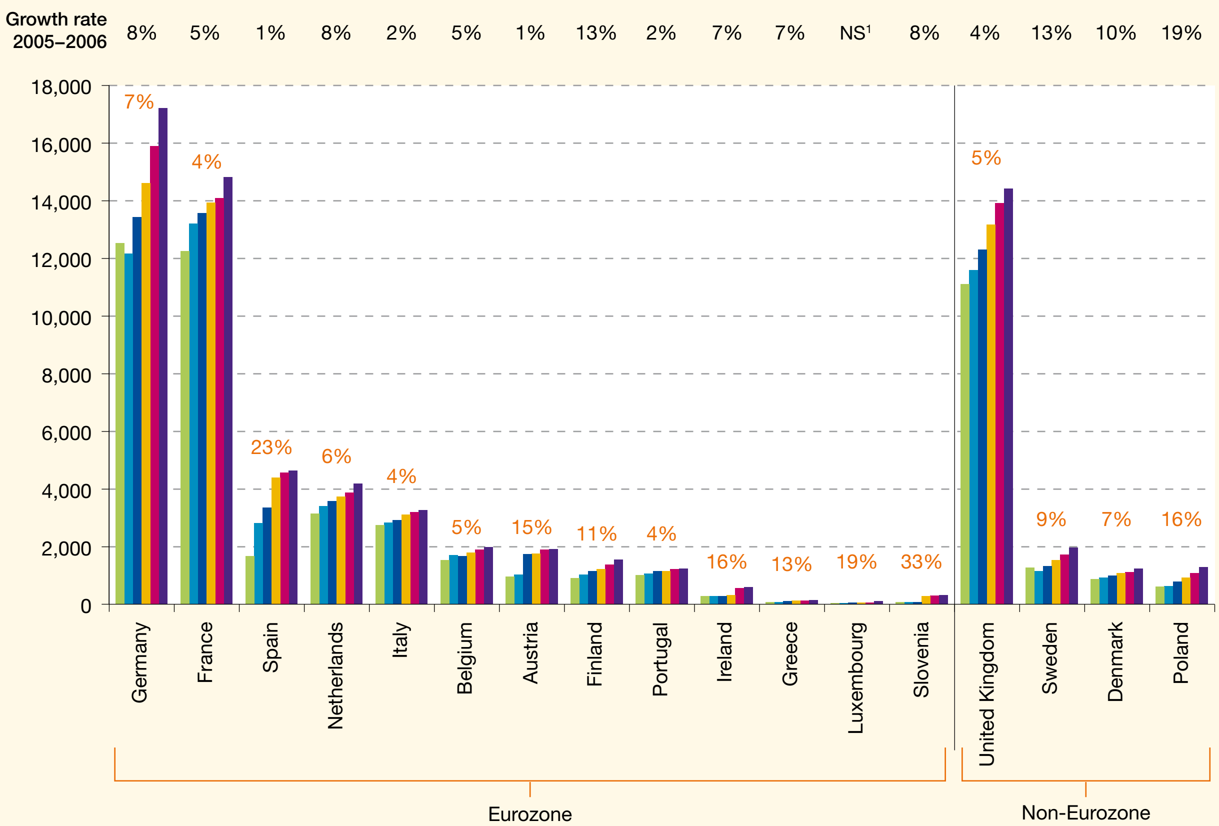
As with last year, we analysed payments in 17 European countries: the thirteen Eurozone members (as of 2007) plus four non-Eurozone countries. In 2006, these 17 selected countries accounted for 93% of the EU population, 97% of the volume of non-cash transactions in Europe, and 98% of their value.

In 2006, approximately 70 billion non-cash transactions took place in the 25 EU countries, of which the Eurozone accounted for 52 billion, up from 31 billion in 2001. The EU represented 30% of the global non-cash payments market, while Eurozone countries accounted for 22%.

Five Eurozone countries—France, Germany, Netherlands, Spain, and Italy—accounted for 63% of the non-cash transactions conducted in the selected 17 countries, and 85% of non-cash transactions conducted in the Eurozone itself. The three largest and most mature markets in Europe are Germany, France, and the UK.

The use of non-cash payment instruments is growing across the board, but at different rates in different countries. On a case-by-case basis (see Figure 2.1), some high-volume countries are still experiencing a significant rise in non-cash payments volumes (Germany, for instance, with steady annual growth of 7% in 2001–2006), while some low-volume countries (such as Italy and Portugal) are still growing only slowly.

Figure 2.1 Number of Non-cash Transactions in Europe (millions), 2001–2006



Leading Countries for Non-cash Transactions Volumes	
Germany	24%
France	21%
Spain	7%
Netherlands	6%
Italy	5%
United Kingdom	20%
Total	**83%**

CAGR 2001–2006

- 2001
- 2002
- 2003
- 2004
- 2005
- 2006

[1] NS = not significant.

Sources: ECB Blue Book—2006 figures, released Nov. 2007; Capgemini analysis and estimates, 2008.

Card usage grew 11% a year in 2001–2006, outpacing the 6% growth in non-cash payments overall

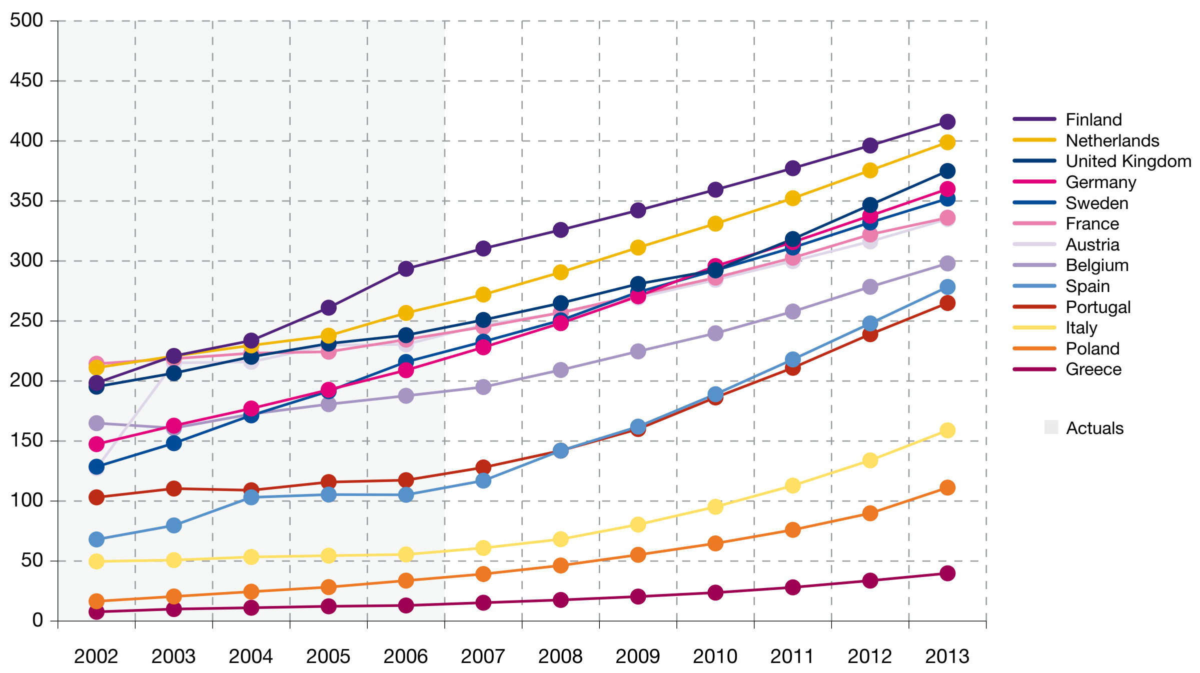
Cards are the principal means of making non-cash payments in Europe, according to a breakdown of volumes by country and payment means:

- Cards are driving non-cash payment instruments in Europe, as evidenced by the double-digit annual growth in usage per inhabitant in 2001–2006.
- Direct debits are used widely in all the selected countries except Greece, Portugal, Spain, and Italy. In 2006, the volume of direct-debit transactions amounted to more than 100 transactions per inhabitant in Finland, Austria, and Luxembourg. Moreover, direct debits has continued growth potential through 2013 (see 2013 Projections in Figure 2.2).
- The use of credit transfers varies by country. For example, Nordic countries use few credit transfers, while usage is particularly high in Austria, Germany, and the Netherlands, where volumes amounted to more than 70 transactions per inhabitant in 2006.

Cheque usage is generally low, with only France, the UK, and Ireland using more than 20 cheques per inhabitant in 2006. Overall, the rate of cheque usage declined at a steady annual rate (5% per inhabitant and 3% in terms of transaction volume). In most of the selected European countries, market pressure has successfully curtailed the use of cheques, which are now used primarily for higher-value transactions. Even in France, where banks have not actively sought to discourage cheque use, major retailers are increasingly trying to dissuade cheque writers.

Behind the aggregate trends in European non-cash payments, usage patterns can vary considerably by country, largely depending on local habits, as can be seen in the trends for card usage (see Figure 2.3).

Figure 2.2 Evolution of Non-cash Transactions per Inhabitant per Country in Europe, 2002–2013



Note: Figures are based on 13 countries covered in this report—see details in the methodology section.
Sources: ECB Blue Book—2006 figures, released Nov. 2007; Capgemini analysis and estimates, 2008.

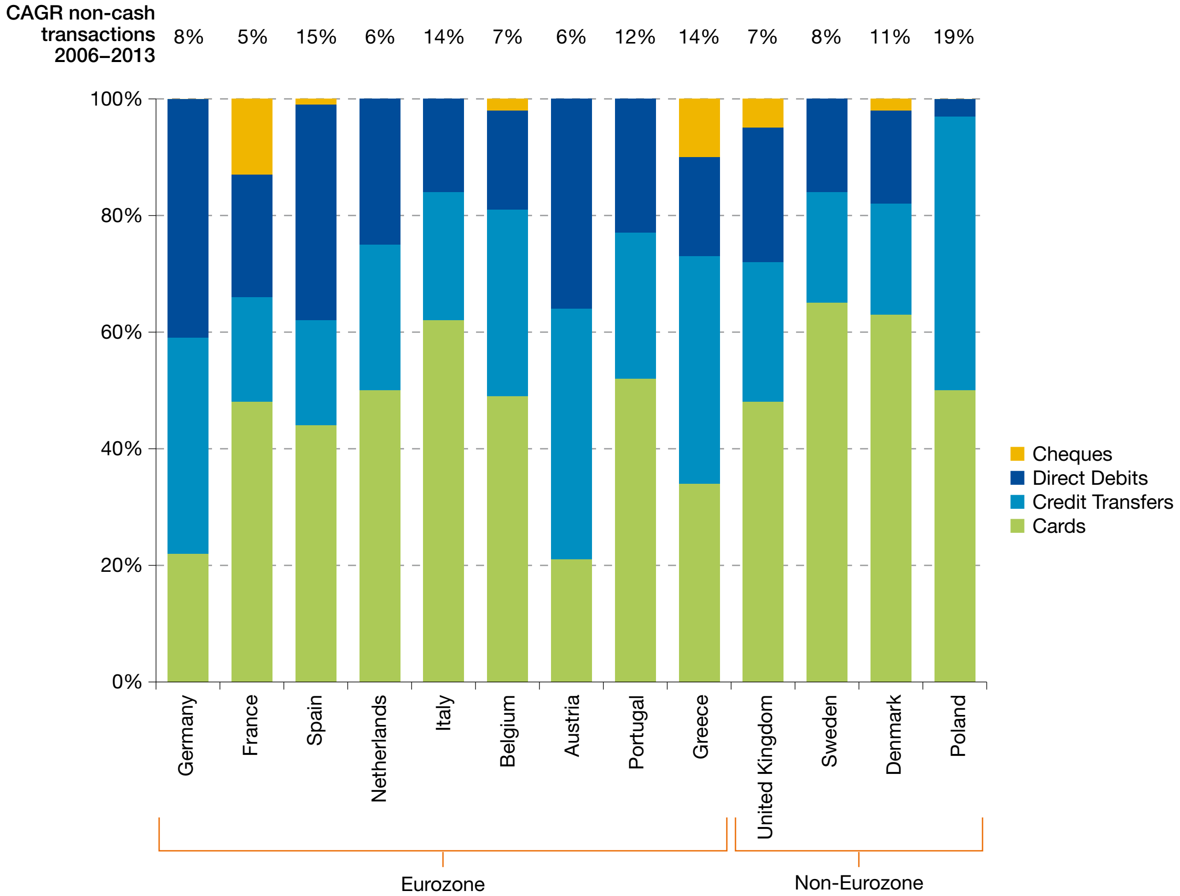
CONVERGENCE ANALYSIS AND 2013 PROJECTIONS

THE VOLUME OF EUROPEAN NON-CASH PAYMENTS WILL KEEP GROWING AT DOUBLE-DIGIT RATES THROUGH 2013, BUT THE INSTRUMENT MIX WILL CONTINUE TO SHIFT, WITH THE USE OF CARDS RISING SHARPLY

Previous editions of this report initiated our projection model focusing on thirteen countries (see methodology section), and to date our projections have been accurate. Looking at the 2006 performance of the non-cash payments market in the European countries we studied, and our projections for that market through 2013, several points stand out:

- The European payments landscape is still evolving. We expect double-digit annual growth in the overall volume of non-cash payments, and a continuing shift in the mix of instruments used.
- Assuming SEPA exerts a converging influence on non-cash payments, the number of transactions per inhabitant should grow overall by a steady annual rate of 9% through 2013. More specifically, in those countries where transactions per inhabitant were less than 150 in 2006, usage should double by 2013 (see Figure 2.2). Growth will be steady in most other countries.
- The use of cards should also rise dramatically, as the network of merchants accepting cards expands and the range of products grows. The rate of card use is expected to follow the Netherlands, which is the prime example of the average. We expect the relative use of cards to be especially marked in countries such as Italy, Poland, and Greece, where current usage per inhabitant is low (see Figure 6.1).
- In the two biggest cheque-using countries, France and the UK, the payments mix should continue to evolve away from cheques in favour of credit transfers, cards, and direct debits.

