Euro Cash in Austria, Ten Years On

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In the run-up to the euro launch, a number of key steps were taken to ensure the uninterrupted supply of notes and coins to the economy and the general public. After all, nearly 15 billion notes and 52 billion coins had to be delivered in due time in order to ensure their availability from January 1, 2002, onward in the participating countries. In Austria, the Oesterreichische Nationalbank shares the responsibility of supplying commercial banks with cash and of processing returned banknotes in accordance with ECB regulations — and thus of ensuring the quality of the euro and its counterfeit security — with an affiliated cash logistics company, GELDSERVICE AUSTRIA. When the financial crisis boosted the demand for cash, logistical reserve stocks enabled the Eurosystem to respond quickly. As a result, the volume of euro cash in circulation rose, as did U.S. dollar circulation. However, the overall value of euro notes and coins in circulation has consistently remained above that of the U.S. dollar since the end of 2006. The euro's established role as an international transaction currency has resulted in approximately one-quarter more banknotes being processed in Austria than the volume required for the national market.

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Box 1

Euro Cash Chronology¹

July 1, 1987

The aim of monetary union is laid down in the Treaty establishing the European Community.

December 1995

The official names "euro" and "cent" are defined as the units of the new currency.

June 16 and 17, 1997

Agreement is reached on the common "European side" of euro coins.

December 31, 1998

Conversion rate set for participating currencies (Austria: EUR 1 = ATS 13.7603).

July 1999

Production of new notes and coins begins.

September 1, 2001, onward

Banknotes and coins are frontloaded to credit institutions and retailers.

December 15, 2001, onward

Frontloading of euro coins to consumers by banks.

January 1, 2002

The euro becomes legal tender in euro area countries.

March 1, 2002

The Austrian schilling loses its status as legal tender, but can still be exchanged for euro.

March 31, 2002

End of period in which banknotes from other euro area countries can be exchanged free of charge at the OeNB.

¹ Europa – Gateway to the European Union (2011).

1 Euro Cash

1.1 Launch of the Euro in Austria

As a Eurosystem central bank, the Oesterreichische Nationalbank (OeNB) is

authorized to issue euro banknotes under the Statute of the ESCB and ECB (ECB, 2003). In the course of the euro launch, each national central bank

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(NCB) was required to cover its country's own initial demand for banknotes. The initial cash supply requirements of the countries participating in the changeover was estimated at about 15 billion banknotes (approximately EUR 633 billion) and more than 51 billion coins (approximately EUR 16 billion) at the end of 2001 (ECB, 2001). In the case of Austria, the banknotes and coins were physically produced at two subsidiaries of the OeNB: Münze Osterreich AG and Oesterreichische Banknoten- und Sicherheitsdruck GmbH (OeBS), which produced 550 million banknotes valued at EUR 30.65 billion and 1.8 billion coins worth EUR 672.7 million for the euro changeover. These quantities covered the country's initial demand for euro cash (table 1) and ongoing supply requirements in 2002, as well as providing logistical stocks for unforeseen cash requirements (see also section 2.1).

Euro Cash:	Austria's	Initial	Damand
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in 2002			

Table 1

Banknotes		Coins		
	Pieces		Pieces	
EUR 5	150 million	EUR 2	150 million	
EUR 10	150 million	EUR 1	200 million	
EUR 20	45 million	EUR 0,5	160 million	
EUR 50	60 million	EUR 0,2	190 million	
EUR 100	105 million	EUR 0,1	400 million	
EUR 200	20 million	EUR 0,05	140 million	
EUR 500	20 million	EUR 0,02	210 million	
		EUR 0,01	350 million	

