The Euro Changeover in the New Member States – A Preview

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This study discusses issues that can be expected to arise in the context of preparations for the euro changeover in the new Member States. In doing so, it draws on the experiences of those 12 countries that have already introduced the single European currency, with a specific focus on the case of Austria. This experience can be a useful signpost for new Member States, even though their starting conditions differ because the euro already exists and most of the countries in question are on a catching-up route. The paper makes reference to the two main dimensions of the process, namely the noncash and cash changeover. The study stresses the crucial importance of timely preparations and well-devised information for ensuring a smooth changeover. In conclusion, the paper expresses confidence that the new Member States will manage the changeover process successfully when the time has come.

1 Introduction

The creation of the euro area on January 1, 1999, followed by the cash changeover in 2002, was a milestone in EU history. At the beginning of 1999, the euro area consisted of 11 members. Of all EU Member States, only Greece, Sweden, the U.K. and Denmark did not participate. While Greece and Sweden did not fulfill the necessary criteria for euro area membership (the so-called Maastricht or convergence criteria), the U.K. and Denmark decided not to adopt the single currency by applying an opting-out clause they had managed to negotiate in the early 1990s. In 2001, Greece also joined the euro area.

Preparations for the euro changeover, of course, started well before January 1, 1999. The European Council of Madrid had decided on a changeover framework already in 1995. Thus, the participating Member States had about six years to prepare for the changeover. From today's point of view, the whole changeover process was a success story in all Member States, although their approaches on how to manage the euro changeover differed considerably.

Any future enlargement of the euro area and the respective changeover processes will differ from the euro changeover processes the current euro area countries experienced. Obviously, the biggest differences result from the fact that the euro already exists and, in addition, that transition periods – i.e. the time between the irrevocable fixing of the exchange rate and the cash changeover – will be much shorter. Nonetheless, the experience gathered by the current euro area countries will be relevant for future euro area enlargement.

According to EC legislation, the new Member States (NMS) are obliged to pursue the adoption of the euro. The related monetary integration process takes place in three successive steps. In a first step, upon entering the European Union, the NMS automatically became members of Economic and Monetary Union (EMU). As "members with a derogation" the NMS do not fully participate in EMU, as they cannot immediately join the euro area. Nonetheless, they are required to observe a number of obligations embodied in the EMU architecture. The second step consists of their participation in the exchange rate mechanism ERM II, which aims at supporting stability-oriented policies and at fostering the sustained convergence of economic fundamentals and which will thereby help the NMS in their efforts to adopt the euro.[2] The third step, participation in the euro area (upon fulfillment of the convergence criteria), then marks the final stage of European monetary integration.

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[2] *European Council (1997) and ECB (2003).*

With a view to the monetary integration process, the NMS have adopted ambitious goals toward euro adoption. In fact, most of the NMS, in particular the small ones, strive for an early adoption of the euro (as soon as 2007 or 2008, if possible), as the following table shows.

Table 1

Monetary Integration Strategies in the New Member States

	ERM II entry date/target date	Euro target date
Estonia	June 28, 2004	2006 or January 1, 2007
Lithuania	June 28, 2004	January 1, 2007
Slovenia	June 28, 2004	January 1, 2007
Cyprus	May 2, 2005	2007 or 2008
Malta	May 2, 2005	2008
Latvia	May 2, 2005	January 1, 2008
Czech Republic	around 2 1/2 years before euro target date	2009 or 2010
Poland	around 2 1/2 years before euro target date	2009 (possibly 2010)
Slovakia	2005 or 2006	(2008 or) January 1, 2009
Hungary	open	January 1, 2010

Source: OeNB, national central banks.

This time schedule, of course, implies that the preparatory work for the euro changeover (especially for the noncash changeover process) should by now have started in some of the NMS – and in fact it has. According to the policy intentions voiced by those countries that will adopt the euro later (between 2009 and 2010), the preparatory work will have to start in the near future.

2 Euro Changeover in the New Member States

The euro changeover covers all the activities related to the preparations for euro adoption as well as the actual cash changeover management, including the withdrawal of the respective legacy currency. It further comprises all activities pursued by public administrations at all levels, private and public businesses, national central banks (NCBs) and commercial banks.

As the euro is already in circulation, today it is possible in the NMS to either open an account in euro or even pay in euro provided that both parties involved agree. This will certainly make the cash changeover easier when it comes to providing the public with information on the security features, marketing the idea of a single currency and organizing cash distribution. Although prior experience, especially with banknotes, may make some minor logistical aspects easier to handle, the forthcoming workload of euro cash production and distribution should not be underestimated, as people are keen to get euro coins with a national side of their own country's design.

Another positive aspect that will probably help to smooth the changeover process is that not only the euro area has recently experienced a changeover, but so have those NMS which introduced new currencies in the past decade.[3] Experience with the integration of additional NCBs into the Eurosystem is also recent, as the Bank of Greece became a Eurosystem member as late as in 2001.

[3] *Estonia in 1992; the Czech Republic, Slovakia, Latvia and Lithuania in 1993; the Polish zloty was redenominated in 1995.*

An aspect which may complicate the euro changeover is that transition periods will be much shorter than for the original changeover. The time between the irrevocable fixing of the exchange rate and the date the euro becomes legal tender will probably be only a few months compared with a period of three and a half years in the current euro area members (in the case of Greece one and a half years). The relatively short transition period will significantly reduce the time available for the public and private sectors as well as the population in general to implement the changeover.

Of course, many other factors have implications for the changeover process at various stages. We will look at some of these factors in more detail later. First, the institutional framework and related aspects will be discussed.

2.1 Institutional Aspects and Drawing up Changeover Master Plans

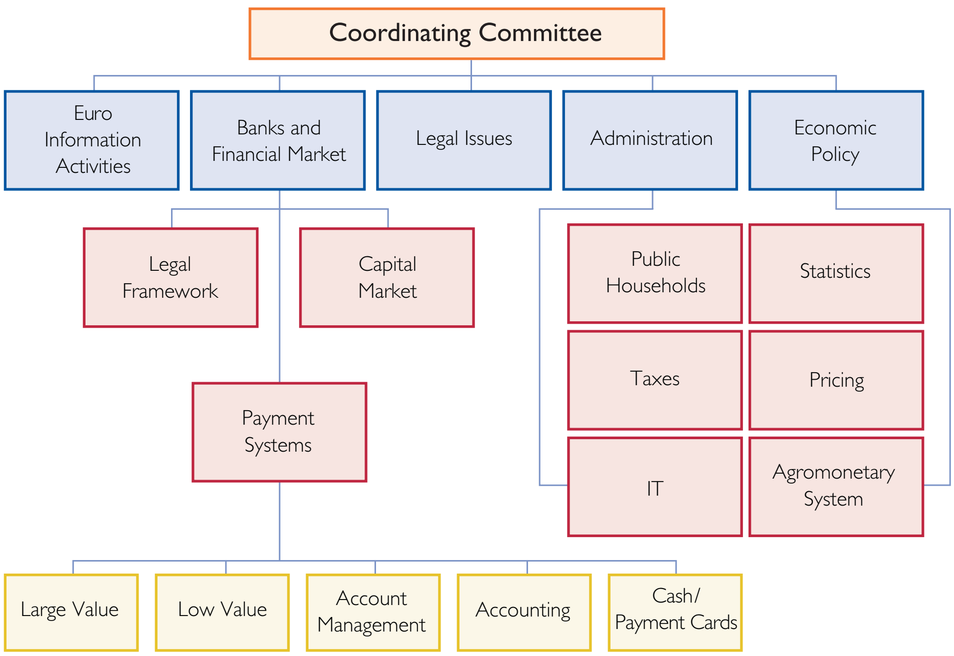
In 1995, the Madrid European Council established the framework for the euro changeover in 1999–2002. The NCBs and the EMI (later the ECB) were involved in the organization of the changeover from the outset. Details and implementation of changeover arrangements were left to the Member States and differed from country to country.