Figure 2.3 Estimated Share of Payment Instrument per Country in Number of Non-cash Transactions, 2013



Note: See details in the methodology section for extrapolation to 2013. Select major European countries were analyzed for this chart.
Sources: ECB Blue Book—2006 figures, released Nov. 2007; Capgemini analysis and estimates, 2008.

- Overall, corporations are expected to start moving towards credit transfers and direct debits at the expense of cheques.
- Italy, Poland, and Greece should start to experience a real acceleration in non-cash payments volumes, as they take further legal and fiscal steps to realise SEPA.
- In 2013, there will still be a distinct difference in the mix of non-cash payment instruments on a country-by-country basis (see Figure 2.3), and local preferences will continue to delay the day when users across Europe all favour the same relative mix of non-cash payment instruments. Nevertheless, early adopters of SEPA instruments could speed up the trend towards a more harmonised landscape.

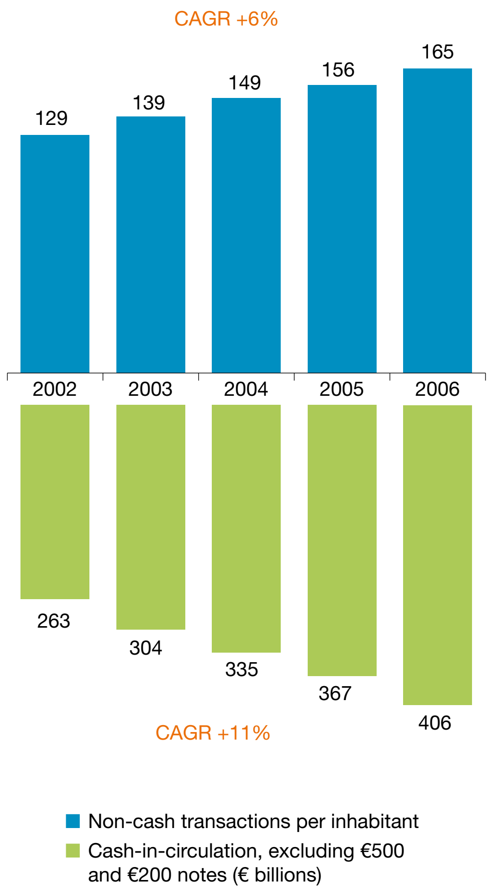
CASH USAGE

Despite strong growth in non-cash payments, Eurozone cash-in-circulation keeps expanding sharply

Euro cash-in-circulation has increased 11% each year since the euro was introduced in 2002 (see Figure 2.4), even without the €200 and €500 notes frequently hoarded in the Eurozone and in neighbouring Eastern European countries. Traditional non-cash alternatives still cannot match the functionality and convenience of cash, especially since few options are currently available to replace cheques for P2P payments (specifically in face-to-face transactions).

There remains huge potential for the Eurozone to replace cash. Cash-in-circulation averages 7% of GDP among Eurozone countries, compared with 5% in the US.

Figure 2.4 Comparison of Cash-in-Circulation vs. Non-cash Transactions per Inhabitant in the Eurozone, 2002–2006



Sources: ECB Blue Book—2006 figures, released Nov. 2007; Capgemini analysis and estimates, 2008.

SEPA Achievements and Challenges

CHAPTER 3 HIGHLIGHTS

- The European Payments Council has delivered the Rulebooks containing the specifications required to realise SCT (which was launched successfully in January 2008) and SDD Core and B2B (both now due to launch at the end of 2009). Preliminary work is also under way on a number of e-SEPA initiatives (e- meaning in an electronic form), such as e-mandates.
- The EPC also made changes to key aspects of its governance structure during 2007, with a particular focus on the ongoing management of the SCT/SDD schemes plus wider stakeholder engagement. This led to the creation of a Scheme Management Committee (charged with overseeing the adherence and compliance processes in relation to the SCT/SDD schemes) as well as the setting up of formal stakeholder consultation forums.
- Core technical standards, such as IBAN/BIC and ISO 20022, are already available. The EPC has provided technical guidelines on implementing these standards for bank-to-bank relationships, and is now consulting on recommended standards based also on ISO 20022 for use within the corporate-to-bank space.
- The final text of the Payment Services Directive was published by the EU in December 2007, and it must now be converted to each participating nation's law by 1 November 2009. To support the realisation of SEPA and the development of a single payments market within the EU, it is important that these national "transpositions" are as consistent with each other as possible.
- The SCT and the two SDD Rulebooks have all been revised to ensure consistency with the PSD. Updated versions of all three Rulebooks were agreed during the EPC Plenary of June 2008.
- Concerning the SEPA Cards Framework (SCF), work continues to complete the standardisation required to support its full realisation. The EPC has published a consultative document for public consideration in hopes of settling soon on a set of standards that can assure full interoperability in the European cards market.

THE EPC CONTINUES TO DEVELOP THE SCT AND SDD RULEBOOKS AND ENHANCE ITS GOVERNANCE STRUCTURE, FURTHERING THE REALISATION OF SEPA

In 2007 and the first part of 2008, the EPC made great strides in facilitating the realisation of SEPA.

The EPC has incorporated a range of enhancements to the SEPA-compliance specifications contained in the Scheme Rulebooks (most recently issuing version 3.2 for the SCT Rulebook and 3.1 for the SDD Rulebook).

An additional version of the SDD scheme for B2B payments has been approved by the EPC Plenary and is due to be launched in the same timeframe as the core SDD scheme. This Rulebook sets out the specific requirements for B2B transactions, such as a shorter minimum time cycle for collections (D - 1) and for returns (D + 2). Reflecting the differing nature of the B2B market, a debtor under the SDD B2B scheme is not entitled to a debtors refund within eight weeks of the debit date in respect of authorised transactions, unlike under the Core SDD scheme.

The EPC has also continued to work with SWIFT on standardising the message formats used during the SEPA payments process (the SEPA data model is based on the UNIFI ISO 20022 XML format). These standards (in the bank-to-bank space and increasingly also in the corporate-to-bank space) are seen as critical to the development of a more efficient and integrated European payments market. These standards need to be used consistently by all stakeholders.

To help facilitate the smooth launch of SCT, the EPC has also published an IBAN/BIC Migration document, containing recommendations for banks on the process of converting existing domestic account numbers for their large corporate and public-institution customers into the new data formats.

During the course of 2007, the EPC also reviewed its governance structure, with a particular focus on the ongoing management of the SCT/SDD schemes plus encouraging wider stakeholder engagement. This led to the creation of a Scheme Management Committee, with an independent chair, which is charged with overseeing the adherence and ongoing compliance processes in relation to the SCT/SDD schemes; a revised change management process, including public consultation, in relation to future enhancements to the existing schemes; and the creation of formal stakeholder consultation forums to improve the dialogue between EPC key stakeholder groups at the European level.

UPDATED SCT AND SDD RULEBOOKS WERE APPROVED BY THE EPC PLENARY IN JUNE 2008, INCLUDING CHANGES RELATING TO THE PSD; THE SDD VERSION OFFERS THE FINAL DETAILS NEEDED FOR AN END-2009 LAUNCH

The European Parliament voted in April 2007 to accept PSD, which, among a range of broader impacts, provides a number of elements of legal support for SEPA, such as a common approach to refund rights. The final text of the PSD was published by the EU in December 2007, and it must now be transposed (converted to national law) in each of the 27 EU countries before 1 November 2009.

The next version of the SCT Rulebook (v3.2) was approved by the EPC Plenary in June 2008, with a view to a live date of February 2009. This version has been updated to align with the PSD; for example, it recognises that from 1 January 2012 the maximum execution time under the scheme will align with the PSD's requirement of D + 1, where D is the "point in time of receipt" of the payment instruction. SCT v3.2 also includes a number of functionality enhancements aimed at better meeting the needs of business customers, such as the addition of new fields in the supporting technical message that can be used to show the "ultimate creditor reference party" and/or the "ultimate beneficiary reference party".

"Go-live" versions of the SDD Core (v3.1) and B2B (v1.1) Rulebooks were also approved by the EPC Plenary in June 2008, with a target for launch of November 2009, in line with the deadline for PSD transposition. As with the new version of the SCT Rulebook, various changes have been made to ensure alignment with relevant provisions in the PSD, including in relation to refunds, together with a range of business enhancements.

The extent of the role that additional optional services (AOS) will play remains to be clarified. Additional optional services are meant to complement the SEPA schemes, for example by allowing a specific national community to offer a service that their corporates locally find particularly useful but are not a feature of the core SEPA schemes. Selective use of AOS could theoretically provide a useful tool to give incentive to corporates to migrate their current domestic payments to products based on the SEPA schemes. However, only a few AOS initiatives have yet been launched, such as the same-day-value SCT from the Finnish community.

A COORDINATED, COHERENT, AND TIMELY TRANSPOSITION OF THE PSD INTO NATIONAL LAW IS CRITICAL TO REMOVE UNCERTAINTY AND MAXIMISE THE SUCCESS OF SEPA

Most countries have confirmed that they are now targeting a common "in force" date of 1 November 2009 for their national transpositions of the PSD (see Figure 3.1). The payments industry has welcomed this outcome given the end-to-end nature of many of the Directive's provisions.

To support the realisation of SEPA and to maximise the extent to which the PSD will contribute to the development of a single payments market within the EU, it is important that these national transpositions are as consistent with each other as possible.

It is inevitable that there will be some variations in the way the PSD is implemented in different countries, not least due to the significant number of member state derogations that were included in the final version of the text as a result of the lengthy negotiation process between the European Parliament, Council, and Commission. Examples include a member state option as to whether or not to insist that statements have to be provided on paper, and whether or not to treat "micro-enterprises" as corporates or consumers. However, these potential variations are clear and were actively negotiated into the text.

It is generally acknowledged, however, that the final text of the Directive contains a number of provisions or definitions that are somewhat ambiguous, leading to a risk that countries will interpret these in different ways. In a positive initiative, the Commission set up a Transposition Working Group early in 2008 to bring together representatives of all member states to discuss and agree common interpretations on key open issues. The outcome of this work will be hugely important in ensuring that appropriate common interpretations are agreed on the key open issues, and then implemented in a consistent fashion across all EU countries.

Clearly, then, the nature and quality of the PSD transposition and implementation process across the EU will be a key success factor. Major inconsistencies or unbalanced interpretations could discourage multinational companies from using SEPA products, and more broadly impede adoption on a European scale. This must be avoided if the full efficiency and competition benefits that SEPA and the PSD are intended to bring about are to be realised.

Figure 3.1 Structure and Scope of the PSD

Structure of the PSD
I. Subject matter, scope, and definitions
II. Payment Service Providers
III. Transparency of conditions and information requirements for payments services
IV. Rights and obligations in relation to the provision and use of payments services
V. Amendments and implementing measures payments committee
VI. Final provisions
Annex—list of payments services in scope

SEPA and PSD: A Comparison		
Feature	SEPA	PSD
Currency	Euro	All EU member state currencies
Legal nature	Self-regulatory initiative	Directive
Geographical scope	EU, EEA, and Switzerland	EU and EEA
Scope	Domestic and cross-border payments in euros within the SEPA area	Intra-EU payments in MS currencies
Timing	Various—starting with January 2008 for launch of SCT and initial SCF deliverables	By 1 November 2009
Focus	SCT/SDD schemes have primary focus on the PSP-to-PSP space	Primary focus on the user-to-PSP space

Source: EC-EPC, 2008.

THE EPC IS STILL PREPARING THE IMPLEMENTATION OF THE SEPA CARDS FRAMEWORK

In the SCF, the EPC is defining the principles and rules needed to underpin SEPA-wide acceptance of cards and support competition among all stakeholders in the card-payment value chain (banks, card schemes, and processors). The SCF essentially has three main goals: (1) to make sure cards can be accepted on a Europe-wide basis under the same conditions as in their native countries; (2) to ensure merchants are equally free to accept any SEPA-compliant card brand, and unconstrained by any legal, technical, or procedural restrictions in their choice; and (3) to increase competition by unbundling the scheme/brand management of a card scheme from the processing activities.

Banks and other stakeholders are now considering their strategy for SCF compliance. They essentially have five options:

- Invest in a national scheme and turn it into an international player.
- Migrate national schemes to existing international schemes.
- Integrate a national scheme into another card scheme in Europe.
- Co-brand a national scheme with an SCF-compliant international scheme.
- Create an entirely new pan-European scheme.

To improve security and reduce fraud, and to facilitate interoperability, the SCF promotes the EMV (Europay MasterCard Visa) chip and PIN (personal identification number) technical standard. The implementation of EMV standards is progressing, and completion is targeted for 2010. However, full completion will not be finalised before 2013, due to the delay already announced in some countries such as the Netherlands.

To support and pursue the EC's vision of "any card at any terminal", the EPC has five different working groups (business models, New Legal Framework, statistical data, fraud prevention, and standardisation) focusing on ensuring standardisation and hence interoperability across Europe's diverse card networks. The EPC has published its suggested standardisation principles for public consultation ("The Volume") and hopes to finish its revisions to this document by the end of November 2008, for approval by the end of the year and implementation as soon as possible, before the end of 2010.