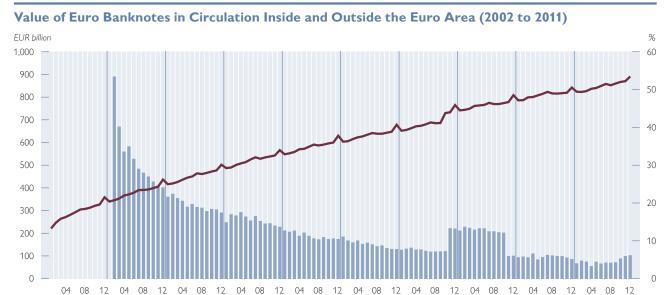
Source: OeNB

In line with the established initial cash requirement of EUR 633 billion, a total of 14.890 million banknotes were produced in the euro area. The country that required the largest number of notes was Germany (4.783 million), followed by Italy (2.440 million) and France (2.265 million). The euro area's overall demand for coins ultimately

came to 52 billion units with a total value of EUR 15.75 billion. In order to produce the coins, about 250,000 tons of metal were processed at 16 European mints (ECB, 2002).

OeBS and Münze Österreich AG delivered the notes and coins directly to the OeNB's head office in Vienna, to the branch offices in Austria's provincial capitals, and to the cash centers physically connected to the branch offices and maintained by GELD-SERVICE AUSTRIA (GSA). GSA, a cash logistics and service company created in order to leverage synergies in cash handling between the OeNB and Austria's main commercial banks, was the most important operational platform in Austria's changeover to the euro. The goal of this measure was to create a "triple-win" situation: As the majority shareholder, the OeNB retains control over the quality of the cash in circulation, the banks do not have to maintain (smaller and thus more expensive) cash recycling centers, and the customers receive optimized service at moderate prices. GSA, the OeNB's cash offices and the country's main commercial banks thus formed the central operational platform for the introduction of euro notes and coins in Austria.

In order to ensure that sufficient euro notes and coins were available for the launch on January 1, 2002, shipments of cash to banks were already allowed from September 1, 2001, onward. In order to optimize the supply of coins to retailers and consumers, approximately 300,000 starter kits were provided for retailers (value: EUR 145.50; sold for ATS 2,000), and more than 5 million kits were distributed to consumers (value: EUR 14.54; sold for ATS 200). The starter kits were available at banks and post offices from December 15, 2001. In total, the front-



2006

Annual growth rates (right-hand scale)

Source: OeNB, ECB.

Value of banknotes in circulation (left-hand scale)

loading volume of notes and coins came to 75% (EUR 10.3 billion) of the average schilling circulation in the year 2000 (EUR 13.6 billion); this percentage was the highest among all euro area countries. This large volume was necessary due to payment habits in Austria, where cash is still widely used, as well as the fact that the euro changeover coincided with the winter holiday period, which is a popular time to visit Austria. Even in remote holiday destinations, tourists in Austria were able to pay in euro from January 1, 2002. Just one week after the launch, euro circulation had already exceeded 291 million banknotes (equivalent to 86% of schilling circulation). Two weeks after the changeover, the share of transactions conducted in euro had already reached 90%.

2005

1.2 Development of Euro Cash Circulation

Since the end of the dual circulation period in Austria (February 28, 2002), the value of euro banknotes in circulation has climbed 262%, from EUR 246 billion to around EUR 890 billion at the end of December 2011. Chart 1 shows how the overall value of all euro banknotes in circulation (both inside and outside the euro area) has risen since the new notes and coins were introduced in January 2002 as well as the annual circulation growth rates. These growth rates declined gradually after the physical introduction of the euro and jumped sharply during the financial crisis (from late 2008, back to 2005 levels), only to return to precrisis levels thereafter.

2010

In October 2008, banknotes in circulation shot up in the wake of the Lehman Brothers collapse. This additional demand for euro banknotes — to the tune of EUR 35 to 40 billion — was mainly driven by countries outside of the euro area. Up to now, the additional banknotes put into circulation have not returned to the Eurosystem NCBs.