All countries had national master plans defining the steps that had to be taken in the real sector, the financial sector and by the public administration, and the measures needed to adapt legislation. The European Commission supervised the national master plans, but did not coordinate them. In Austria, in addition, the provinces and – at a later stage – the municipalities introduced action plans of their own. Morover, most of the legal entities, enterprises, commercial

Illustration 1

Austria's Changeover Committee:

Coordinating Committee and Working Groups



Source: OeNB.

banks and – of course – the Oesterreichischen Nationalbank (OeNB) had their own master plans, setting standards and time schedules for their specific needs related to the noncash and cash changeover process.

National committees were established. The main purpose of these committees was not only to foster an exchange of information, but to institute a regular reporting mechanism to ensure an adequate information flow, to detect problems right from the beginning, and to see to it that everybody takes the changeover seriously.

Table 2

Euro Changeover Action Plans and Possible Scenarios in the New Member States

Country	National changeover plan or similar scenario	National coordinator	Big bang or transitional period	Dual period
Czech Republic	Czech Republic's Euro Accession Strategy (Oct. 2003); Česká národní banka published a paper on its main tasks in connection with the euro introduction (Feb. 2005)	None	Undecided, but most likely big bang	2 weeks to 1 month
Estonia	Joint statement by the Estonian government and Eesti Pank (Jan. 2004); national changeover plan will be presented in mid-2005	Commission of Ministers (including central bank governor) headed by the ministry of finance, which is in charge of changeover management	Big bang	2 weeks
Cyprus	A Strategic Action Plan for the introduction of the euro has been adopted; more detailed plans will have to be elaborated	The National Advisory Committee, chaired by the minister of finance, involves all relevant parties (including the Central Bank of Cyprus)	Big bang	1 month
Latvia	Preliminary changeover plan	Changeover working group at Latvijas Banka; consultations between ministry of finance and the central bank	Big bang	2 weeks
Lithuania	Board of Lietuvos Bankas approved action plan on December 23, 2004; law on the adoption of the euro is expected during the first half of 2005	Working group at Lietuvos Bankas for the development of the changeover plan	Big bang	2 weeks
Hungary	With regard to the 2010 target date, preparatory work is under way at the ministry of finance and Magyar Nemzeti Bank	None	Big bang	1 month
Malta	Preliminary changeover plan is being drafted by the ministry of finance and the central bank	A Euro Changeover Committee will be set up, but will still have to be formally appointed	Big bang	Up to 1 month
Poland	None	So far, there is no national coordinator in charge of the changeover process; an interinstitutional working group (ministry of finance and Narodowy Bank Polski) is dealing with monetary integration issues in general	Undecided, but most likely big bang	Up to 2 months
Slovenia	Master plan for the euro changeover published by Banka Slovenije and the government in Jan. 2005	Coordinating Committee for Technical Preparations to Introduce the Euro (central bank, ministry of finance, other ministries and bodies)	Big bang	1 week
Slovakia	The government approved the concept for the elaboration of the National Plan for the Introduction of the Euro in Slovakia in Jan. 2005; national changeover plan to be approved by mid-2005	ministry of finance	Big bang	2 weeks

Source: European Commission, national central banks.

In most countries, the ministry of finance headed the national coordinating committee; in Austria, the ministry of finance and the OeNB shared this competence. The remaining ministries, the social partners, the Trade Association of the Banking Industry and the provincial and municipal governments sent representatives to the national coordinating committee. This setup proved very efficient in coping with the entire range of issues involved in the changeover.

The ESCB installed a cash changeover committee (CASHCO) to monitor the preparations for the introduction of the euro at the NCBs, but also to enhance coordination between the ECB and the NCBs. In this committee, NCB cash changeover experts met regularly to exchange their views. At the final stage of the cash changeover, a so-called "cockpit" was installed in each central bank, where a small number of high-ranking experts supervised the cash changeover weekend and, just in case, stood ready to take urgent measures or decisions.

Many of the NMS are presently in the process of drawing up changeover plans which cover their institutional framework and the actual changeover scenario. As was the case for the current euro area countries, the national changeover scenario is left to each Member State. Thus, each country may either opt for simultaneously entering the euro area and adopting the euro as legal tender ("big bang" scenario) or for disentangling the two (transitional period). Not all NMS have already expressed their view, but most have indicated that they are provisionally considering a big bang.

The European Commission will monitor the individual national master plans and will report at least once a year on the state of the changeover preparations in the NMS. In addition, the European Commission has relaunched the Public Administration Network II (PAN II) working group, which comprises representatives from the ECB and the Member States with a derogation. The working group thus is an essential forum for exchanging views and information as well as transferring experience and best practice from the current euro area members to the countries preparing the changeover process now. The European Commission also uses PAN II as a forum for informal checks on how the Member States are progressing in their preparations to adopt the euro (see Banka Slovenije, 2005).

In view of future euro area enlargement, the ECB has also developed an Enlargement Master Plan for the purpose of defining, planning and monitoring its own activities. These activities include assisting the NCBs in the NMS in becoming acquainted with the relevant tasks and needs related to euro adoption. Against this background, the NMS are being introduced to the relevant standards applicable to the security, issuance and production of euro banknotes. Moreover, the ECB provides assistance in establishing national euro cash changeover scenarios and has founded a Task Force on future information campaigns in the NMS.

2.2 The Noncash Changeover

2.2.1 The Changeover at the NCBs

The changeover tasks of Eurosystem NCBs were very much dominated by the need for legal, technical and organizational adjustments related to euro area requirements and standards.

First, in order to fulfill the necessary conditions for euro adoption, new central banking legislation had to be adopted to guarantee accordance with the rules governing the euro area.[4] New legislation in Austria, for example, included changes in the organizational structures of the central bank and in the appointment procedure for members of the board; in Italy, for instance, financing public debt was a major issue. For the NMS there remains less to be done in this respect, as harmonization was a precondition for joining the EU;[5] by contrast, some legislative adjustment will still be required in Bulgaria and Romania, the next two countries lining up for EU accession (Dvorsky, 2004).

Second, the NCBs of the NMS will have to adapt their organizational structures and the procedures of their individual operational monetary framework to fulfill the responsibilities assigned to the Eurosystem (e.g. with regard to bidding procedures for open market operations, or to collateral and liquidity management issues). The OeNB, for instance, had begun very early (in 1996) to implement the monetary instruments of the future ECB, especially with respect to its open market operations (tender procedure) and collateral requirements. It took the commercial banks some months to adapt to the new system of monetary policy instruments, but once they had familiarized themselves with it, they were well prepared for participating in the ESCB tender procedure.

Aside from these systemic tasks that have to be carried out during the changeover process, the NCBs will have to adapt their accounting and IT systems and switch their client accounts to euro. In addition, the NCBs may have to prepare for printing euro banknotes (that is, if they have printing facilities) and, depending on the individual national situation, also for minting coins. This requires timely technical preparations to guarantee that sufficient printing capacities and adequate facilities will be available, if the printing is not outsourced, which is another option. Having adequate printing facilities will be of special importance, since a new series of euro banknotes will be launched from 2008 or 2009 to 2011 – a period which presumably coincides with the euro area accession plans of some of the new Member States.