THREE CONDITIONS FOR A REAL IMPLEMENTATION OF THE SEPA CARD FRAMEWORK: FULL IMPLEMENTATION OF EMV STANDARDS, A CLEAR DEFINITION OF THE APPROACH TO INTERCHANGE FEES, AND INTEROPERABILITY

International card schemes already provide well-established cross-border payments systems for cards, and the SCF seems unlikely to threaten this stronghold. In fact, uncertainty over the EMV implementation deadline and the definition of the link between terminal and acquirer could arguably favour the established players.

The EPC's endorsement of EMV is certainly a key move for ensuring technical interoperability in Europe. But compliance is much further along in some countries than others, both for point-of-sale (POS) terminals and cards, and it is not certain that compliance will be complete before 2013.

Full implementation of the EMV standards is necessary on a European scale to allow the development of competition. Currently the major international card schemes (such as Visa and MasterCard) are the only schemes able to authorise card transactions on a European-wide scale, and this places them in a strong position to overcome the technical barriers within the EU31. The relevant European authorities have made clear they would like to see a European scheme in addition to the existing international schemes (such as MasterCard and Visa).

In addition, the EC has concerns about the current level of interchange fees for the international schemes. In particular, on 19 January 2007, the EC issued a decision finding that MasterCard's interchange arrangements for cross-border transactions in the EU break EC competition rules by inflating costs without delivering benefits to consumers. The EC has indicated that the principles set out in the MasterCard decision provide guidance to the market in general, including to Visa. MasterCard has since appealed the EC's decision to the European Court of First Instance. This issue could therefore continue to be a sticking point in SCF implementation for some time.

The market assumed the ECB supports the aims of the SCF, including its choice of the "4-party" model (defining the relationships among originators, beneficiaries, and their respective banks), its core principles of unbundling card-scheme management and processing, and EMV compliance. The ECB has also made clear it expects card schemes to be economically viable for banks.

Banks now have until 2010 to move from their existing domestic schemes to SEPA cards, but clearly the details on some key issues (such as scheme governance and specifics on interchange fees and payment guarantees) must be resolved soon in order for SEPA to become a reality for cards.

The EPC, EC, and ECB are the key regulatory stakeholders in cards (see Figure 3.2), but there are others. Merchants, for example, would clearly like some say over the development and definition of any European scheme, but their concerns centre on the business proposition, benefits for each stakeholder, governance, and other risk-management and technical issues.

Despite the uncertainty surrounding cards, a variety of banking and non-banking segments are actively developing card initiatives. EAPS, Monnet, and Payfair, for example, are developing business models that might be able to rival Visa/MasterCard, potentially achieving European scale, offering payment guarantees and presenting a sustainable alternative business model.

Figure 3.2 Regulatory Bodies: Actions and Impacts Concerning the SEPA Cards Framework

Regulatory Bodies	Their Impact Regarding Cards
EPC ▪ SEPA Cards Framework	▪ Requirement of full acceptance ▪ Target of increased competition within the European cards market ▪ Unbundling of the card scheme / operator (processing and certification) ▪ Free choice of the acquirer, card system(s), and terminal by the merchant ▪ EMV chip mandatory on any SEPA card and interoperability of technical standards ▪ Freedom to choose a distinct network other than the one of the card brand for authorisation and settlement ▪ Common approach for fraud and declaration at a European level
European Commission ▪ EC DG market's statement ▪ Payment Services Directive ▪ EC DG Competition's decision on interchange	▪ Target setting of "any card at any terminal" ▪ Transparency (detailed pricing of each service) and reduced prices ▪ Possible refusal of the authorised transactions (on specific cases) ▪ Rules of reimbursement of non-authorised transactions extended to the European Union ▪ Challenges the basis of current interchange fees
ECB ▪ The Eurosystem's view of a "SEPA for cards" ▪ Oversight for card payments scheme standards	▪ Increased competition of schemes ▪ Cards should be competitive, reliable, and cost-efficient ▪ Rationalisation of card infrastructure and economies of scale ▪ Provision of a sound legal basis for the cards scheme ▪ Transparency of comprehensive information including financial risks ▪ Security and reliability of the card system needs to be ensured ▪ Scheme should have effective, accountable, and transparent governance arrangements ▪ Financial risks should be managed and contained in relation to clearing and settlement processes

SEPA Achievement for Cards

- "Any card at any terminal"
- Increased competition
- Interoperability
- Reachability
- Security (EMV)
- Interchange

Sources: SEPA Cards Framework, Version 2.0, March 2006; European Commission, PSD, November 2007; Neetie Kroes speech on interchange, 19 December 2007; The Eurosystem's view of a "SEPA for cards," ECB November 2006; "Oversight framework for card payment schemes—standards," ECB January 2008.

EPC AND KEY INDUSTRY STAKEHOLDERS LOOK TO THE FUTURE IN PREPARING E-SEPA

The initial SEPA Rulebooks focused by necessity on harmonising existing payment means (credit transfers, direct debits, and cards). The next horizon for SEPA is emerging payment methods, for example, payment direct from Internet banking services or via mobile phones equipped with Near Field Communication (NFC) chips. The EPC and other stakeholders are continuing to develop rules and standards for the channels through which e- and m-payments will be made. Ultimately, these emerging payment means could complement, or compete with, more traditional SEPA instruments.

The provisions are together known as "e-SEPA", but several different innovations fall into the broad category, and the development of each is at a different stage.

E-mandates: The EPC is working on electronic mandates, which would offer numerous benefits for SDD, including a shorter mandate-management processing cycle, fewer defaults (that is, with real-time checking of debtors), fewer mandate-fulfilment errors, lower operating costs (for instance, as data collection and analysis become simpler), and a more secure document delivery and payments process.

E-payments: The EPC will publish proposed standards for e-payments for Web retailers that focus on security and draw on corporate initiatives from several countries. Different standards apply to different situations, but the central principle involves linking the merchant's website via a single click to the website of the customer's bank. The customer performs the payment and the merchant receives a payment confirmation from the merchant's bank.

M-payments: The EPC is sponsoring an "m-payment initiative" that aims to explore the different business models for initiating payments from a mobile phone (for instance, via contactless NFC, chip and PIN codes, short message service [SMS], or text message, confirmation). These capabilities are very popular in the US and Japan (albeit with different technical standards), and could gain market share in non-cash payments, especially as a replacement for cash. The EPC is involved in m-payment initiatives being pursued by banks and telecom operators, which are working both independently and together on realising m-payments.

E-invoicing: The EPC's mandate does not extend to e-invoicing. This arena extends deeply into the internal processes of businesses, as well as the payments system. Rather, the EC is heading up the development of e-invoicing, aiming to eliminate paper invoices and establish a seamless financial supply chain, from the ordering of goods to the reconciliation of payments, across industries. According to the EC, the savings and efficiency gains from e-invoicing could amount to 0.8% of Europe's GDP.

There are obvious benefits to linking e-invoicing to SEPA, but barriers will need to be removed first. For example, a single set of standards will be needed across Europe, and tax and legal obstacles will need to be removed (for example, if companies are currently required to keep paper invoices). An expert group is due to publish an e-invoicing framework by 2009.

Clearly, e-SEPA holds great promise, but given the existing challenge of simply realising SEPA migration in traditional non-cash payment instruments, the key question will remain: How much should stakeholders plan to spend on innovations like m-payments in the near term?

SEPA Implementation and Migration Status

CHAPTER 4 HIGHLIGHTS

- In a major milestone achievement, the first SEPA scheme, the SCT, was launched successfully on 28 January 2008. Six months later, more than 4,300 banks and sixteen CSMs are SEPA-compliant for SCT. Initial transaction volumes are relatively low, but they will rise when a significant number of domestic transactions become SEPA-compliant.
- The SEPA-wide launch of the SDD Core Scheme has, as anticipated, been postponed until November 2009 given the dependency on the implementation of the PSD. The EPC intends to launch the SDD B2B Scheme at the same time as the Core Scheme. Some related points are still being resolved, such as how to support the process of converting existing mandates to the new scheme, and to what extent European Commission's Directorate General Competition will support the EPC's proposal for a "multilateral balancing payment" arrangement.
- Although sixteen European CSMs have announced themselves as SEPA-compliant, the volumes being processed so far are relatively small. This can be expected to affect the pace at which the market-anticipated consolidation of the CSM market happens.
- Corporates are under no legal obligation to migrate to SEPA, so banks will need to continue to draw them into the process and discuss their needs and concerns, and thereby attract the kind of participation required to achieve critical mass.
- Only about half of country SEPA migration plans were updated last year. There are still few concrete details on critical issues such as plans and timetables for decommissioning existing euro domestic payments (legacy instruments). The question of whether an end date (or a number of end dates) will ultimately be required to stimulate and add incentives to the migration process is increasingly being debated by a wide range of market participants.

STAKEHOLDER POSITIONS

SCT was launched successfully, but has limited initial volumes

More than 4,250 banks declared themselves to be SEPA-compliant in time for the successful SCT launch on 28 January 2008, and by June that number had climbed to 4,349. At the same time, sixteen CSMs from thirteen countries announced they were equipped to participate. No major operational incidents have occurred since the launch.

Initial transaction volumes are relatively low, as might be expected at this early stage of the SEPA migration process. The European Banking Association (EBA) Clearing reported 12 million SCT-compliant transactions for the period up to the end of May 2008, a significant achievement but a relatively small figure when compared to the fact that nearly 16 billion credit transfers were conducted in the Eurozone in 2006. The majority of SCTs so far appear to relate to cross-border transactions. Data on SCT volumes suggest SCTs are currently growing at less than 10% per month, a rate that would be substantially higher if domestic transactions had started moving towards SEPA to any significant extent.

Domestic use might soon start to increase. The Finnish banking community, for example, has announced it will push for the migration of some domestic activities to SEPA instruments. The Eurosystem plans to set up a SEPA Dashboard, which will facilitate the tracking of SEPA-payment flows.

SDD launch now targeted for November 2009, but some key practical challenges remain

The SDD is a more complex undertaking than the SCT from a legal and operational perspective. As widely predicted, the SEPA-wide launch of the SDD Core Scheme has now been postponed until November 2009, because much depends on the implementation of certain key elements from the PSD. The EPC intends to launch the SDD B2B Scheme at the same time as the Core Scheme.

Direct debits are, by nature, more complex instruments than credit transfers, with greater existing national variations in existing domestic services. It is more difficult to close some of the gaps between existing direct-debit schemes and the SDD than it was for credit transfers. Some key specifics are still being resolved, such as the activities that can be undertaken at the national level to ease the migration of existing mandates of direct-debit legacy instruments into the new scheme, and to what extent Directorate General Competition will support the EPC proposal for a “multilateral balancing payment” arrangement to be paid by the creditor’s bank to the debtor’s bank for each direct-debit transaction.

To help promote the changeover to SDD, the EPC is planning to publish a “toolbox” of recommended transition measures and best practices from throughout the SEPA region. It could highlight cases such as the move by Belgium to provide information on existing direct-debit mandates through a central bank database. The first version of the toolbox should be available by the end of 2008.

In addition, work is being done within the EPC to develop an “e-mandate” capability to supplement the basic paper mandate capability of the existing Core SDD scheme. Again, the intention is to have this additional capability ready for use by those communities where it is seen as a priority in time for the launch of the SDD scheme.

Sixteen CSMs are SEPA-compliant; a number of possible approaches exist to increasing scale and “reach”

Sixteen European CSMs have announced themselves as SEPA-compliant (that is, they are able to process SCT orders), albeit the volumes being processed so far are relatively small, with the EBA Clearing’s STEP2 SCT service currently enjoying the highest share.

This is not surprising given the relatively low levels of SCT adoption so far and the very high proportion related to cross-border transactions. Volume increases in the majority of cases can be expected to be strongly linked to the pace at which national transactions start moving towards the SEPA schemes.

The pace of national migration will also clearly have an impact on the speed of (and extent to which) the market-anticipated consolidation of the CSM market will happen. So will the extent to which CSMs ensure interoperability at a technical level and make use of alternative approaches to achieving “reach” and scale, whether by becoming a full pan-European ACH (PE-ACH), developing linkages to other CSMs, or through other strategies.

Corporate and public-sector users need further help and guidance

Corporates are under no legal obligation to migrate to SEPA. To attract the kind of participation required to meet critical mass, the banking community needs to continue to draw corporates into the process and discuss their needs and concerns.

For example, some existing non-cash payment schemes offer certain features that differ from (and in some cases exceed) the standards for the SEPA schemes as set out in the Rulebooks. In cases where these features are used today by specific corporates or public-sector users, there is less incentive for them to be early adopters of SEPA products. Over time, it can be expected that the SEPA schemes will further evolve to take on additional features and capabilities, but in the meantime, selective use of AOS may be necessary for a given community of users. Individual banks can, of course, also differentiate themselves, and promote migration to SEPA, by providing relevant supplemental services as part of their own offerings.

Corporates also need to be fully involved in the data-standards discussion. The initial SEPA data standards implemented by the EPC for the SCT and SDD schemes (based on ISO 20022) relate to bank-to-bank relationships. Standards for bank-to-corporate interactions were initially missing, but the EPC has recently published for consultation the "SEPA credit transfer scheme customer-to-bank implementation guidelines V3.2", in which it recommends UNIFI ISO 20022 for those interactions. Some debate remains as to whether bank-to-corporate communications relationships should remain a "competitive domain" (in which the use of the message fields is itself a service differentiator), or be used instead to drive greater interoperability.