In the year 2011, rapid circulation growth was observed in the case of the

Table 2

Share of Banknote Denominations in Circulation (end-2011) and Annual Growth Rates (based on value)

	EUR 500	EUR 200	EUR 100	EUR 50	EUR 20	EUR 10	EUR 5	Total
	%							
Share (value)	33.7	4.1	18.6	34.0	6.4	2.3	0.9	100.0
Share (units)	4.0	1.2	11.0	40.4	19.1	13.9	10.3	100.0
Growth rate								
2003	42.9	12.1	20.3	19.0	4.0	2.5	2.3	10.1
2004	28.4	5.7	13.5	12.4	1.3	0.9	2.3	14.9
2005	20.9	3.9	10.8	11.3	3.9	3.6	3.1	12.8
2006	13.2	2.7	9.6	12.5	8.2	7.9	4.7	11.2
2007	7.9	1.9	8.3	8.9	5.6	3.4	5.6	7.7
2008	17.1	9.3	14.2	10.6	6.1	3.3	3.8	12.7
2009	6.4	4.8	6.6	5.9	2.8	0.6	1.5	5.7
2010	2.1	1.3	5.4	6.7	2.3	-0.1	1.6	4.1
2011	4.1	0.4	6.4	8.9	3.7	1.7	1.5	5.8

Source: OeNB, ECB

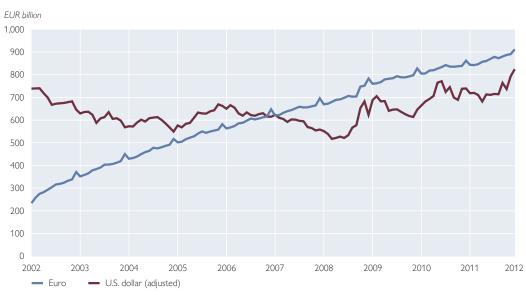
50-euro banknote. This development can be partly attributed to high demand arising from the turbulence in Greece, where there is a clear preference for that particular denomination (table 2).

The demand for euro notes emanating from non-euro area countries serves to confirm that the euro is used throughout the entire world. In terms

of the value of cash in circulation, the euro surpassed the U.S. dollar for the first time in 2006 (chart 2). Due to the strong position of other reserve currencies such as the euro, the U.S. dollar's rate of circulation growth continued to drop until August 2008, only to climb substantially in the course of the financial crisis. The U.S. government then

Chart 2

Cash in Circulation: Euro versus U.S. Dollar



Source: OeNB.



took measures to defuse the situation. This pattern repeated itself until 2011, with non-U.S. demand for 100-dollar notes boosting circulation (Roseman, 2010). Euro cash circulation followed a similar pattern in the course of the crisis, rising significantly at first and then dropping to normal levels in 2009. What both reserve currencies have in common is that the additional banknotes released during the crisis are still circulating. At the end of 2011, global euro circulation amounted to approximately EUR 912 billion, compared to EUR 824 billion in the case of the U.S. dollar. Of those amounts, euro notes account for some 97% and U.S. dollar notes for 99%, respectively; however, only 25% to 30% of euro banknotes are used outside of the euro area, while the corresponding estimate for U.S. dollar notes is 50% to 70% (ECB, 2011).

The value of euro coins in circulation has roughly doubled since the end of the dual circulation period (end-February 2002), rising from EUR 11.4 billion to EUR 23.1 billion.

In terms of units, some 15 billion euro banknotes and 97.8 billion euro coins are currently in circulation, which translate into the following statistical averages:

- The average value of a circulating euro banknote is approximately EUR 59; the average value of a euro coin in circulation is 24 cents.
- In mathematical terms, there are 45 euro banknotes and 293 euro and cent coins in circulation for every citizen of the euro area.

Due to the single currency, it is no longer possible to provide circulation statistics at the national level. The OeNB estimates the actual amount of cash circulating in Austria at EUR 25 to 27 billion. This assumption is based on the initial volume issued, growth rates in withdrawals from cash dispensers, as well as the volume of cash supplied each year.