2.2.2 The Changeover and the Banking Sector

In the financial markets, the changeover poses somewhat different challenges to retail banking than to the wholesale sector. In the current euro area countries, the changeover did not create any difficulties in the wholesale markets. The changeover was largely completed on the conversion weekend at the beginning of 1999. Since then, new issues of securities, wholesale transactions and most payments have in general been denominated in euro (Bank of England, 2001). For bonds and shares denominated in legacy currencies, Article 14 of EC Regulation 974/98 stipulated that their value should be read as euro.

The conversion of customers' bank accounts and related products into euro was – and will once again prove to be – another major task. Clearly, even though bank accounts of households and SMEs are numerous, their conversion

[4] *For a more detailed discussion see Gerharter et al. (1999).*

[5] *See European Commission (2004).*

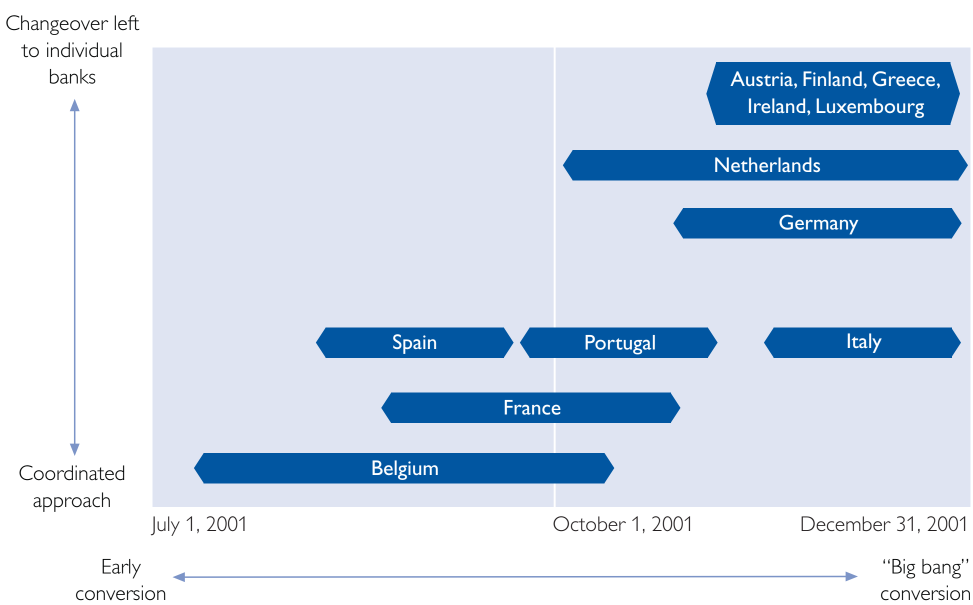
is likely to be less problematic than that of accounts of larger companies, as these usually manage complex internal systems based on different types of accounts and interlinkages between banks' and customers' systems, which may pose reconciliation problems (Bank of England, 2001).

However, the authorities in each NMS will have to decide whether the conversion of accounts is to take place very close to the actual cash changeover date or whether accounts are to be converted in stages over a period of time, that starting approximately half a year before the cash changeover.

Whatever the speed of conversion will be, a decision will have to be made as to whether the authorities prefer to follow a centralized approach (meaning that conversion largely takes place according to a common plan) or to adopt a decentralized approach that leaves the banks some scope for discretion. Illustration 2 shows the different approaches toward bank account conversion in the current euro area countries.

Illustration 2

Bank Account Conversion to Euro



Source: Bank of England, 2001.

If a country opts for a transitional period, its retail payment infrastructure and systems must be adapted so that payment services and products can be denominated, in parallel, in euro as well as in the legacy currency. In addition, retail banks will have to promote the use of ATMs and electronic payment facilities, e.g. the installation of point-of-sale (POS) terminals for electronic credit and debit card payments in shops, as this will make cash changeover logistics far less complicated. This approach will require intense cooperation with the business sector. Additionally, ATMs must be adapted for euro cash. A major issue here is the question of the most appropriate denominations to be made available via ATMs. At the beginning of the cash changeover, Austria opted for distributing EUR 10 and EUR 100 banknotes via ATMs, as they are relatively close in value to the former ATS 100 and ATS 1,000 banknotes. This choice provided optimal everyday cash handling conditions both for consumers and the retail sector. In the meantime other denominations have been added to the sample of banknotes distributed via ATMs.

Certainly, a main priority for any bank will be information management. On the one hand, customers must be duly informed about the consequences the changeover has on bank accounts, fees and banknote security issues, etc. To fulfill their obligations as information providers, banks have to prepare adequate information material. Against this background, cooperation with the respective central bank and government is essential. On the other hand, bank staff must be trained accordingly and must be provided with all relevant information.

2.2.3 The Changeover and the Public Sector

Legislative adjustments constitute an important part of the public sector's changeover preparations. Every country will have to implement a law on the conversion of national currency into euro. Although this seems to be a rather trivial task, it should not be underestimated. The question of how to round certain amounts remains. So far, all participating Member States have defined some "signal" amounts (round numbers) in the legacy currency; these signal amounts are e.g. related to tax thresholds, social security payments, charges and fines or fees. In the euro area countries, national legislation ensured correct conversion according to specified rounding rules, taking into account practicability. This step is of particular importance also for all types of official forms, stamps, public transport tickets, parking tickets or any other public services sold via vending machines. In turn, these forms, stamps, ticket machines and the like will have to be adapted or newly produced. Last but not least, also any references to interest payments linked to central bank interest rates must be considered (Lachs and Ritzberger-Grünwald, 1998).

All these legislative adjustments have to go through specific national legal processes which probably also involve decisions made by parliament or other democratic institutions. Keeping in mind that legislative and political processes can sometimes be lengthy, the preparations of the necessary legislative adjustments are definitely among the first steps in the changeover process.

Another main preparatory task – and perhaps the most demanding for the public sector – is to adapt the whole system of public accounting and the respective IT systems to the euro. With respect to social security data, the question will also be whether all historical data will have to be changed into euro or whether data should be converted into euro only when necessary. In Austria, as in the other participating Member States, there was a preference for the second option, which certainly represents a reasonable approach in terms of costs and time (Federal Ministry of Finance, 2000).

The public sector may take the function of a frontrunner. If the public sector switches to the euro early, this will be a positive signal and a good example to the general public. However, the public sector did not do so in most of the current euro area members. While the EU institutions switched to the euro on January 1, 1999, the national administrations in general proved to be the slowest ships in the convoy. Some administrations justified this on grounds that an early changeover might be confusing to the public. Before January 1, 2002, however, operations in euro concentrated on utility billing, civil servants' salary payslips and public procurement contracts (Bank of England, 2001).

2.2.4 The Changeover and the Corporate Sector

For the business sector, the major task during changeover is to adapt their payment systems and their IT and accounting systems, including salary and wage slips, tax payments, etc. Especially for SMEs, there is also the question of how to treat historical data. In Austria, for instance, neither the public sector nor the private sector were required to convert internal accounts or historical data to euro, and it was more or less up to enterprises themselves to consider whether any changes were necessary.

For the corporate sector, another challenging task is to adapt vending machines (for cigarettes, chewing gum, condoms, etc.), supermarket carts, etc. This may be a very costly process. In Austria, for instance, the cash changeover caused the market leader of vending machines to suspend his business.

Furthermore, the fact that signal prices will have to be recalculated may also have implications for marketing and communication strategies (STUZZA, 2001). In addition, the European Commission recommended a period of dual pricing, and all euro area countries followed this recommendation. Austria was the only country where dual pricing was regulated by law, however. The *Euro-Related Pricing Act* stipulated dual pricing between October 1, 2001, and February 28, 2002. However, businesses could prolong this period if consumers deemed the five months of dual pricing insufficient. In addition, Austria installed a Euro Price Commission to monitor the application of the respective legal provisions (Federal Ministry of Finance, 2000).