Finally, banks and other service providers will need to help corporate and public-sector users manage the actual migration to SEPA, for example, by providing access to IBAN/BIC databases, helping to reformat legacy account-number databases and payment messages on the path to Extensible Markup Language (XML), and offering outsourced mandate-management services for creditors.

Updated and more concrete national migration plans are required; potential need for an end date?

In last year's *World Payments Report*, we noted that two topics clearly needed to be addressed when participating countries updated their SEPA migration plans: achievement of critical mass, and legacy payments. In the ensuing year, only half of participating countries appear to have issued updated plans, and many of those were largely focused on reflecting the shift in the SDD launch to November 2009.

Still absent in many cases for the time being are concrete plans and timelines for decommissioning existing euro domestic payment instruments. Many plans only address implementation and migration of existing credit transfer and direct-debit instruments, covering 91% of the volume. Other legacy instruments often cater to the specific needs of local corporate and public-sector users, and these can be harder to migrate to SEPA-compliant versions. These country-specific legacy instruments, which account for about 9% of European non-cash transactions each year, are generally not even part of the migration plans, so far at least.

The question of whether some sort of end date (or end dates) will ultimately be required as an incentive to the migration process is increasingly being debated by a wide range of market participants. Many views currently exist about how many dates might be required—ranging from a single date to one each for SCT and SDD, or a range of different dates for different countries. There are also differing views on what such an end date might be (end 2012 seems to be earliest possible date in the view of some commentators), and whether such a date could be set by the payments industry or requires some sort of support from the European authorities.

In any event, it seems clear that successful and full SEPA migration will happen only when all stakeholders, especially large users and the public sector, are fully participating in the process, whether on an entirely voluntary basis or with some degree of regulatory encouragement.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European Cash Management and Corporates

CHAPTER 5 HIGHLIGHTS

- Some large corporates have begun to study the implementation of SCT and SDD, and have a more concrete idea of the potential value of SEPA products. Some key bank-to-corporate aspects of SEPA implementation are yet to be established, making it difficult to plan initiatives with total certainty.
- Two SEPA-driven trends in particular could deliver cash-management benefits to corporates: the harmonisation of payments standards, and the data and protocols that facilitate STP. Standardisation and the introduction of the SCT and SDD schemes provide an incentive for corporates to concentrate their payments activities.
- The introduction of standards such as ISO 20022 into the European payments industry could facilitate the automation of the payments value chain and the development of STP. In turn, STP could improve the productivity and efficiency of internal cash-management activities, and improve liquidity management as the information chain is automated.
- The impact of SEPA will depend, however, on the profile of the company. For example, B2B and B2C companies will see different effects, because they process transactions in different volumes and use different payment instruments. The size of the company will also be a factor, as the benefits of treasury and payments consolidation is felt most by those with multiple European subsidiaries.
- Banks have so far been focused largely on complying with SEPA, but their focus should shift to capturing value from their investments in enhanced pan-European cash management service offerings.
- Cash management is an appealing and growing business for banks. It is a market that is restructuring to become more consolidated. European banks may also be able to generate additional revenues from SEPA by offering value-added services—either around existing services or by extending the scope of services further upstream into the clients' value chain.

THE TIME HAS COME FOR CORPORATES TO PLAN FOR SEPA

Many corporates still seem to be somewhat unaware of SEPA. To some extent this is not surprising, as the key building blocks for SEPA have been put together by the banking industry (in line with the shared vision agreed with the European regulatory authorities), and corporates are not currently obligated to participate. Some large corporates have begun to study the implementation of SDD and SCT, and they now have a more concrete view of the potential value of SEPA products. However, the time has come for all corporates to consider how SEPA could impact and potentially benefit their businesses, even though some key bank-to-corporate pieces of SEPA implementation have yet to be finalised, perhaps making it difficult to plan initiatives with total certainty.

For corporates, the most direct impact of SEPA is in transaction/payment activities. Yet that effect will feed into other links in the financial supply chain, including treasury and cash management.

Corporates are certainly aware that SEPA could have a profound impact on cash management. Few, however, have yet defined exactly what SEPA will mean for key operational challenges such as cash forecasting and the management of liquidity and credit risks, or other trends in global cash management, such as cross-border cash pooling, automation, and the increasing tendency of corporates to deal with fewer banking partners.

For the purposes of this chapter, cash and treasury management is taken to mean the management of risk, cash balances, and payments and collection transactions. Each corporation aims to structure and manage its cash flow and treasury to meet the needs of its business and improve its liquidity. The imperative has grown even more pressing given the recent turmoil in credit markets.

CORPORATE CASH MANAGEMENT SHOULD BENEFIT AS BANKING PRACTICES HARMONISE UNDER SEPA

Two SEPA-driven trends, in particular, could deliver cash-management benefits to corporates: the harmonisation of payments standards, and the data and protocols that facilitate STP. Most notably, legal and technical standards contained in the SCT and SDD schemes provide an incentive for corporates to concentrate treasury activities. Two potential benefits stand out:

- By concentrating their transaction processing activities, corporates can make it economically rational to invest in a payment/collection factory that can centrally manage activities of their different European entities. This approach can help streamline processes, optimise systems, and offer economies of scale. The factory approach makes particular sense for SDD, which can be complex to manage, particularly because of the mandate-management issues. Concentrating SDD management on a European scale could therefore deliver substantial value for some corporates, especially B2C companies that often have a huge number of direct debits to process.
- As CSM interoperability across the region becomes more efficient, there is more opportunity to consolidate accounts and improve cash pooling. Pooling makes liquidity positions more transparent, enabling corporates to optimise balances across Europe (for example, by using the surplus cash of one subsidiary to cover the outstanding short-term credits of another). Cash-flow forecasts would also improve from homogeneous data standards and processes, enhancing treasury management.

Furthermore, SEPA should also enable some corporates to reduce the number of banks they use in Europe. As standards are implemented, and interoperability is enhanced, competition among European banks will intensify. Corporates will then be in an improved position when it comes to negotiating their fees, especially if they have large-scale, concentrated volumes as a bargaining chip, and are in a position to allocate these to a smaller list of banking partners.

SEPA TECHNICAL STANDARDS WILL ALSO FACILITATE STP THROUGHOUT THE FINANCIAL SUPPLY CHAIN

The common use of standards such as ISO 20022 in the European payments industry should help facilitate the automation of payments processing, increasing efficiency, improving audit support, and ensuring greater accuracy. For example, automated reconciliation could allow further reduction of manual activities in the internal administration departments.

SEPA instruments are also more seamless than some legacy products, so there is potential to replace more costly and time-consuming payment means such as cheques, and to facilitate further enhancements in STP.

These developments (ease of use and improved control in payments transactions, and reduced transaction costs) could help facilitate and shorten the collection cycle, allowing corporates to manage a greater volume of transactions more easily. This could lead to long-term benefits, including:

- Faster collections and more rapid accounts receivable updates, which could reduce corporate liquidity needs and client risk exposure, and possibly increase sales.
- More frequent collection transactions (monthly instead of quarterly), which could lead to a better and more precise management of customer/receivables accounts, and thereby decrease corporate-counterparty exposure.
- Better audit and control activities and a reduction in operational risk, made possible when payments activity is centralised.

SEPA OPPORTUNITIES WILL DEPEND ON A CORPORATE'S PROFILE

SEPA's impact will depend, however, on a company's profile. For example, B2B and B2C companies will see different effects, because they process transactions in different volumes and use different payment instruments.

The size and global scale of the company will also be a factor. There is a greater potential for rationalisation when the number of subsidiaries is high (see Figure 5.1).

Figure 5.1 Impact of SEPA on Corporates

Impact on Corporates	Corporate Profile Key Variables to Determine Savings' Potential	Implementation Timeframe
Rationalisation of treasury management structure	International dimension: possible savings increase with the number of company subsidiaries	Medium term
Increased internal payments efficiencies through STP implementation	Transaction volume: the greater the volume of payments transactions, the larger the savings should be	Long term
Reduction in working capital	Payment cycle: the longer the existing payment cycle, the greater the potential improvement will be Payment mix: the higher the volume of "time consuming" payments, the greater the impact will be on payment cycle improvements	Medium term
Potential for lower transaction fees	Transaction volume: the greater the company's payments volume, the greater the savings should be Payment mix: the more varied the payment instrument mix managed, the greater the potential for savings with SEPA products	Medium/Long term
Reduction of banking fees (not transaction-based)	International dimension: the more subsidiaries and banks the company uses, the more savings they should realise	Short/Medium term

Source: Capgemini analysis, 2008.

ANTICIPATING SEPA, LARGE CORPORATE GROUPS HAVE LAUNCHED PROJECTS WITH AMBITIOUS SAVINGS OBJECTIVES

Some corporate groups are already looking to leverage the benefits of SEPA and thereby improve their financial value chain. A large B2C company offering services all over Europe via a network of 35 subsidiaries launched a SEPA project at the end of 2007. The main options they studied were:

- Creating a Shared Services Centre that would centralise collection and disbursement activities using single and rationalised IT tools.
- Replacing non-STP instruments (cheques) with SDD and card payments, enabling further STP improvements in the collection process and a dramatic acceleration of the payment cycle and reduction in working capital.
- Cutting the number of bank relationships and bank accounts.
- Lowering banking and transaction fees by negotiating on a European scale.

According to this company, which is processing more than 200 million transactions a year (mainly direct debits), the group could potentially save up to 50% of its total European payments cost base through a combination of all these actions. Of course, realising these savings would also entail initial investments that are currently being estimated, both to transform the internal processes and to give incentives to their clients for changing payment instruments.

POST-SEPA CASH MANAGEMENT IS AN APPEALING BUSINESS FOR BANKS

Cash management is an appealing business for banks for several reasons. First, cash management helps secure long-term corporate relationships. Second, it is a stable market with limited risk, because it offers regular revenue from transaction and banking fees, but limited direct credit exposure.

Small and medium-sized enterprise (SME) cash management holds particular promise for banks that can concentrate SME payment activities in one platform, capturing scale economies. SEPA also opens up the possibility for banks to extend their geographic reach, and handle pan-European corporate needs for SMEs and others.

Figure 5.2 SEPA Banking Options for Corporates

<table>
<tr><th colspan="2">Banking Options to Consider</th><th rowspan="2">Major Capabilities Needed for SEPA Offering</th></tr>
<tr><th>Who?</th><th>Why?</th></tr>
<tr><td>Half a dozen global and multi-regional players</td><td>Global and European capabilities, and SEPA-specific offerings</td><td rowspan="2">▪ Payments transactions handling for SEPA formats by payment instrument
▪ Pricing
▪ Reachability across Europe
▪ Support for migration; especially IBAN/BIC data collection and updates
▪ Account consolidation options/cash pooling
▪ Value-added services (for instance, reporting tools, direct access to banking data, multi-standard communication tools)
▪ Error and exceptions handling
▪ Flexibility in payment offering (e.g., to integrate specific AOS)</td></tr>
<tr><td>European players (may or may not be pan-European)</td><td>Local excellence with SEPA offer</td></tr>
</table>

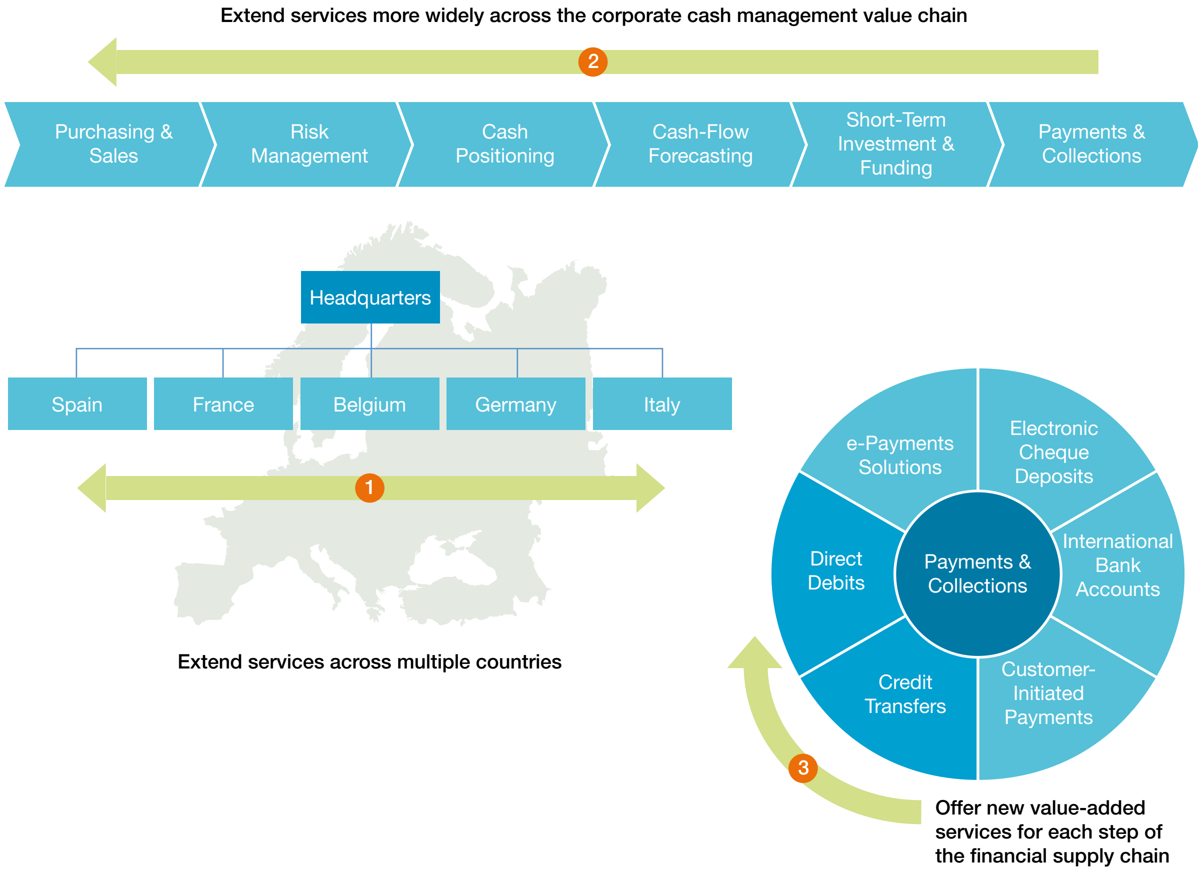
Source: Capgemini analysis, 2008.