1.3 Development of Schilling Circulation

Some 470 million schilling banknotes and 3 billion schilling coins were taken out of circulation during the changeover to the euro. By the end of the dual circulation period (February 28, 2002), a majority of the schillings expected to return had been exchanged for euro. Even now, the OeNB still exchanges schillings for euro, free of charge. In addition to the OeNB cash desks, which are open five days a week, the OeNB's annual Euro-Tour in the summer months has also allowed people throughout Austria to exchange schillings for euro free of charge. The tour has now been carried out ten times. As a result of all different activities, some 98% of all schillings in circulation had been withdrawn from circulation by the end of 2011.

The last series of schillings valid before the introduction of euro notes and coins can be exchanged at the OeNB indefinitely. However, the preceding series are subject to different rules. In the year 2018, the last banknotes from the preceding series (1,000-schilling notes featuring Erwin Schrödinger; 500-schilling notes featuring Otto Wagner) will be called in. These notes will lose their validity if they are not exchanged at the OeNB by the end of the redemption period (April 20, 2018; see box 3). The value of schilling banknotes not returned (for banknotes not exchanged before the end of the respective redemption period equivalent to EUR 91.8 million) is transferred to the Austrian Federal Ministry of Finance.

Box 2

Austrian Schillings Discovered in Curious Places

Anecdotal evidence from the Euro-Tour gives an indication of where outstanding schillings might still be found:

Carinthia, 2005: Five meters below the surface of Lake Ossiach, a diver discovers an old wallet containing schilling notes.

Vorarlberg, 2006: A Bregenz resident finds ATS 20,000 hidden behind a painting – and forgotten – by the finder's mother.

Lower Austria, 2010: While clearing out her grandmother's house, a woman from the town of Vösendorf finds a secret compartment containing ATS 50,000.

Schilling Banknotes with Limited Redemption Periods

Banknotes with a limited exchange period



ATS 1,000: Bertha von Suttner August 30, 2005



ATS 100: Angelika Kauffmann November 28, 2006



ATS 500: Josef Ressel August 31, 2007



ATS 50: Ferdinand Raimund August 31, 2008



ATS 20: Carl Ritter von Ghega September 30, 2009



ATS 500: Otto Wagner April 20, 2018



ATS 1,000: Erwin Schrödinger April 20, 2018

2 Cash Logistics and Processing

2.1 Planning and Production

In general, the volume of euro banknotes produced annually must be sufficient to cover any increases in banknote circulation as well as the exchange of banknotes which are unfit for circulation. In addition, sufficient logistical stocks must be available at all times in order to cover unexpected increases in demand (as observed during the financial crisis) and seasonal fluctuations, especially during the holiday season at the end of the year.

Ultimately, the Governing Council of the ECB decides each year which denomination is to be produced in what quantities, allocating shares to individual NCBs under a decentralized pooling system that was first established 2002.² In this context, each NCB is responsible for producing selected denominations only, in line with the amount of capital it has transferred to the ECB (Austria had a capital key share of 2.775% at the end of 2011).³ In this decentralized pooling system, the production costs are borne by the NCBs

For the introduction of the euro, the NCBs themselves were required to produce the initial supply of banknotes required for their respective countries.

³ OeNB (2011).

Banknotes:	Production	n Volume	in 2011
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Denomination	Number of notes	Value	NCBs commissioning production
	Million	EUR million	
EUR 5	1,714.80	8,574.00	DE, CY, ES, FR, IE, MT, LU, NL, SI, SK, FI
EUR 10	1,541.20	15,412.00	DE, GR, FR, AT, PT
EUR 20	536.60	10,732.00	CY, FR, MT, LU, NL, SI, SK, FI
EUR 50	2,169.10	108,455.00	BE, DE, ES, IT
EUR 100	×	×	X
EUR 200	×	×	X
EUR 500	56.20	28,100.00	AT
Total	6,017.90	171,273.00	
Source: ECB.			

according to the share of banknote production assigned to them.