Prior to the changeover process, the retail sector was very hesitant, denying the need for early preparation and pointing out that menu costs (e.g. labeling costs, printing costs for new catalogues) would rise. Later, many retail firms used dual pricing as an active marketing instrument servicing their customers. Some even continued to provide dual labeling for several years; these firms are now being blamed for having contributed to the fact that citizens were slow to adapt to the new price structure. Although the euro is already in circulation in the NMS and people have been developing a feel for it, either from traveling into the euro area or, at a more abstract level, from following the exchange rate, dual labeling could still be a sensible tool to prevent price hikes during the actual changeover. To a certain extent the transparency that goes along with dual pricing can also limit the perceived inflation that is linked to the euro.

While large enterprises in the participating Member States in general organized their changeover preparations well and on time, SMEs were rather slow in getting ready for the euro. Lack of awareness, software shortages, customer confusion and technical conversion problems may help explain their difficulties (Bank of England, 2001). Companies which had not completed their changeover operations in advance had to face serious problems, especially as the cash changeover coincided with the end of the financial year. For many SMEs this is a critical period, and at least some of them ended up interrupting their daily business, thereby damaging their commercial relationship with customers, suppliers and bankers. Despite these difficulties, however, any date other than year-end seems rather impracticable for the introduction of the euro because of the applicable accounting standards and rules.

2.3 The Cash Changeover

The cash changeover requires thorough information and major logistical efforts, including the production of euro banknotes and coins, frontloading the new cash, promoting security and increasing storage capacities, supplying the citizens with euro cash and, last but not least, withdrawing the former national currencies.

Although most countries announced a dual circulation period of two months, the responsible authorities had the ambitious aim to complete the cash changeover within a much shorter period of time. Such an aim can only be achieved if the public – on the one hand – is prepared and willing to cooperate and if – on the other hand – all the required euro banknotes and coins are available from the very beginning. Therefore banknotes and coins must be frontloaded widely to banks and retailers well in advance. For this reason, the cash changeover poses considerable logistical and organizational challenges and constitutes an enormous task not only for the NCBs but for all parties involved, such as commercial banks, retailers and others. In addition, after the old national currency has ceased to be legal tender, the withdrawal of old national banknotes and coins remains a challenging task.

Against this background, three periods can be distinguished within the cash changeover process:
1. the pre-changeover period
2. the actual changeover or dual period and
3. the post-changeover period

2.3.1 The Pre-Changeover Period

The prospective enlargement of the euro area will require the production of additional euro banknotes and coins to replace the acceding currencies. Some of the NMS have the necessary facilities – generally owned by the respective central bank – to produce euro notes and coins and will probably, if commissioned to do so, produce the bulk of their required euro cash. Countries that have no production capacities will have to import euro banknotes and coins.

To ensure that sufficient euro banknotes and coins are available for circulation from the very beginning of the cash changeover, massive frontloading to credit institutions and subfrontloading to retailers and others partners (such as post offices and cash-in-transit companies) is necessary. The lines of business that are probably most affected by cash transactions are grocery stores, tobacconists, bakeries, transport enterprises, drugstores and hotels and restaurant services in general (Schnedlitz, 2001). Although it is not the NCBs' task to organize subfrontloading, it is in their interest to monitor and, if necessary, promote adequate subfrontloading to enhance a smooth changeover.

However, to have an idea of how much cash is initially required, commercial banks are asked to place orders for the amount of cash they wish to receive, including the amounts needed to subfrontload to customers (Bank of England, 2001). In addition, each NCB produced its own studies geared toward predicting the amount of euro cash needed from the very beginning of the cash changeover.

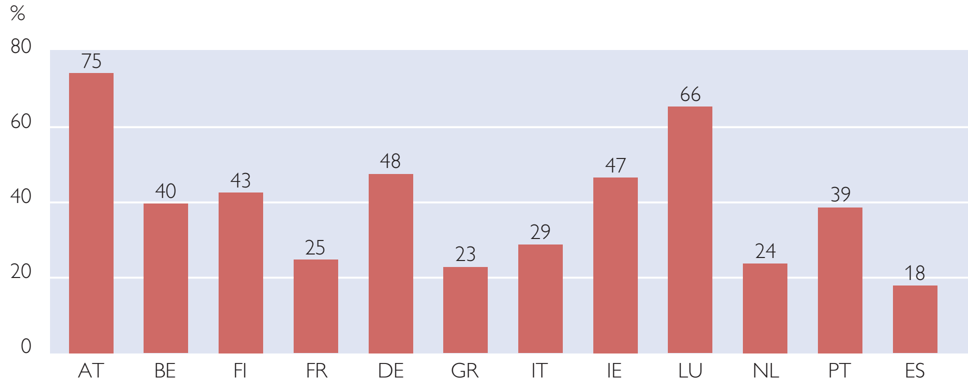
Each of the current euro area countries handled the frontloading process differently. Obviously, frontloading volumes depend on various economic, but also some cultural, factors (e.g. payment habits). For instance, the use of credit and debit cards is negatively correlated with the need for cash. Another factor is public attitude. Are citizens keen on getting rid of their old national currency or are they hesitant about using the new currency? Finally, the prevailing economic structure matters. Regions with strong tourism may need more euro cash than others.

When we take a look at the total amount of frontloaded cash relative to cash in circulation, this ratio was highest in Austria among the present euro area countries. This is because the responsible authorities wanted to be on the safe side and to create room for maneuver should other problems arise. This massive frontloading resulted in a very smooth cash changeover that did not have any regional or sectoral bottlenecks.

Chart 1

Frontloading in the Euro Area

Total amount of frontloaded cash as a percentage of cash in circulation



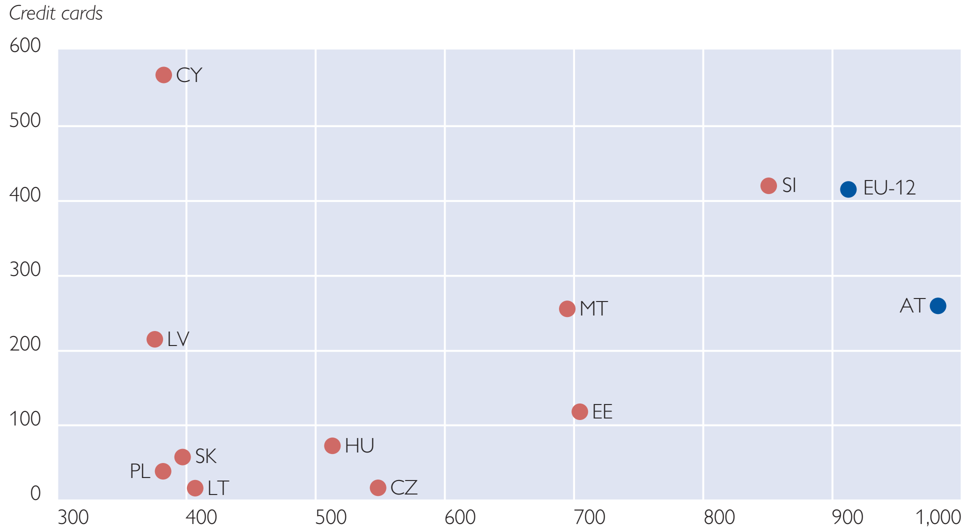
Source: OeNB.