Banks might also be able to generate additional revenues by offering value-added services around their existing services (see Figure 5.2) or by extending the scope of services further upstream into their clients' value chains to help drive improvements in corporate treasury and cash-management activities. For example, banks could support treasury-system integration, facilitate STP to enhance corporate reporting and cash pooling capabilities, and provide an enhanced electronic payments platform to centralise and industrialise collection and disbursement activities. Banks could also help corporates make their financial supply chains more efficient by (for instance) reducing the number of accounts, automating account reconciliation, and offering intelligent-matching tools to identify payment exceptions quickly.

It could require large-scale investment in products and infrastructure for banks to offer these enhancements and meet the evolving needs of corporates seeking SEPA-driven solutions at low cost. However, these investments would not only benefit the European payments market as a whole, but would also better position banks to capture the myriad opportunities in the post-SEPA financial supply chain (see Figure 5.3).

The global treasury and cash management market, worth some €60 billion to €110 billion, is highly fragmented, with local banks currently playing the lead role. The situation is much the same in Europe, but SEPA could potentially give banks there the opportunity to benefit from significantly reduced fragmentation and target new opportunities in cash management.

Figure 5.3 SEPA Opportunities for Banks



Source: Capgemini analysis, 2008.

Card Market Opportunities and Challenges for Banks

CHAPTER 6 HIGHLIGHTS

- Cards are the fastest-growing means of non-cash payments, and accounted for 54% of all such payments worldwide in 2006. Among the top ten countries, which together accounted for 80% of global card purchase transactions in 2006, China was responsible for 20% of issued cards, placing it in second position in the world card market behind the US.
- Among all existing payment cards, general-purpose cards are the most popular and most commonly used. The 4-party (cardholders, card issuers, merchants, and merchant acquirers) business model appears to cause faster and broader market development, because issuing and acquiring are done through large multi-member networks. In contrast, more “centralised” 3-party schemes must rely to a greater extent on their own capabilities to develop acceptance. The 4-party model also allows participants to specialise according to their expertise, and in this way brings greater efficiency and broader reach.
- To develop a 4-party card payment market, a delicate balance must be maintained between the interests of cardholders, issuers, acquirers, and merchants. The interchange rate is critical to the equilibrium among stakeholders. However, interchange is under fire, with authorities in some markets enforcing fee adjustments. It is questionable, however, whether regulatory intervention meets the stated aim of creating a more efficient payments system, as neither merchants nor cardholders appear significantly to benefit quickly or fully.
- Banks are generally the most trusted financial partners from the end users’ perspective, and are arguably the best players placed today to offer a highly secured payment guarantee and associated banking services. For banks, the imperative to remain in the card market exists for various reasons, including:
  - Cards, as the fastest growing non-cash payment means, can provide a source of stable revenue and contribute significantly to the overall volume of non-cash payments transactions.
  - Cards are the most meaningful payment instrument for capturing and maintaining customer relationships. Cards are also the easiest payment means to export beyond domestic borders.
  - If banks cede their strong position in both the issuing and acquiring sides of the card business, they risk being gradually disintermediated from the payments value chain, and their absence could undermine the systemic strength of payments risk management.

WORLDWIDE CARD PAYMENTS MARKET: GROWTH IN A COMPLEX REGULATORY ENVIRONMENT

Of all payment means, cards are in the spotlight most

Cards are the fastest-growing global non-cash payment instrument, and in recent years cards have been pivotal to the growth of retail financial services. Cards linked to current accounts provide a means of cementing the various capabilities of such accounts. Credit cards offer a convenient form of unsecured retail lending that acts as a regular communications channel between consumer and issuer, facilitating the development of customer relationships. As a means of payment, cards are the primary alternative to cash and cheques, offering convenience for consumers and merchants alike, and making the payments system more efficient and secure.

Given their crucial contribution to efficiency in the payments system, cards are necessarily central to SEPA. The EPC is therefore working to clarify the ground rules (security standards, data requirements, network protocols, rules and services) for the future use of cards (see Chapter 3).

The economics of cards have also been under scrutiny, especially the level and structure of interchange rates. For example, in addition to the EC's investigation into Visa's cross-border interchange arrangements in the EU (decision in 2002) and its investigation into MasterCard's cross-border interchange rates in the EU (decision in 2007), there has also been regulatory intervention in the following jurisdictions:

- Australia, 2003: The Reserve Bank of Australia (RBA) mandated that Bankcard, MasterCard, and Visa must set interchange fees based on a strict cost-based formula.
- Denmark, 2003: Legislation reduced Maestro and Visa Electron fees from 0.75% to 0.4% of transaction value, and set a cap of DKK 4; in 2005, merchant service charges (MSC) of national card Dankort were replaced by an annual fee per retailer.
- Spain, 2005: Card networks and merchants agreed to reduce credit- and debit-network interchange fees.
- Turkey, 2005: The Turkish Competition Authority ruled on the country's Interbank Card Centre's (BKM's) clearing commission rate set by member banks, saying certain cost items in the formula used to calculate fees should be adjusted.
- Austria, 2006: Austrian banks agreed to review arrangements for setting interchange fees, and announced that a reduction could be expected.
- US, 2008: The Credit Card Fair Fee Act of 2008 was introduced into the legislative approval process. It would require card operators "with substantial market power" (for example, Visa, MasterCard) to negotiate interchange fees with merchants and retailers. The cost of US interchange fees to consumers has doubled over the last ten years.
- UK, ongoing: The Office of Fair Trading has been investigating Visa and MasterCard's interchange arrangements for UK domestic interchange rates for a number of years.

The main actors in the card market are the card issuer, transaction acquirer, payment scheme, and end user (cardholder and merchant). The card scheme (payment application and brand owner) sets the rules, including acceptance and transaction processing standards for a given set of card products, and provides a forum in which members (issuers and acquirers) may exchange views. It establishes expectations and processes for the operational integrity and security of its scheme, and ensures that members adopt appropriate operational behaviours and methodologies to limit losses that might otherwise undermine the system. Based on the SCF, the aim of the EPC is to establish a common set of standards for the multiple card schemes operating in the Eurozone and any other participating countries and, in doing so, enable a more level playing field for the actors to expand or otherwise improve the efficiency of their businesses.

In 2006, there were 7.9 billion cards in circulation worldwide, and 142 billion purchases worth €5.8 trillion were conducted using cards. By any gauge, cards are growing faster than any other non-cash payment means, and are driving the growth in those means overall. For example, between 2001 and 2006:

- The number of cards in circulation increased by 9%, raising the number of cards per inhabitant from 0.82 to 1.20.
- The number of card purchase transactions increased by 16%, and the share of non-cash payments made with cards increased from 39% to 54%.
- The value of card purchase transactions rose by 8%, exceeding the aggregate growth in GDP by a steady 6% per year.
- The acceptance network grew by more than 10.2% per year (an estimate based on the top 25 card payment markets, which represented 88% of the card purchase transactions in the world in 2006).

General-purpose cards account for 88% of all cards issued, 87% of card purchase transactions, and 93% of the value of card purchase transactions. The analysis in this chapter therefore focuses on general-purpose cards.

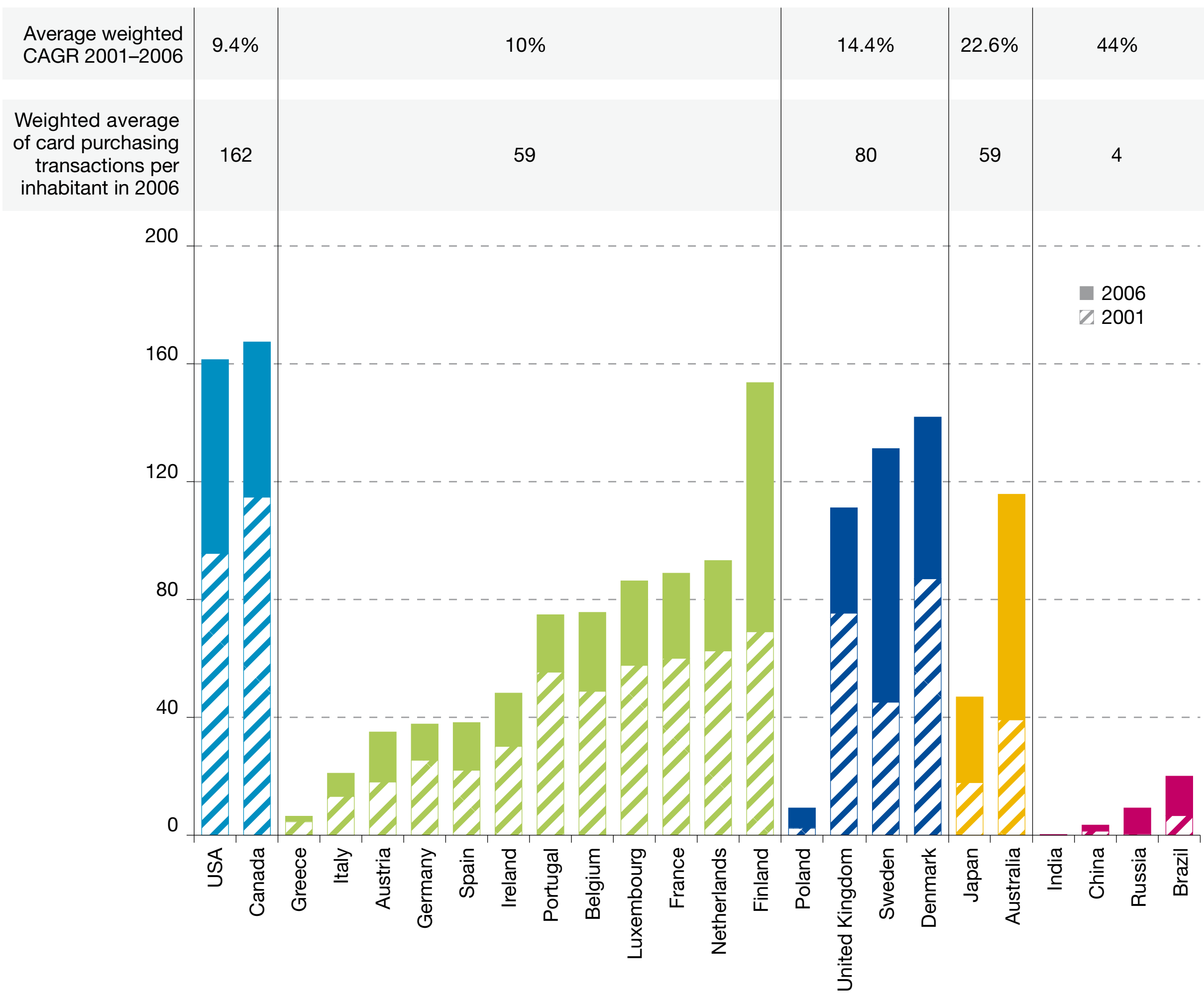
Cards are most prevalent in mature economies, and are growing significantly in emerging markets

Developing and emerging countries account for 43% of cards issued worldwide, but only 10% of the value of card-based transactions. Among all BRIC countries, China (where the national card scheme has issued more than 1 billion cards) accounted for 20% of all cards issued globally in 2006, and 12% of all transactions processed worldwide.

The growth rate of card usage in developing and emerging countries is double that of mature economies (EU, North America, Australia, Japan, Singapore, and South Korea), but mature economies still accounted for 57% of all cards in circulation worldwide, 74% of card-based transactions, and 90% of their value in 2006.

The US remains by far the largest single market, accounting for almost one-third of all cards issued worldwide, and approximately 40% of the number and value of card-based transactions. The rate of card usage is also very high (about 161 card-based purchases per inhabitant in 2006), and despite the market's maturity, the number of transactions per US inhabitant grew more than 9% per year in 2001–2006 (see Figure 6.1).

Figure 6.1 Number of Card Purchase Transactions per Inhabitant in the Top Usage Markets, 2001 and 2006



Note: Eurozone comprises the 12 countries using the euro in 2006; Slovenia was added to the Eurozone in 2007.

Sources: ECB Blue Book—2006 figures, released Nov. 2007; Bank for International Settlements—Red Book—2006 figures, released March 2008; Capgemini analysis, 2008.

Europe also increased its card usage rate by more than 10% per year in 2001–2006. In 2006, it accounted for 11% of cards issued worldwide, 20% of card purchase transactions, and 28% of purchase value. Aggregate usage per inhabitant (about 59 transactions per annum) still significantly lagged behind the US market, but it demonstrates enormous potential for future development. On a country-by-country basis, however, usage rates vary sharply, both within Europe and across the world. For example, usage ranges from just 1 transaction a year per inhabitant in India to 168 in Canada.