In order to ensure an efficient supply of cash, logistical stocks have been set up in all euro area countries. In addition, the decision was made in 2002 to set up strategic reserves for the Eurosystem (Eurosystem Strategic Stock – ESS; section 2.3). These reserves are intended for use in exceptional situations where the Eurosystem's logistical stocks are not sufficient to cover an unexpected increase in demand for banknotes or where the supply of banknotes is suddenly disrupted. These logistical and strategic stocks ensure that the NCBs are able to handle changes in demand for banknotes at all times, regardless of whether the demand originates inside or outside of the euro area (ECB, 2012a).

2.2 Controlling Availability2.2.1 Supplying Cash at the European Level

As mentioned above, the production of banknotes is divided up in accordance with the capital key shares of the euro area NCBs. However, as not all banknote denominations are produced in all euro area countries, and as stocks of banknotes are accumulated or depleted at different speeds due to spe-

cific national circumstances, it is also necessary to transport cash between euro area central banks. These crossborder transports ensure that banknotes are distributed according to schedule in the euro area.

However, cash is also subject to certain flows, which are influenced by various direct and indirect factors. Direct influencing factors include economic ties, cross-border commuting, labor migration, tourism and the tendency to hoard cash. These factors are in turn influenced by population numbers, income levels, economic power and each population's payment habits and preferences. These cross-border flows result in national imbalances in cash circulation which cannot be accounted for completely in banknote production and distribution planning. Given their responsibility for managing national cash supply chains, the NCBs need to compensate for these imbalances with individual cross-border cash transports. These are carried out on an ad-hoc basis according to demand.

As euro coins are also legal tender throughout the euro area regardless of their national side, the phenomenon of cross-border flows and the resulting imbalances can also be observed in this case (albeit to a far lower extent). However, coin transports are largely restricted to compensating for regional imbalances.

2.2.2 Supplying Cash in Austria

In cooperation with GSA, the OeNB supplies Austrian banks with notes and coins as needed and ensures the quality of cash in circulation.

In 2011, 1.33 billion banknotes and 2.55 billion coins were put into circulation in Austria. Depending on their denomination, banknotes have an average lifespan of two to seven years and are returned to the OeNB or GSA an average of three to four times each year, where their fitness for circulation and authenticity is checked. In 2011, a total of 1.61 billion banknotes were processed throughout Austria.

With the help of cash processing devices, the used banknotes returned to the OeNB or GSA are counted and tested for authenticity, completeness and degree of soiling. If the minimum standards are met, the banknotes can re-enter the cash cycle. Depending on their quality and denomination, an average of just under 6 million

banknotes are processed each day. Banknotes considered to be unfit are sorted out, invalidated and then destroyed under stringent security conditions.

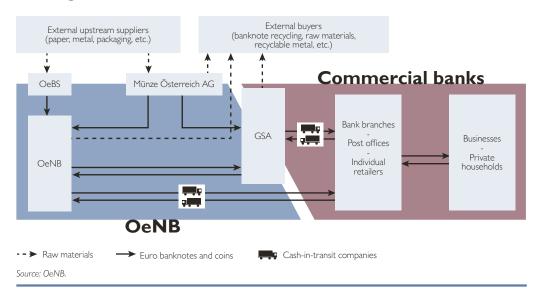
2.2.3 Decentralized Cash Recycling – OeNB Test Center

Cash recycling helps to preserve the high quality of the euro banknotes in circulation in Austria. These efforts serve to pursue two main objectives: Inspection activities enhance the banknotes' counterfeit security and at the same time only those notes which meet high quality standards are recirculated (section 2.2.2). This also means that it is easy for people to verify the authenticity of the banknotes in circulation.

Most cash is machine-tested for authenticity and fitness for circulation. Automated processing devices may only be used for this purpose if they have been tested and approved by an NCB. In line with the requirements of the ECB, the OeNB established a testing facility in Vienna in 2005 for the purpose of inspecting and evaluating

Chart 4

Cash Logistics in Austria



authentication, counting and sorting devices.