The major difference between the current situation and that of December 2001 is that the euro is already in circulation (also in the NMS). The need for efficient frontloading will thus depend on the amount of euro cash that is already circulating in these economies. A study on euro cash holdings in the neighboring NMS (Stix, 2004) shows that at the end of 2004 about 49% of Slovenians, 26% of Slovaks, 35% of Czechs and 10% of Hungarians held euro, and on average in quite substantial amounts. For instance, in the second half of 2003 the median euro holdings amounted to EUR 300 per person in Slovenia and ranged from EUR 80 to EUR 116 per person in the Czech Republic, Hungary and Slovakia. For the development of euro cash holdings in the NMS in the near future, one can put forward the following arguments: On the one hand, the required stability-oriented policies within the framework of EMU should decrease the precautionary demand for euro-denominated cash and deposits. On the other hand, economic integration will entail closer economic ties, which in turn will enhance the demand for euro transactions.

Chart 2

Use of "Plastic Money" in the New Member States

Number of debit cards and credit cards per 1,000 persons (2004)



Source: OeNB. Debit cards

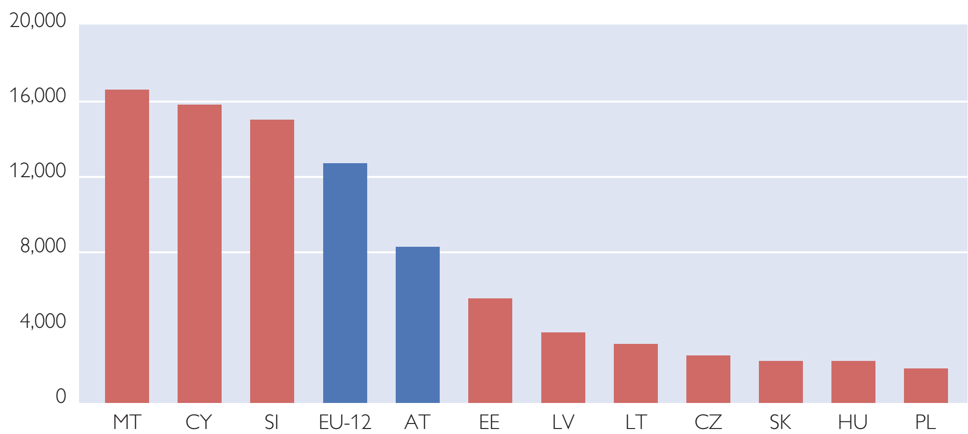
Furthermore, people might decide not to reduce but to expand their euro holdings in anticipation of the changeover. Overall, we expect that the demand for euro cash will continue to increase as euro adoption comes closer. A very fundamental aspect that may make the frontloading process easier is the relatively low GDP per capita in the NMS (compared with the current euro area countries), which indicates a relatively low cash need per capita.

There are of course some aspects which pose a challenge to the changeover processes in the NMS. First, compared with the participating Member States, a relatively low use of debit and credit cards can be observed. Chart 2 shows that

Chart 3.1

Number of POS Terminals in the New Member States

Per 1 million inhabitants (2004)

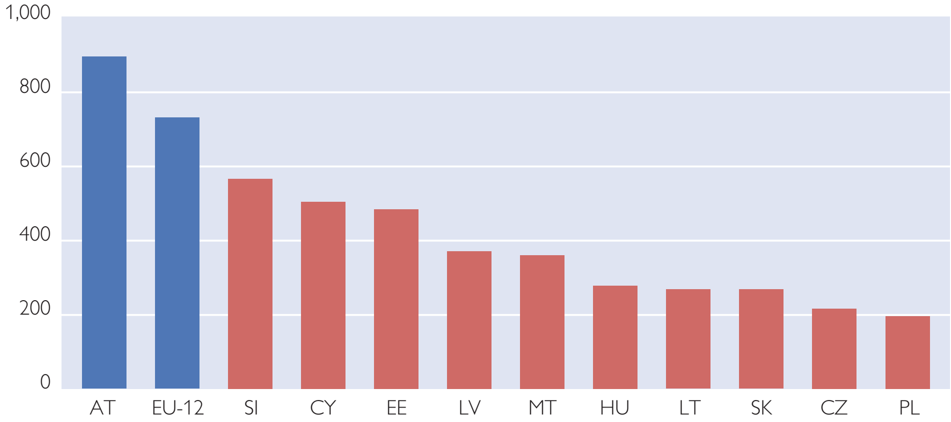


Source: European Commission.

Chart 3.2

Number of ATMs in the New Member States

Per 1 million inhabitants (2004)



Source: European Commission.

most people in the NMS do not have credit cards and only every second person has a debit card. The use of credit and debit cards is comparable to the euro area average only in Slovenia.

Second, with the exception of Cyprus, Malta and Slovenia, POS terminals are relatively rare in the NMS, which is not surprising given the low number of debit and credit cards in use. Also the number of ATMs per inhabitant is much lower in the NMS than in the euro area. During the cash changeover period, people in the NMS are therefore likely to concentrate their financial activities on bank opening hours and thus put enormous pressure on banks' resources. In Austria, ATMs played a major role in the euro cash distribution strategy. In fact, the bulk of banknote supply was scheduled to take place via ATMs.

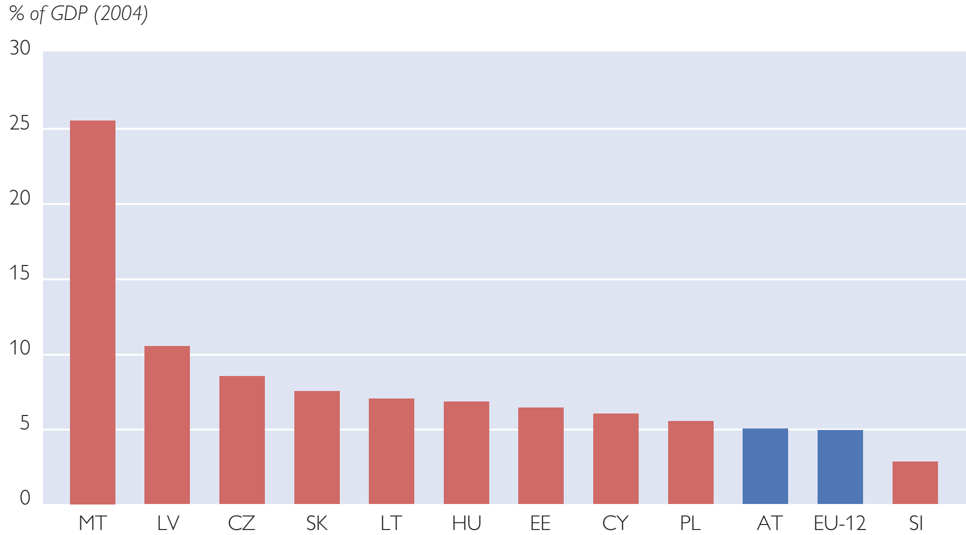
On average, people in the NMS carry relatively more cash in their pockets than euro area inhabitants. Chart 4 shows banknotes and coins in circulation in the NMS as a percentage of GDP. The relatively higher degree of cash use in the NMS may have several reasons, such as the fact that – in line with low purchasing power – a higher share of wages is used for daily expenditures; or that there may be higher amounts of cash stashed away; or that banking transaction costs are perceived to be too high compared to banks' interest payments; or that confidence in the banking system may still be lacking; or that the low density of ATMs and POS terminals makes it necessary to carry more cash; or that many employees still get their wages in cash rather than having them transferred onto current accounts (as in Malta). Whatever the reason for the high use of cash in the NMS may be, it will have to be taken into consideration when planning the frontloading process.

Aside from the scale of the initial demand of euro banknotes and coins, a number of other important issues arise with respect to frontloading and sub-frontloading:

First, it is important to take into account the capacities of cash-in-transit companies, as they may otherwise become a bottleneck, especially with respect to the bulk and weight of coins. In Austria ATS 20 and ATS 50 banknotes were very popular. These denominations roughly corresponded to the EUR 1 and

Chart 4

Banknotes and Coins in Circulation



Source: European Commission.