International schemes lead the global cards market

The top six international card schemes (American Express, China Union Pay, Discover/Diners Club, JCB, MasterCard, and Visa) have branded 75% of all cards in circulation worldwide, although a large majority of cards are co-branded with national schemes, as is the case in Europe. The top six account for 85% of all card-based purchases. Among these market leaders, four are US-based and two are from Asia. Three use the 4-party model and three use the 3-party. Noticeably absent from the list of market leaders is any European card scheme. The EC/ECB would like to see European banks rectify this situation, arguing that the SCF offers banks an opportunity to combine their capabilities and create a major European payments scheme with potentially global reach.

Nevertheless, analysis confirms that to date there are only two truly global players: Visa and MasterCard, both of which use the 4-party model. Visa (no. 1) and MasterCard (no. 2) both have a large number of European members. Together, their brands or co-brands account for 50% of all cards issued worldwide, and 67% of all card purchase transactions. Banks are currently investigating the conditions necessary for allowing the creation of a third international scheme.

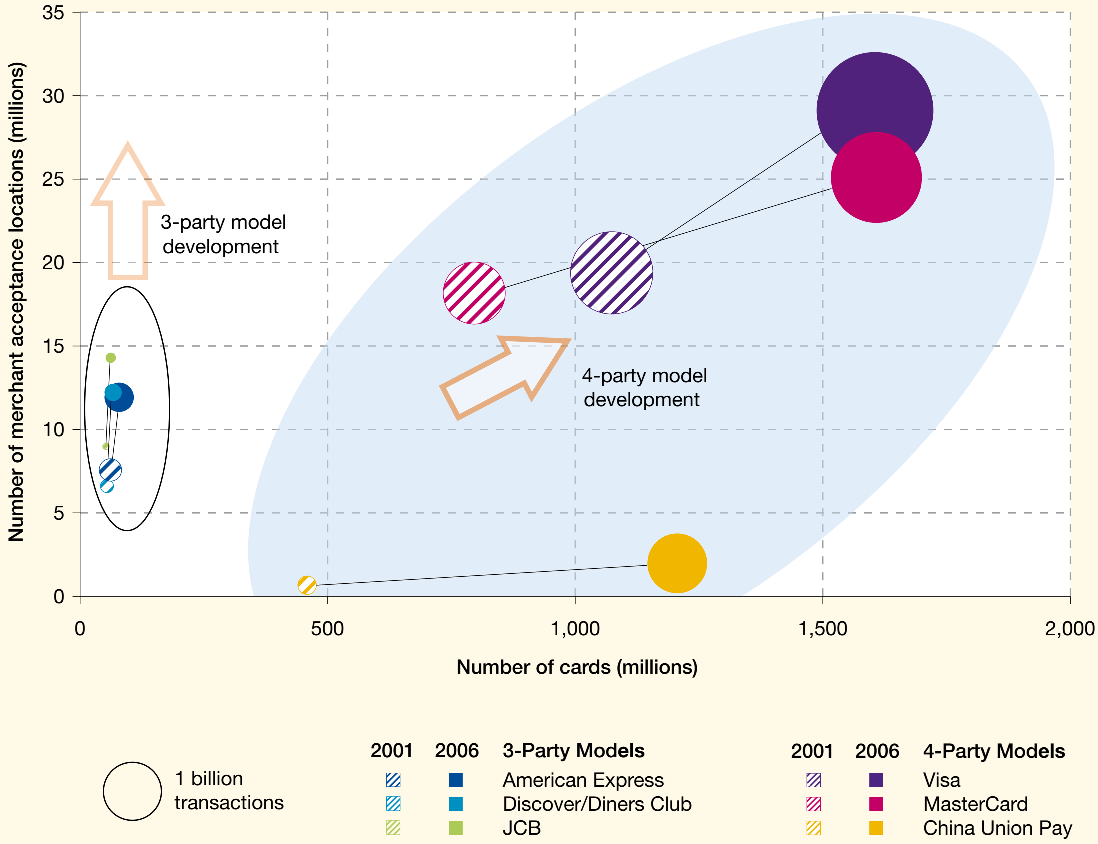
Visa and MasterCard each have a very strong brand in mature countries, but a less established presence in emerging markets. Both are growing their issuance and the number of card-based transactions, but their market shares remain stable. Like all 4-party schemes, they do not have any direct relationship with the end user. The next largest scheme, China Union Pay (CUP), is primarily a domestic scheme, but it is trying to establish broad international acceptance to support its numerous cardholders as they travel abroad. Acceptance is largely confined to Asia but is gradually extending globally. While transaction volumes are large and growing significantly, CUP's weakness remains the relatively modest levels of consumer spending, which translate into relatively low revenues for scheme participants compared with those in mature economies. Moreover, the scheme's growth is likely to be tempered by the high cost of establishing international brand recognition and acceptance relative to consumers' limited purchasing power.

The development of 4-party international card brands has diverged from 3-party schemes (see Figure 6.2):

- 4-party models have developed faster than 3-party models in both issuance and merchant acceptance, driven by their larger partner networks (banks and payment service providers (PSPs). CUP, as noted earlier, is still trying to develop acceptance beyond its home territory. Overall, however, 4-party schemes now account for more than 70% of the global card market, both in terms of issuance and the number of purchase transactions.
- 3-party models, primarily credit or charge cards, have to juggle the expansion of both acceptance and issuance. They may use partners to develop acceptance, but their success in issuance largely depends on their marketing capabilities; acceptance is, by definition, more constrained than open-membership schemes. Ultimately their reluctance to cede control over scheme governance and customer relationships limits their growth potential.

In practice, then, the strength of the 4-party model for general-purpose payment cards lies in its scale and flexibility, which drive volume-based growth, while 3-party models are driven by the provision of a package of "value-added services" (for instance, unsecured credit, image, prestige, and ancillary services such as travel money or insurance) to a narrower segment of cardholders.

Figure 6.2 International Card Brands Development, 2001–2006
Number of Cards vs. Number of Merchant Acceptance Locations



Sources: Companies' annual reports, Capgemini analysis, 2008.

DEVELOPMENT OF KEY SUCCESS FACTORS

For card-scheme growth to become self-sustaining, acceptance and cardholding need to achieve harmony

Key performance indicators (number and value of transactions) in the world's main card markets indicate the impact of three potential drivers of success:

- Acceptance network
- Card issuance
- Card scheme business model (that is, cardholder fees, interchange rates, merchant service charge (MSC))

In analysing the relationship between the use of cards and the scale and growth of the acceptance network (see Figure 6.3), several points stand out:

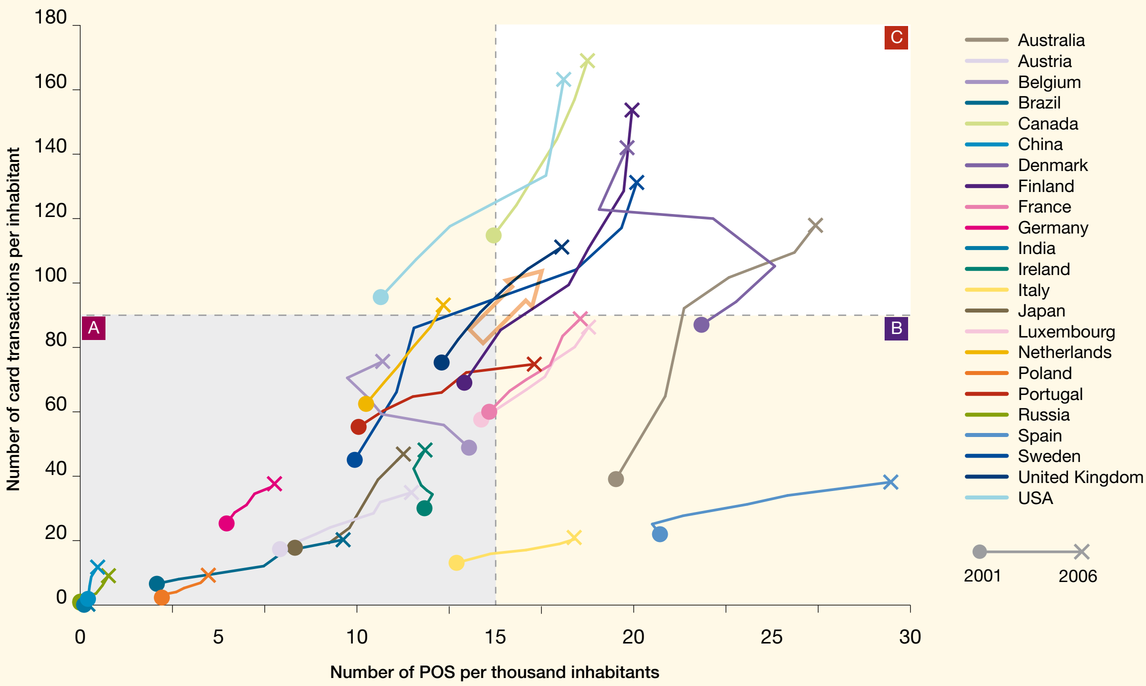
- There is a clear positive correlation between acceptance and usage. The more acceptance points there are (and thus opportunities to use a card), the higher the rate of usage per consumer.
- Development of the acceptance network is a prerequisite for card-usage growth, but it is not the only issue. There also needs to be concerted consumer education, particularly in the early stages of market development, and appropriate and competitive pricing for card services must appeal to both consumers and merchants.
- Tracking only POS terminals might mask the true level of card acceptance. In some countries, networks are not compatible, so merchants need more than one terminal. The total number of merchants accepting cards is therefore lower than it might first appear. Brazil is a good example of this phenomenon, but it also applies to other countries.

Each of the main card markets falls into one of three segments, and while case studies highlight each segment later in the text, some broad conclusions can also be drawn here about each:

- **Area A:** Countries in this segment have yet to invest sufficiently in distribution to generate a large number of purchase transactions per inhabitant.
- **Area B:** These countries have started to invest in an acceptance network to achieve critical mass, but the return in terms of purchase transactions per inhabitant is not yet tangible. Solutions might include marketing to change ingrained consumer attitudes or behaviour, and developing incentives such as loyalty schemes to encourage card use.
- **Area C:** In these countries, earlier network investments (in terminals, for instance) is already translating into higher usage of non-cash instruments per inhabitant.

Separately, irregular developments can be observed for Belgium and Denmark, because they merged their domestic schemes, leaving only one national scheme.

Figure 6.3 Number of Transactions and Acceptance Network Development per Inhabitant, 2001–2006



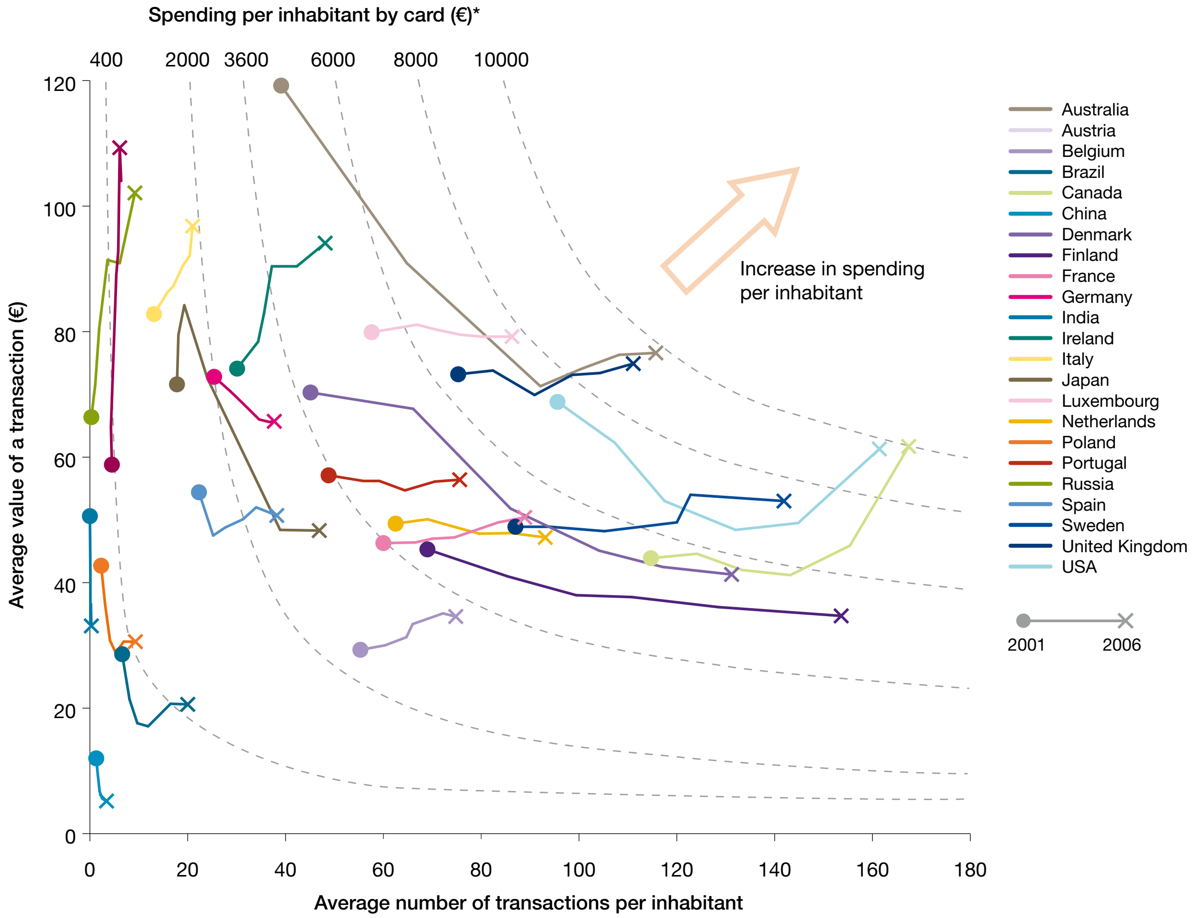
A Limited investment in infrastructure so far
B Payback on investment not yet evident in terms of customer acceptance
C Payback on earlier investment already tangible in customer acceptance

Sources: ECB Blue Book—2006 figures, released Nov. 2007; Bank for International Settlements—Red Book—2006 figures, released March 2008; Capgemini analysis, 2008.