Periodic updates are necessary in order to ensure that the processing devices are always at the cutting edge of development. In these efforts, the OeNB Test Center cooperates with international device manufacturers and distributors and conducts tests of new detection technologies for banknote testing. This cooperation is indispensable, especially with regard to the forthcoming second series of euro banknotes. The results are published on the web sites of the ECB and OeNB. In 2011, a total of 132 devices were tested.

2.3 The OeNB's Role as a Cash Supply Hub in the Eurosystem

Thanks to Austria's location in the center of Europe, at the intersection of important trans-European transport axes, near emerging economic regions and densely populated areas (e.g. the Twin City Region around Bratislava and Vienna), the OeNB and its subsidiaries have established themselves as a cash competence and logistics center.

- The OeNB is one of the storage locations for strategic stocks in the euro area; for logistical reasons, these stocks are held by only a few NCBs.
- The OeNB's expertise was also called upon during the preparations for the introduction of the euro in Slovenia and Slovakia in order to ensure a smooth transition to the new currency. Both the initial supply as well as later shipments of euro banknotes to those two countries were handled by the OeNB.
- Moreover, for many central banks in Central, Eastern and Southeast-

- ern Europe (CESEE), the OeNB is an important point of contact in cash-related matters; this is evidenced by the active exchange of information between the OeNB and those banks.
- In particular, GSA has established itself as a partner for commercial banks and retail companies in neighboring regions, especially in Slovenia, Slovakia and southern Germany.

Due to the close interrelationships between Austrian banks in the CESEE region, a great deal of euro cash flows back into the euro area via Austria. Current estimates indicate that Austria processes some 25% more banknotes than are required for the national market.

2.4 Counterfeits in Austria

Shortly after the launch of the new currency, counterfeit euro notes also appeared in Austria. Numerous OeNB projects were initiated in order to preserve the currency's integrity and to strengthen public confidence.⁵ For example, one of the central bank's duties is to ensure the quality of euro banknotes in circulation; this high quality makes it possible to verify the notes' authenticity quickly and easily. The resistance of euro banknotes to counterfeiting is ensured by integrated security features, and advances in these features will be incorporated in the new banknote series (section 2.5).

In 2011, a total of 606,000 counterfeit banknotes were removed from circulation throughout Europe. During that period, the number of counterfeit notes recovered in Austria came to 5,583. The most common counterfeit

⁴ www.oenb.at/testzentrum.

⁵ 47% of the Austrian population believe that the EU has also precipitated an increase in criminal activity (European Commission, 2012).

banknote discovered in Austria in 2011 was the 50-euro note (33%), followed by the 100-euro note (29.3%) and the 20-euro note (24.7%). The Austrian share of counterfeit notes recovered throughout Europe amounts to 0.92%, meaning that Austria has one of the lowest counterfeit volumes in the euro area.

Austria's consistently low counterfeiting figures indicate that counterfeit euro notes are rarely accepted. Compared to 2011, the number of counterfeits dropped by 36.6%, to the second-lowest level since the launch of euro notes and coins in 2002. One of the main reasons for this result is the high level of knowledge the Austrian population has acquired with regard to the banknotes' security features.

2.5 Measures to Combat Counterfeit Euro Notes

A sound knowledge of the security features enables people to verify the authenticity of banknotes quickly. The most important and easiest way to check whether a banknote is genuine is based on the "feel — look — tilt" principle. This test does not require any technical devices. The OeNB uses a wide variety of communication channels to inform the population of this principle; another key purpose of these measures is to send a clear signal to counterfeiters.

Training for Currency Experts and Interested Parties

In one-hour training sessions, an OeNB employee explains how to check the security features on euro banknotes. Upon completion of the training, participants know how to check banknotes

quickly and efficiently in everyday payment situations. In addition, participants are allowed to compare genuine banknotes with counterfeits and thus to ascertain the quality of genuine banknotes and their security features. This training seminar is offered throughout Austria and is open to all interested parties, especially those who handle cash in their jobs. Participants are required to register in advance.⁶ Since the launch of euro notes and coins in the year 2002, 3,393 training sessions have been held with a total of 70,307 participants.