EUR 2 coins, so logistical planning had to take into account a higher demand for coins and in fact, 1.5 billion euro coins (nearly 7,600 metric tons) had to be distributed. This in turn meant that cash-in-transit companies had to carry out almost 10,000 individual transports. Another important factor is that various measures promoting the return of hoarded money may lead to an overproportionate return of legacy currency even before the dual circulation period.

Second, ensuring sufficient frontloading and subfrontloading to banks and retailers raises the issue of storage facilities and the risks and costs involved, which may be a problem especially for retailers who – in order to avoid high storage costs and risks – would want to receive banknotes as late as possible. This is logistically not feasible, so retailers will have to accept an early euro supply. With respect to the costs of frontloading, the ECB envisaged a debiting model that provides a formal subsidy to banks. In addition, a few countries introduced additional schemes to provide further compensation to banks (Bank of England, 2001). The arrangements for banks' subfrontloading to retailers and other partners will have to be negotiated between individual banks and their customers.

Third, there is the issue of collateral. Austrian banks had to hold collateral for frontloaded cash with the central bank, but under favorable conditions. Nonetheless, banks were obliged to cover any risks of destruction or robbery of euro banknotes and coins.

Fourth, the timing and speed of the exchange of legacy currency into euro can be geared by fees collected by the banking sector. In Austria, no fees were collected from private customers for exchanging household amounts. The result was that people changed their cash more or less immediately after December 31, 2001, and did not wait for any possible reduction of fees. By contrast, more than three years after the changeover vast amounts of schilling cash have still not been returned in Austria, as there is no deadline for exchanging the last series of schilling banknotes free of charge at the central bank.

A number of recommendations were made during the pre-cash changeover period. In 2001, e.g., the European Commission issued a *Report on the Preparations for the Introduction of Euro Notes and Coins*, which named a series of measures that could be taken before January 1, 2002. From today's point of view, bearing in mind the experience made during the cash changeover, some very useful measures would be the following:

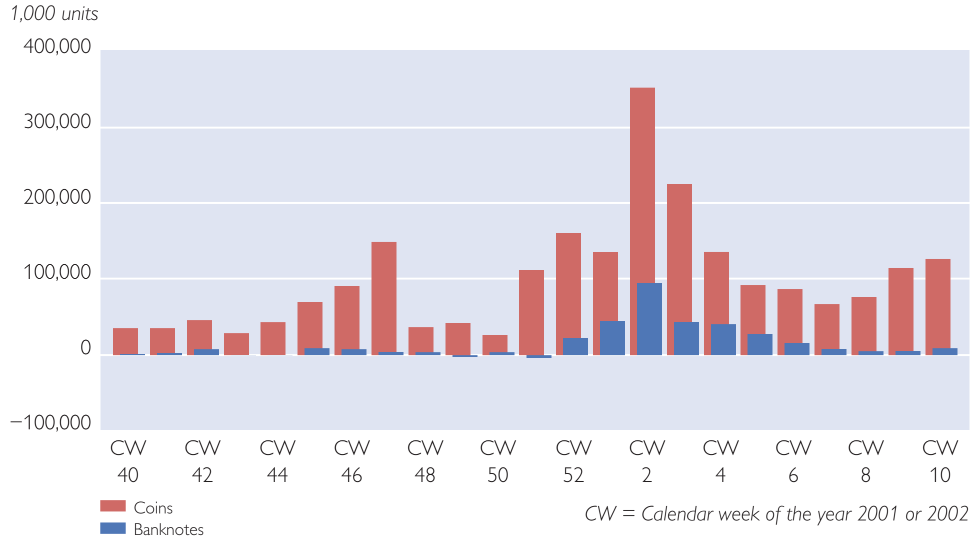
- In Austria, it was estimated that at least 5% of cash in circulation was stashed away by the population. To reduce the amount of euro cash needed for the cash changeover in the forefront, considerable effort went into promoting the collection of hoarded coins. Advertising campaigns launched the idea of either bringing hoarded coins to the bank for deposit in a bank account or to donate them. Donation boxes were set up at various public locations to collect these coins.
- Another measure would be to reduce or abolish the fees for exchanging national currency into euro. At the moment, commercial banks in the NMS charge a fee when selling euro cash. To avoid long waiting times during the cash changeover, banks might reduce or even abolish these fees in advance – an opportunity that was not available to the current euro area members at the time.
- Taking into account the low use of credit and debit cards in most of the NMS as well as the relatively small number of POS terminals, it seems to be crucial to promote the use of electronic payment means and the installation of POS terminals in supermarkets and stores.
- New methods of payment such as Internet banking and other forms of e-banking are developing or gaining ground in the NMS. These offer additional alternatives to ATMs and POS terminals and reduce the number of banking transactions at the counter as well as cash demand.
- In a special form of subfrontloading, the current euro area countries had supplied the general public and small retailers with low denominations of euro – the so-called starter kits – some weeks before the start of the dual circulation period. The starter kits were intended to help people familiarize themselves with the new coins ahead of the dual cash circulation period, ensure a sufficiently widespread distribution of coins and thus reduce the demand for small change in the retail sector.

2.3.2 Dual Circulation

The length of the dual circulation period is decided individually at the national level. As mentioned above, however, the dual circulation period was envisaged to last two months at the most. Nonetheless, the responsible authorities set a more ambitious goal, namely that within the first two weeks after the cash changeover the vast bulk of cash transactions should be paid in euro. Encouraged by the quick withdrawal of the East German mark, Germany envisaged no dual circulation period at all, so the Deutsche mark ceased to be legal tender on January 1, 2002.

Chart 5

The Withdrawal of ATS Banknotes and Coins

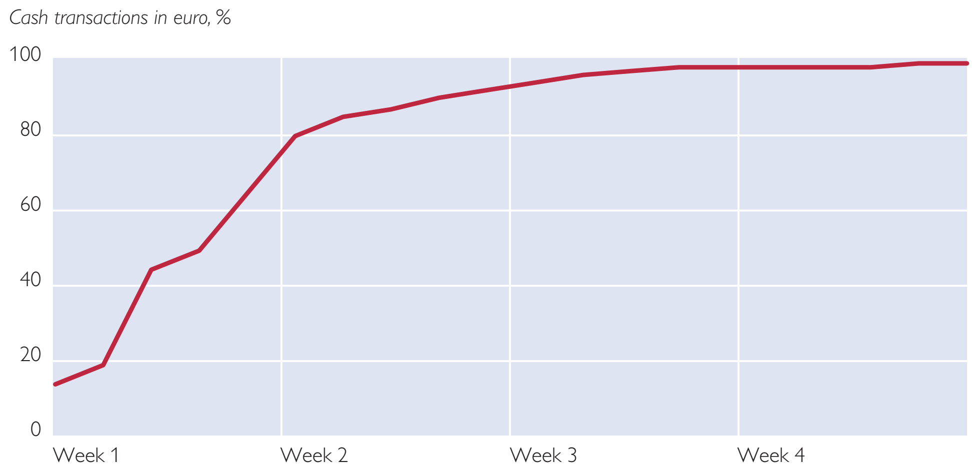


Source: OeNB.

In the end the overall goal set for the cash changeover was reached without problems. The time period needed to withdraw the old currencies and to introduce the euro was much shorter than anyone had expected. At the end of the second week after the cash changeover, around 90% of all transactions were carried out in euro and after another week nearly 100% (see chart 6). In Austria, the smooth cash changeover was mainly based on two factors, namely that it became *en vogue* to pay in euro as a consequence of the large-scale information campaign and that handling two currencies in parallel in everyday life proved much too complicated.