We analysed card issuance on two dimensions:

- Spending per inhabitant (see Figure 6.4), which grew steadily in volume and value between 2001 and 2006:
  - The amount spent using cards rose in all countries, mostly by increasing the number of transactions rather than the average value of a transaction. However, there is a strong disparity between similar economies, for example between Germany and the US.
- The relationship between the number of transactions per card and the average number of cards per inhabitant (see Figure 6.5). Overall, the number of card transactions per inhabitant rose between 2001 and 2006, but high top-line growth was achieved in one of two ways:

Figure 6.4 Average Number of Transactions per Inhabitant vs. Average Value of Transaction, 2001–2006



Note (*): $\frac{\text{nb of trx}}{\text{hab}}$ x value of trx = spending

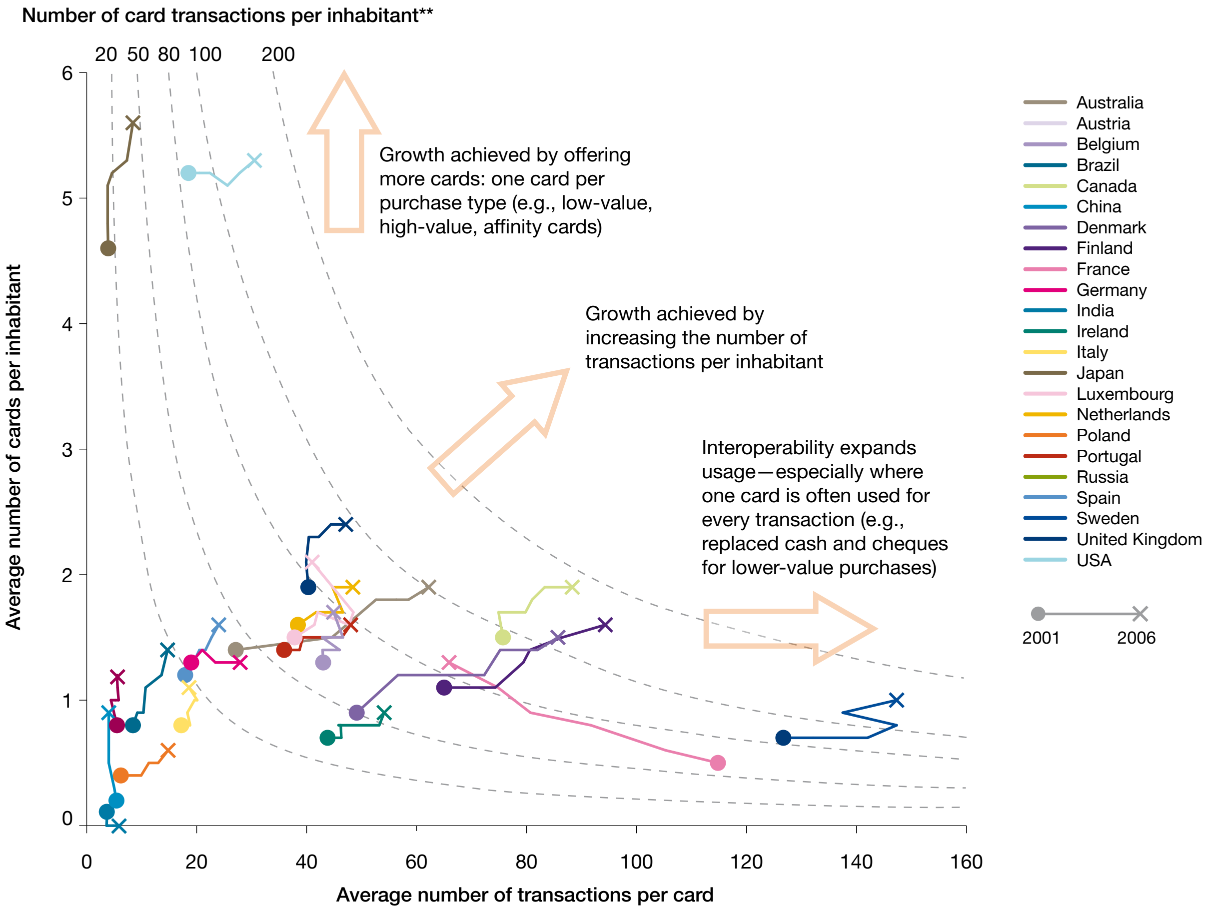
Sources: ECB Blue Book—2006 figures, released Nov. 2007; Bank for International Settlements—Red Book—2006 figures, released March 2008; Capgemini analysis, 2008.

– By offering more cards. For example, in Japan and the US, the market share of 3-party schemes is significant, so consumers need to hold multiple cards from competing schemes to have the ability to use cards as an alternative to cash.

– By creating network interoperability. Interoperability increases the utility of individual schemes, and therefore a single card tends to be used for every transaction, especially in replacing cash and cheques for lower-value purchases, as is the case in Denmark, Sweden, Finland, and Canada (where 3-party schemes are less common).

Figures 6.4 and 6.5 show different ways to reach successive levels of spending per capita (6.4) and transactions per capita (6.5).

Figure 6.5 Average Number of Transactions per Card vs. Average Number of Cards per Inhabitant, 2001–2006



Note(**): $\frac{\text{nb of card}}{\text{hab}} \times \frac{\text{nb of trx}}{\text{hab}} = \text{nb of trx per hab}$

Sources: ECB Blue Book—2006 figures, released Nov. 2007; Bank for International Settlements—Red Book—2006 figures, released March 2008; Capgemini analysis, 2008.

Case studies illustrate the three development paths (see Figure 6.3)

US (Area C). The US, the world's largest card market, accounted for more than €2,968 billion in card-based purchases (55% of world total) and more than 50 billion card transactions (39% of the total) in 2006. The number of transactions per US inhabitant grew steadily and strongly in 2001–2006, although the expansion of the merchant acceptance network has slowed since 2004. Two factors offset that slowdown:

- The traction of debit cards, at the expense of credit cards (online authorisation has become possible for debit cards, providing more security for cardholders and merchants).
- The co-existence of several types of cards, including 4-party, 3-party, and other models, has increased the number of cards per inhabitant and encouraged incremental usage.

Japan (Area A). In Japan in 2006, there were 713 million general-purpose cards and 6 billion card-based purchases worth a total of €298 billion. However, despite a strong economy and the continual expansion of the acceptance network, the number of card transactions per inhabitant is only a third of the US total. The Japanese market is dominated by a number of domestic and international 3-party, non-interoperable card schemes, each with its own ACH to clear transactions.

Acceptance and issuance are therefore fragmented. In terms of cardholding, the market is saturated, with consumers having an average of five cards apiece (see Figure 6.5). At the same time, merchants are obligated to have POS terminals and contracts for each operator. To develop further and make greater inroads into the market, 4-party schemes need to broaden their membership and promote both issuance and wider acceptance of their products. Today they account for only 12% of cards issued in Japan.

Spain (Area B). In 2006, Spain had more than 72 million payment cards, and 1.6 billion transactions were processed there for purchases worth €203 billion. Spain has no history of widespread cheque use, so payments are made either by cash or card, and cash is preferred.

Spain is predominantly a 4-party market. Three different national card-scheme networks all honour each other's cards, but each scheme has its own membership association and processing infrastructure. In a market the size of Spain, this represents a high basic infrastructure cost for the banks to bear. As a result, banks operate within a constrained technical environment. The historically complex structure of interchange fees has also hindered the market's development.

A 4-party card market involves a delicate balance of stakeholder interests

A thriving 4-party card market must have a balance among the interests of cardholders, issuers, acquirers, and merchants, as each has a stake in the economics of the card business model. These include:

- Fees paid by the cardholder to the issuer (such as joining fees, annual fees, foreign exchange charges, late-payment fees, over-limit fees, and other penalty fees).
- The interchange fee, paid by the acquirer to the issuer.
- The MSC, paid by the merchant to the acquirer to pay for processing and the interchange fee.

Most fees are transaction-based. Each stakeholder pays the relevant fees, receiving the following benefits:

- The cardholder gets a more convenient and secure means of payment than cash, and in some cases access to credit for a period of time.
- The acquirer profits from the margin between the MSC and the interchange fees.
- The merchant gets a more secure, efficient, and cheaper means of payment than cheque or cash.
- Issuers benefit from greater efficiency in retail payments, and in the case of credit cards, interest income from credit balances, etc.

Cardholder fees and MSC are defined in individual contracts between the concerned parties. Interchange, in contrast, is usually set centrally at the national payment-scheme level, although some schemes allow members to negotiate fees bilaterally.

Interchange fees are currently under scrutiny in many jurisdictions, with regulatory bodies putting more pressure on the banking community to reduce the fees, hoping to improve the economics for merchants, who might pass the benefits on to cardholders. The experience of Australia, however, suggests interchange-fee reductions may not be passed on, at least not in full. The RBA lowered credit card interchange fees in 2003 by 0.4 percentage points, expecting the reduction to filter into lower retail prices that would benefit consumers. However, the market has not quite evolved as the RBA expected.

In practice, interchange rates are essential for the development of card markets, radically reduced interchange fees can adversely affect the growth and development of schemes.

Banks have good reason to pursue a stake in cards, in both issuing and acquiring

If 4-party models are the most conducive to vigorous card-market development, the next question is: Who are the most appropriate players for issuing and acquiring? Certainly, both banks and non-banks have a significant role to play in almost all developed card markets. However, there are several good reasons specifically for banks to be and remain key players in the card market, in both issuing and acquiring. The key issues are summed up in question-and-answer form here.

Why should banks remain in the issuing market? Cards are a "hook" product for many banks, allowing them to keep up a relationship with customers through their management of current accounts (a dynamic that is only possible in the 4-party model). To use a general-purpose payment card, customers need an account with a regular cash inflow, so cardholders are more likely to keep their income in current accounts. Without a card attached to their current accounts, cardholders feel less tied to their bank. In the case of credit cards, the product represents a convenient unsecured lending tool combined with a payment instrument and a channel that enables regular marketing communications.

Why should banks remain in the acquiring market? The relationship of small and medium-sized merchants with their acquiring bank is much like the consumer-banking dynamic. That is, if a bank can participate in managing electronic merchant fund flows, it will reinforce the bank-client relationship. Relationships with large retailers enable acquirers to amortise their cost structure across those larger volumes while continuing to offer competitive service to small merchants.

An acquiring relationship may also allow a bank to cross-sell other services to its merchant customers. However, acquiring is increasingly the preserve of specialists that can combine scale with distribution. In such circumstances, it is sensible for smaller regional or local banks to consider a partnership or alliance with an acquirer to meet the needs of its customers. Smaller and larger banks may be natural clients of one another in such cases.

AUSTRALIAN CASE STUDY

Impact of Interchange Fees on the Card Market

In 2006, there were more than 38 million financial cards in Australia, and 2.6 billion transactions were processed, representing purchases worth €240 billion.* The acquiring market is relatively concentrated (the four largest banks accounted for 95% of all transactions in 2006), while the issuing market is more fragmented (the four largest banks issued 55% of all cards). Both acquirers and issuers are highly competitive.

In 2003, the RBA reduced credit card interchange fees by 0.40 percentage points. There were a number of consequences:

- The average merchant fee fell by 0.41 points (0.50 through March 2006).
- Banks increased cardholder fees (but only by enough to recoup 30%–40% of the lost interchange fees), encouraging increased use of 3-party cards.
- There was an increase in interest rates charged by issuers to cardholders.
- There was an increase in surcharging by merchants.
- Card distribution slowed down, despite continuous efforts to develop the acceptance network.

* at current exchange rates

While larger banks that provide a full range of payment services will clearly remain as acquirers, the nature of their participation may change. Even among the largest players, some form of partnership or alliance may be necessary to pursue the goal of international growth and cater to the needs of increasingly global retailers.

Why should banks remain in the cards market? Card transactions are the fastest-growing segment of non-cash payments. If banks do not participate, they are ceding enormous volumes of global transactions and losing the opportunity for scale efficiencies in payments as a whole. As a product, cards are also the only instrument with export potential (compared to credit transfers and direct debits), and are a less capital-intensive retail-development product than, for instance, branches.

Emerging payment means may favour non-banks

Although banks are clearly in a strong position to survive and thrive in payments overall, and in cards in particular, emerging payment means could favour non-bank and other non-traditional players. These new technologies and business models (see Mobile Payments Market sidebar) could ultimately complement or rival cards.

Mobile Payments Market

Mobile payments (m-payments) are transactions initiated via a mobile handset. There are three main trends underlying the development of m-payments:

- SMS: Initiating and settling a payment using text messages. The payment can be incorporated into the phone bill, or just confirmed by SMS.
- WAP/browser: Internet via mobile. A general-purpose card is required, and the payment is the same as any other card payment via the Internet.
- NFC: Short-range wireless technology used for contactless payments. NFC-enabled phones can be linked to bank accounts, allowing for direct debits from the user, or NFC cards and phones can be pre-loaded with credit.