Cooperation with Radio and Television Broadcasters

The probability that a private individual will encounter a counterfeit note is very low, but if such a note does end up in someone's wallet, its value is not reimbursed to that person. Therefore, it is particularly important to pay attention to payment activities when business is especially brisk.

Above all, this means checking the security features on euro banknotes. Especially during the holiday season, the OeNB focuses on the general public and uses the mass media to support its information activities on this topic. In cooperation with various radio broadcasters, OeNB employees explain the security features of euro banknotes in radio interviews. The Austrian population also makes heavy use of television to obtain information (IFES, 2011). In order to account for this tendency, the OeNB used short films for the first time in 2011 (weekdays at 6:55 pm on ORF 2) to demonstrate the "feel – look — tilt" principle.

⁶ www.oenb.at/bargeldschulung.

Euro-Shop-Tour

In the course of its Euro-Shop-Tour in 2011, the OeNB provided retail employees with information directly at the workplace. In total, the tour covered around 2,400 shops in all nine federal provinces of Austria. In this way, the security features of euro banknotes were explained to more than 2,500 cashiers.

Euro-Bus and Fairs

In addition, the OeNB also provides information on the euro's security features during the Euro-Tour in the summer months and at the fairs in which the OeNB participates. As people are never too young to learn about such an important topic, the OeNB has also organized a Euro-Kids-Tour since 2008, visiting primary schools throughout Austria and playfully demonstrating the security features to young children.

The Second Series of Euro Banknotes

Although the number of counterfeit banknotes is very low, the Eurosystem makes every effort to remain one step ahead of counterfeiters and to enhance the notes' resistance to counterfeiting on an ongoing basis. For this purpose, a second series of euro banknotes will be introduced in the coming years (ECB, 2012c). The new series will retain the key design features of the first series and include security features which like those used in the first series – are easy to recognize and difficult to imitate. The first denomination of the new banknote series is scheduled for issue in the next few years. The other denominations will follow one by one and ultimately replace the original series of banknotes. The new banknotes will again incorporate design elements

based on the "ages and styles of Europe" theme.

3 Summary and Outlook

Despite the widespread use of various payment methods such as cards, direct debiting and other forms of cashless payment, the use of cash is still on the rise. Cash is still the most commonly used retail payment instrument throughout the euro area;⁷ in Austria, for instance, 80% of all transactions in Austria continue to be effected in cash.

Cash is still the most favorable payment method for small retail payments, and it has established itself as a secure form of payment with regard to fraud and counterfeiting. In emergencies, it remains the most important payment instrument, allows transactions without access to bank accounts or electronic payment services, and involves lower costs than other payment options (ECB, 2012a). Consumers also appreciate the ease of monitoring their expenditures when using cash (OeNB, 2010).

The importance of cash in times of crisis became obvious during the turbulence on the financial markets and the collapse of Lehman Brothers in October 2008. Especially at such uncertain times, people tend to rely more on cash, especially high-denomination banknotes. In order to meet demand inside and outside the euro area, the ECB holds logistical and strategic reserves; Austria is one of the Eurosystem's storage locations for its strategic stocks and — as the cash supply hub for the region — also contributes to supplying cash to CESEE countries.

The single European currency is regarded in a positive light by a vast majority of the Austrian population⁸ and ensures security for individuals and

⁷ Capgemini, RBS, EFMA (2011).

⁸ See also Fluch and Schlögl in this issue.

businesses. In the course of harmonization, the different formats, systems and business practices in cashless payment services will be standardized in Europe as well. Now that a single currency area has been established, a standardized euro payments area (SEPA – Single Euro Payments Area) is being created, and participating countries are required

to implement these standards by February 2014. In order to ensure the smooth and efficient operation of payment systems, a combination of various payment instruments with different features and advantages is necessary; the importance of cash in this system will remain high for a long time to come.

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