Chart 6

The Speed of the Cash Changeover in Austria



Source: OeNB.

This is good news for those NMS which envisage a short dual circulation period of a few weeks or those that favor a big bang solution without any dual circulation. Nevertheless, it has to be kept in mind that, while frontloading and the supply with euro banknotes and coins are under the authorities' control, the pace of the changeover and of the withdrawal of old national banknotes and coins will be determined by the behavior of the general public and retailers.

Therefore it may be reasonable to introduce measures to promote a swift changeover during the dual circulation period. One such measure would be to encourage retailers to give back change only in euro right from the beginning. Another idea would be to load ATMs preferably with small denominations, as this would reduce retailers' need to hold large stocks of small change and would be in line with price levels, which are clearly below the euro area average in the NMS. However, there is of course the tradeoff that if ATMs are loaded with small denominations, they will be empty relatively fast. This aspect is all the more important the fewer ATMs are in operation and, given the low number of ATMs in the NMS, it will be reasonable to bear this factor in mind.

In the current euro area countries, in early 2002 the following denominations were distributed at ATMs:

Table 3

Main Euro Denominations Distributed via ATMs in Early 2002

Country	EUR denomination	Country	EUR denomination
Austria	10, 100	Ireland	5, 10, 20
Belgium	5, 20, 50	Italy	10, 20, 50
Finland	20, 50	Luxembourg	20, 50, 100
France	10, 20, 50	Netherlands	5, 10, 20, 50
Germany	5, 10, 20, 50	Portugal	5, 10, 20, 50
Greece	5, 10, 20, 50	Spain	10, 20, 50

Source: Bank of England.

Table 3 shows that there was no euro area-wide strategy or common agreement on which euro denominations to distribute via ATMs. Obviously, each euro area country based its strategy on the respective national circumstances and structures of payment systems or cash holdings.

2.3.3 After Dual Cash Circulation

Once the dual circulation period ends, national banknotes and coins automatically cease to be legal tender. Clearly, arrangements should be made for citizens to exchange their national cash for euro at the NCBs and at commercial banks for some time after the end of the dual period.

Table 4 shows the different time schedules and provisions for exchanging legacy currencies in the euro area and in the new Member States.

In many cases, different exchange periods were granted for banknotes and coins, such as in the Benelux countries, France, Greece and Portugal, where the exchange period is shorter, in general, for coins than for banknotes. In Portugal, it was possible to exchange coins only until end-2002, whereas a five-year exchange period was envisaged for coins in the Netherlands. While some participating Member States have limited the exchange periods for banknotes and coins, other countries, such as Austria, Germany, Ireland or Spain, have opted

Table 4

Periods Envisaged for the Exchange of Legacy Currency after the Dual Circulation Period

EU-12	Banknotes/coins	NMS	Banknotes/coins
Austria	Indefinitely	Cyprus	10 years/2 years
Belgium	Indefinitely/end-2004	Czech Republic	At least 5 years
Finland	10 years	Estonia	Indefinitely
France	10 years/3 years	Hungary	20 years/5 years
Germany	Indefinitely	Latvia	Indefinitely
Greece	10 years/2 years	Lithuania	Indefinitely/5 years
Ireland	Indefinitely	Malta	10 years/2 years
Italy	10 years	Poland	. .
Luxembourg	Indefinitely/end-2004	Slovakia	At least 5 years
Netherlands	30 years/5 years	Slovenia	Indefinitely
Portugal	20 years/end-2002		
Spain	Indefinitely		

Source: ECB, OeNB.

for an unlimited exchange period. This customer-oriented approach has helped raise the acceptance of the new currency, as people need not worry about missing any final deadlines.

2.4. Information as a Crucial Element

All the aspects that have been put forward so far also make clear that the changeover process entails certain risks. The main risk of the noncash changeover is that too many of the necessary steps might be left until the last minute. This is especially true for SMEs, as they may not be able to continue trading if they have not adapted to the new situation in time. The major risks of the cash changeover, by contrast, are that (1) it may take longer than envisaged, (2) the cash distribution process may be seriously interrupted (e.g. strikes, shortages of cash-in-transport services, etc.) and (3) that there is strong criminal activity (e.g. counterfeiting).

Against this background, well-targeted information campaigns appear to be a crucial element. During the first euro changeover, one of the major challenges was not only to inform banks, businesses and the general public about the changeover process but also to convince banks and retailers, especially SMEs, to take the changeover seriously and to start preparations early. For Catalan firms, Duque et al. (2005) find that information campaigns conducted by the public administration had a considerable influence on managers' perception of the importance of changeover plans and were therefore key to a smooth changeover process. This finding may be of special interest for the new Member States, as Catalonia and the NMS have a number of similarities (relatively closed economies until the end of the 1980s; both are a preferred destination for FDI from a neighboring country; the manufacturing sector has a relevant share; the average firm size is significantly below the EU average).

In addition to various information campaigns run by the European Commision and the ECB, the Austrian federal authorities, the OeNB, the social partners, commercial banks and a special government information agency called "Euro-Initiative" organized several information campaigns aimed at familiarizing all parties involved with the euro and the changeover process. For the upcoming changeover process, the ECB plans not only to assist the NMS in familiarizing themselves with the Eurosystem, but also to share with them the experience of its own euro information campaign.[6]

From a national central bank's point of view, a major task during the last changeover was to provide information about the design and the security features of the new banknotes to limit the probability that counterfeits are accepted. In an effort to fight against euro counterfeiting, all Member States are linked via the Counterfeit Monitoring System (CMS). Since the CMS was extended to comprise the NMS as well, the ECB has been actively involved in providing training sessions on security features and counterfeit detection to representatives from the future euro area countries.

Providing information about the design and the security features of euro banknotes and coins will probably be an easier task during the next euro area enlargement, as many people in the NMS already know the euro banknotes rather well. As mentioned above, however, one has to bear in mind that the launch of the second series of euro banknotes is envisaged to start in 2007 and that the new series is likely to have new security features replacing some of the current features. Against this background the involvement of the ECB in future euro information campaigns seems crucial to ensure that in all countries involved, citizens will be given similar messages on the design of euro banknotes and coins.

3 Some Economic Effects of the Changeover

Finally, let us put forward some economic effects of the changeover and link them to the NMS. Certainly, one relevant question is that of direct changeover costs. Another important question is that of the possible impact the changeover has on inflation. Last but not least, we will also take a brief look at some general effects the changeover may have on economic activity.

3.1 Changeover Costs

In order to assess the changeover costs, most studies that deal with this question divide the related costs into the following categories:
- costs of handling two currencies (such as additional cash registers or security measures);
- costs of in-store infrastructure (also for dual pricing);
- costs of IT adaptations; and
- costs of staff training.

Estimates of changeover-related costs, both in Austria and across the EU, vary significantly. One major reason for these differences is that given the long transition period, it was difficult to accurately assess the costs involved. However, according to an internal survey among the euro area NCBs, total changeover costs were expected to be between 0.3% and 0.8% of GDP. In addition, the estimated conversion costs, which are one-off costs, would be offset already within one year by lower selling prices, reduced exchange rate risks and diminished transaction costs (Dirschmid et al., 2001).

[6] *Exchange of information also takes place within the Directors of Communication (DIRCOM) group established by the European Commission to coordinate PR activities. This group consists of the communications representatives from the individual finance ministries and NCBs; it meets on a regular basis.*

Another important question in this context is who will have to bear the changeover costs. In Austria, the general principle with respect to changeover costs was that everybody had to take care of their own costs. Aside from budgetary aspects, the idea was to make the changeover a shared effort of society as a whole and to raise personal responsibility.