There are only about 30 million users of m-payments worldwide, accounting for approximately 2.5 billion transactions—just 1% of the value of global non-cash payments. Asia accounts for 84% of all m-payment users, with Japan, the recognised leader, accounting for almost half of the global m-payments (approximately 1 billion transactions per year).

The m-payments market is growing fast and its development is still wide open to further expansion. In 2007, only 1% of people with a mobile phone used it to make a payment, but in the US, the number of users grew from 1 million to 9 million in the year 2007–2008.

Because mobile access is so prevalent (more than 3 billion mobile phone users worldwide in 2007), m-payments are a prime instrument for low-value payments. For example, mobile offers a good alternative for payments in unattended environments (such as parking lots and vending machines), providing a more secure, less costly, and faster way to handle such payments. In many developing countries, mobile phone penetration is far higher than that of banking, and the mobile phone is often the only cashless payment means available. While m-payments are generally viewed as low value, there is also potential for them to be higher value depending on risk, security, and other considerations.

No standards or rules have yet been established for m-payments. In Europe, most m-payments are made via SMS, the advantage being a secure payment solution that can be used by all handsets. In other countries, contactless readers are the preferred path for m-payment development.

MOST M-PAYMENTS MARKETS ARE DRIVEN BY TELECOM OPERATORS

Telecom operators have pioneered m-payments in many countries, as they own the customer relationship and the handset technology that can incorporate m-payment capabilities (see graph).

The security of m-payments is a major issue in the market's development. With the current level of security, m-payments are restricted to replacing micro-payments (cash and e-purse)—which could explain the general reluctance of banks to invest in the technology. However, banks could still play a key role in m-payments, bringing their payment-security capabilities into partnerships with telecom operators.

Mobile Payments Market Case Studies on Six Countries, 2007

<table>
<tr><th></th><th>Key Statistics</th><th>Top Market Drivers</th><th>Market Distinctiveness</th></tr>
<tr><td>Austria</td><td>▪ 300,000 users
▪ 3.1% of mobile users
▪ 1,500 vending machines capable of m-payments</td><td rowspan="4">Telecom operators</td><td>▪ One of the most advanced m-payments markets with the broadest m-commerce offering
▪ National m-payment standard achieved through cooperation of mobile operators</td></tr>
<tr><td>China</td><td>▪ 17 million users
▪ 3.4% of mobile users</td><td>▪ Market is fragmented among several telecom operators
▪ With SmartPay, mobile phone users can pay for goods and services through their phones. SmartPay is partnered with seven banks
▪ China Unicom allows customers to check balances, pay bills, and purchase goods</td></tr>
<tr><td>Venezuela</td><td>▪ Recently launched</td><td>▪ A large share of the population is unbanked, leading telecom operators to target this channel for m-payments
▪ Example product: a virtual wallet in the mobile phone, topped up by depositing cash in a shop connected to a mobile operator</td></tr>
<tr><td>Japan</td><td>▪ 10 million users
▪ 9.7% of mobile users
▪ 300,000 transactions on one day
▪ 41,500 stores</td><td>▪ Using the mobile phone in conjunction with contactless acceptance terminals has proved to be highly successful
▪ M-payments driven by telecom company DoCoMo
▪ DoCoMo focuses on maintaining strong customer relationships</td></tr>
<tr><td>Finland</td><td>▪ 200,000 users
▪ 3.4% of mobile users</td><td rowspan="2">Banks or credit card companies</td><td>▪ Banks are driving m-payments development based on stored-value accounts that can be recharged via the Internet
▪ Customer signs a contract with a bank; the merchant with a bank and a broker</td></tr>
<tr><td>USA</td><td>▪ 1 million users
▪ 3.1% of mobile users</td><td>▪ M-payments development driven by credit card and transaction companies
▪ Focus on using the mobile phone in conjunction with contactless acceptance terminals</td></tr>
</table>

Source: Capgemini analysis, 2008.

Methodology

WORLD NON-CASH PAYMENTS MARKET

This year's *World Payments Report* has a broader focus and more global approach than in previous years. It offers insights on the payments segments in: North America (US and Canada), Europe (all of the EU), Asia-Pacific (Australia, China, India, Japan, Singapore, and South Korea), Latin America (Brazil and Mexico) and Central Europe Middle-East Africa (CEMEA, Russia, South Africa, and Turkey).

Several sources were used for the analyses. Figures for the US, Canada, Japan, and Singapore were taken from the latest Bank for International Settlements payment statistics (Red Book, March 2008). The source of figures for the Eurozone was the ECB's payment statistics (Blue Book, November 2007). For the remaining countries, figures were taken from central bank publications and websites. Macroeconomic indicators (GDP and population) were all collected from the IMF.

In order to provide regional and global data sets, estimates have been calculated for those countries not specifically researched and grouped under the appropriate regional heading: Rest of Asia, Rest of Latin America, and Other CEMEA countries. For macro descriptive graphs (number of transactions per region, number of transactions per instrument), seven regions were defined: Europe, North America, Japan-Australia-South Korea-Singapore, BRIC (Brazil, Russia, India, China), Latin America without Brazil, Rest of Asia, and CEMEA grouped by geographic, economic, and non-cash payment market maturity criteria.

Projections for 2013 focus on twelve markets, which account for 94% of the global market, although all these countries or regions have different usage patterns. More specifically, we studied: the US, Eurozone (13 countries, including Slovenia, which did not officially join the Eurozone until 2007), Australia, Brazil, Canada, China, Japan, India, Russia, South Korea, Sweden, Turkey, and the UK.

Of special note, peaks evident in historical data (2001–2006) that feed into the 2013 projections represent anomalies related to methodology rather than erratic fluctuations in actual payments volumes. Therefore, they do not alter projections for 2007 to 2013.

EUROPEAN NON-CASH MARKET OVERVIEW

This year's report offers deeper analysis of the relevant countries. For macro descriptive graphs (volumes, cards, and number of transactions), seventeen countries were surveyed, which is the same as last year. This includes all Eurozone countries (Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Portugal, Netherlands, Slovenia, and Spain), as well as four non-Eurozone countries (the UK, because it is the largest non-Eurozone country, Denmark and Sweden to represent Nordic countries, and Poland to represent Eastern Europe). Our 2013 projections focus on the same thirteen countries as last year.

For the focus on cash, the analysis of cash-in-circulation versus non-cash transactions was conducted on all Eurozone countries, to give the widest possible view. Notes of €200 and €500 were excluded from the study, as these large-currency notes are essentially used for hoarding rather than for payments.

As for the world non-cash payments market, several sources were used for this analyses. Figures were taken from the latest ECB payment statistics (Blue Book, November 2007), macroeconomic indicators are from the IMF, and cash figures were provided by the ECB.

Also like the analysis for the world, some sharp peaks are evident in historical data (2001–2006) that feed into 2013 projections. They represent anomalies related to methodology rather than erratic fluctuations in actual payments volumes, and they do not alter projections for 2007 to 2013. The Blue Book's methodology is constantly being updated, but not on a retroactive basis. This holds especially true for paper-based non-cash transactions prior to 2004, which were hard to track. Recent data is likely to be more accurate and consistent.

CASH MANAGEMENT

The cash management chapter focuses on cash and treasury management (management of risk, balances, payments, and transactions), but that necessarily links into other areas of the corporate financial supply chain that SEPA affects, such as finance and administration. The client case analyses for cash management opportunities may not necessarily link to the economic or business context.

Concerning the European treasury market figures, estimates of the global treasury market come from market publications (Ernst and Young 2006, Euromoney 2007). Estimates of the European treasury market come from the turnover of industry leaders, and market share estimates were made from annual reports of the cash management leaders.

CARD PAYMENTS MARKET

The cards chapter focuses on the worldwide card payments market, and two categories of sources were used for the analysis. For country figures, we used the same sources as for Chapter 1 (for example the Blue Book), and for the analysis of international card schemes, data came from the companies' publications and press releases.

The acceptance network growth rate was based on 25 card payment markets, which represented 88% of card purchase transactions in the world in 2006. The countries included are: Austria, Australia, Belgium, Brazil, Canada, China, Denmark, Finland, France, Germany, Greece, India, Ireland, Italy, Japan, Luxembourg, Poland, Portugal, Russia, Slovenia, Spain, Sweden, the Netherlands, the UK, and the US.

Glossary

ACH
Automated Clearing House

AML
Anti–Money Laundering regulation

AOS
Additional Optional Services

B2B
Business-to-Business

B2C
Business-to-Consumer

BEPS
Bulk-Entry Payment System

BIC
Bank Identifier Code (ISO 9362 Norm)

Blue Book
Official ECB publication covering the main payment and securities settlement systems in EU Member States. Data once sourced to the Blue Book will in the future be sourced to the ECB's Statistical Data Warehouse (SDW).

BRIC
Refers collectively to the countries of Brazil, Russia, India, and China

CAGR
Compound Annual Growth Rate

Check 21
The "US Check Clearing for the 21st Century Act"

Contactless Payment
Contactless payment devices, which use radio frequency identification (RFID) technology to let users make purchases by holding an RFID-enabled device such as a mobile phone in proximity to a reader

Critical Mass
In the SEPA context, the level of SEPA product adoption needed to ensure an irreversible move to SEPA instruments. The actual level has not been set in national migration plans.

CSM
Clearing and Settlement Mechanism

D+/D-
Due Date in Collections Cycle

D/C
Documentary Collection

DG
Directorate General

e-
Electronic

EBA
Euro Banking Association

EC
European Commission

ECB
European Central Bank

Efma
European Financial Management & Marketing Association

EMV chip
Europay MasterCard Visa chip

EPC
European Payments Council

EU
European Union

EU27
The 27 members of the European Union

EU31
The 27 existing members of the European Union plus Iceland, Liechtenstein, Norway, and Switzerland

Eurozone
The 15 member states of the EU that have adopted the euro as their national currency, including: Austria, Belgium, Cyprus, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Spain and Slovenia

4-party card model
A cards business model or scheme involving cardholders, card issuers, merchants, and merchant acquirers all operating under the umbrella of a particular payment scheme. Cardholders are customers of card issuers, and merchants are clients of merchant acquirers.

GCC
The Gulf Cooperation Council; includes Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates

GDP
Gross Domestic Product

IBAN
International Bank Account Number (ISO 13616 Norm)

IMF
International Monetary Fund

Interchange fee
The fee paid by the acquirer to the issuer mainly to reimburse for payment guarantees, fraud management, and issuer processing costs

ISO
International Organisation for Standardisation

ISO 20022
Abbreviated term referring to the ISO UNIFI message scheme for SEPA instruments

Legacy payments
Term used to describe domestic payment instruments that pre-date SEPA

M-payments
Mobile payments

Mandate
In payments, the "mandate" is the authorisation required for a payment to be initiated

Micro-payments
Various techniques for exchanging small amounts

MSC
Merchant Service Charge, the fee paid by the merchant to the card-acquiring bank to cover the acquirer's processing costs and interchange

MTO
Money Transfer Operator

NFC
Near Field Communications, which use short-range wireless technology for contactless payments. When an NFC device (e.g., smartcard or mobile phone) passes close to a reader, data is transmitted between the two.

NON-CASH
Cashless payments made with instruments other than notes and coins and include credit transfers, direct debit, credit and debit cards and chequues

P2P
Person-to-Person

PE-ACH
Pan-European ACH. A clearing house that processes domestic and cross-border SEPA payments alike, and has full reach across SEPA.

PIN
Personal Identification Number

Players
Major payments "players" (stakeholders) are banks, payment service providers, corporations, SMEs, and merchants

POS
Point-of-Sale

PSD
Payment Services Directive

PSP
Payment Service Provider

RBA
Reserve Bank of Australia

Red Book
An official publication of the BIS

RTGS
Real-Time Gross Settlement is the continuous settlement of payments (versus one time daily) on an individual order basis without netting debits with credits across the books of a central bank

SCF
SEPA Cards Framework

SCT
SEPA Credit Transfer

SDD
SEPA Direct Debit

SEPA
The Single Euro Payments Area is a domain in which EU31 is standardising euro payments and collections so they can be treated as domestic transactions.

SEPA Instruments
Euro payments that are compliant with the SEPA Rulebooks

SMEs
Small and Medium-sized Enterprises

SMS
Short Message Service (more commonly known as text-messaging)

STEP2 SCT
The EBA's pan-European retail payment clearing house for SEPA Credit Transfers

STP
Straight-Through Processing

SWIFT
Society for Worldwide Interbank Financial Telecommunication

3-party card model
A cards business model or scheme involving cardholders, merchants, and specialist financial institutions that operate as combined card issuer, merchant acquirer, and also scheme owner. Both cardholders and merchants are customers of the specialist financial institution/ scheme owner.

UNIFI
Universal Financial Industry

WAP Browser
Function whereby a phone contains mini-browser software that will let you navigate various services through the Internet, shown on the phone's display

XML
Extensible Markup Language; facilitates the sharing of structured data across information systems

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We thank the following people for collaborating to produce this report: Salamata Ball, Frédéric Boucher, Karen Cohen, Andrew Copeman, Pierre-Edouard Dolhen, Gautier Durand, Judith Ghilks, Gerard Hartsink, Elizabeth Hemming, Rob Jamieson, Bernard Laffineur, Marion Lecorbeiller, Philip Lindow, Hiroko Nakamura, Simon Newstead, Joerg Pinkernell, Sid Seamans, Christophe Vergne, Jackie Wiles and Gary Wright.

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