During the changeover, financial support for the banking sector was very limited; examples include the fact euro cash frontloaded to commercial banks had to be collateralized, but banks were allowed to reap the interest until December 28, 2001. This rule, which was based on an ECB guideline, was lifted in three steps after January 2002 and also gave an incentive to collect and return the old schilling banknotes quickly. Morover, additional storing and safe capacities were provided by the central bank free of charge. However, the Austrian banking sector had to cover approximately one-third of total direct costs. The situation may be different in the NMS, as most of their commercial banks are owned by foreign banks located in the euro area. It should be relatively easy for the parent banks to adapt the logistics they ran a few years ago and to apply them in the next changeover process.

3.2 Impact on Inflation and Economic Activity

Price developments are affected by a number of factors such as tax measures, wage developments, inflation expectations, changes in the terms of trade. Thus, it is difficult to quantify, or even predict, the impact the changeover has on inflation or to decide whether possible price hikes may be changeover-related or not (for Austria, see Fluch and Rumler, 2005). Nonetheless, there are some reasonable assumptions which can be put forward with respect to price developments. In this context, we have to distinguish between effects that put upward risks on inflation and effects that generate downward pressure.

As the changeover process involves certain costs and as a good part of these costs is borne by banks and retailers, these costs tend to be passed on to the consumers. In addition, whenever prices are moving, there is the temptation to round up to psychologically or technically convenient prices. Depending on the competition in the respective sector but also on agreements between the retail sector, the government and the social partners, the upward pressure on inflation is restricted.

There are some aspects, by contrast, that create downward pressure on inflation. Higher international price transparency, as supported by the common currency, enhances competition and thus leads to downward price adaptations. This happened e.g. in the IT and communication sectors. In addition, as was the case in Austria, a few months before and after the introduction of the euro, consumer associations and other institutions (e.g. the social partners) carried out more price checks than usual, which in turn put pressure on retailers and banks to follow a fair and transparent price policy. As already mentioned, the use of dual pricing could support this policy. Last but not least, the Austrian government's approach – as recommended by the Ecofin Council and the ECB – was to round prices, especially signal prices, taxes and fees, in favor of the general public. This would also be a valuable option to the governments of the NMS, especially as administered prices still play a considerable role in most of these countries. In fact, they account for a significant share of about 10% to 25% in national consumer price indices (CPIs) (Égert et al., 2004).

Turning finally to possible effects on general economic activity, it is clear that a proportion of the changeover costs at the same time represents an increase in economic activity. While the net effects on consumption are difficult to predict, the euro changeover involves significantly stronger activities in certain sectors, in particular the banking sector, the transportation sector, the IT sector and many other businesses such as vending machine companies, the media and advertising industry (Dirschmid et al., 2001). Of course, output could also be adversely affected if the changeover does not go smoothly and leads to major disruptions in the economy.

For the NMS it will be even more difficult to disentangle the changeover effect on inflation and GDP growth from other cyclical and structural factors that impact on these key variables. In addition, the fulfillment of the convergence criteria will overlap with the changeover period. In the previous changeover process, these two aspects had been largely disentangled, as there was a three-year waiting period before the cash changeover. Therefore, predicting the economic consequences of the next changeover process seems to be even more complicated than it was for the current euro area countries.

4 Conclusions

With the introduction of the euro, today's euro area countries have successfully managed an enormous economic and logistical challenge. This was accomplished in a broad and well-coordinated effort. The ten NMS which joined the European Union in May 2004 are going to introduce the euro after they successfully fulfill the Maastricht convergence criteria; the convergence process is expected to take two years at least. As some of the NMS have already joined ERM II and others are well underway to doing so, national changeover processes may be starting soon.

Therefore, several questions arise concerning preparedness and prospective challenges. In which aspects do the NMS differ from the euro area countries and which aspects are basically the same as in the euro area? Aspects that differ from the situation the current euro area countries had to face before and during the changeover require new concepts and solutions; aspects that are similar or equal to the euro area experience suggest taking a look at what the NMS can learn from the euro area.

The differences from the euro area can be divided into two groups: those that make things easier for the NMS and those that might cause difficulties. Starting with the first group, the fact that the euro is already in circulation is obviously the biggest difference compared to the situation the current euro area countries experienced, thus making information campaigns less relevant and cash changeover logistics a little bit easier to handle. Moreover, the lower GDP per capita tends to reduce the need for euro cash. In addition, some of the NMS recently introduced new banknotes and coins, so they were able to gather some experience on their own. Last but not least, the commercial banking sector in the NMS is characterized by foreign ownership, with the majority of owners being euro area-based. The fact that they have done the exercise once should be helpful. In addition, a possible scenario might be that parent banks frontload to their subsidiaries at least at the very beginning of the cash changeover process, when shortages are likely to occur and national distribution channels are not yet fully in place.

The NMS differ from the euro area countries in that they are catching-up economies in different stages of transition. They are characterized by different degrees of banking intermediation, different payment habits and varying degrees of unofficial euroization. All these factors may influence both the amount of frontloading required and the changeover process quite significantly, although the direction is not always clear. On the one hand, the relatively low degree of banking intermediation together with the relatively rare use of payment cards (exceptions do exist here) result in an above-average circulation of cash in the individual economies. Therefore, frontloading and the cash changeover will be even more of a challenge. On the other hand, in countries with unofficial euroization, euro cash is already circulating and people use it, if not daily, at least once in a while. This phenomenon should make frontloading less important and thus render the cash changeover easier.

Last but not least, the institutional framework drastically shortens the changeover period. Between 1999, when exchange rates were irrevocably fixed, and 2002, when the euro banknotes and coins were introduced, the euro area countries had three years for targeted changeover preparations. The NMS will not have as long a period of time at their disposal, even though the legal framework does not provide that the euro be immediately introduced as soon as the EU Council finds the Maastricht criteria to have been successfully fulfilled. At the moment, the debate is about how long the euro cash changeover can be postponed after exchange rates have been fixed and countries have become members of the euro area. Theoretically the NMS could postpone the introduction of euro cash. But with the euro already circulating in other parts of the euro area, such a strategy would not be accepted by the public and would in the end result in reduced seigniorage for the national central banks.

Therefore, for the countries that are "frontrunners" for euro adoption it is key to start preparations early. In fact they will have to start preparations long before the relevant EU institutions make their decisions. The actual time schedule for euro adoption is as follows: In the first year after joining the EU, six out of ten NMS entered ERM II (three of them on June 28, 2004, and three on May 2, 2005). The earliest point in time for a convergence assessment will be summer 2006. If the outcome of this assessment is positive, the changeover process provides for the introduction of the euro on January 1, 2007. All in all, these countries have one and a half years left to get ready for the euro. Is this enough time to make a smooth changeover possible? Where do the preparations stand now? Our analysis has shown that the NMS have started their preparations already, that they have installed national changeover committees and that they are currently gathering expertise from the euro area NCBs, the ECB and the European Commission. There is, however, no sign of any information campaign directed at the general public or at the corporate sector at large. Obviously, the NMS still have a long way to go in this respect.

All in all, the previous changeover process has shown three things: First, as the euro changeover is a major effort, preparations have to start early; second, as it is in the national interest that the changeover work smoothly, the authorities involved have to cooperate closely; and third, as the changeover is a highly complex and demanding process, it is recommendable to consult a number of experts. Although there was a lot of skepticism up to the last minute, the euro area countries and the international institutions involved in the changeover (e.g. the European Commission and the ECB) have managed this challenge successfully. As the NMS can draw on the expertise gained during the first euro changeover and as the more difficult and less difficult aspects will be balanced, there is reason to be confident that the NMS will manage the changeover process successfully.

Editorial close: May 31, 2005.

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