

# IMPLICATIONS OF THE INTRODUCTION OF THE EURO FOR THE ESTONIAN FINANCIAL MARKETS

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**The present study aims to explain the first implications of the third stage of the European Economic and Monetary Union (EMU) and the introduction of the euro for the financial sector of Estonia. As the process was launched only in January 1999 the study reflects, first of all, the extent of the use of the euro in Estonia in the first nine months of 1999 and does not attempt to give any final assessment of the implications of the third stage of EMU.**

The authors have analysed the use of the euro in Estonia's foreign trade and changes in the share of currencies with the fixed exchange rate to the Estonian kroon through the euro in foreign trade transactions. Payment orders are also used to analyse the currency structure of the transactions of the current account of the balance of payments. Purchase and sale of the account currency in Estonian credit institutions is analysed, as well as the

role of the euro in these transactions. The extent of the use of the euro in the deposits and loans of Estonian banks is studied, as well as changes in the volume of transactions with derivatives after the introduction of the euro, changes in capital flows and changes in the currency structure of the assets and liabilities of Estonian credit institutions.

The study is mostly based on the data available in Eesti Pank, data and publications of the European Central Bank (ECB) on the launch of the third stage of EMU and the possible impacts of the introduction of the euro. The currency structure of Estonian foreign trade transactions is characterised by the data of both the Customs Board (after the deduction of customs warehousing operations and recalculations into special export and import) and data on payment orders collected for drawing up the balance of payments.

## Possible Mechanisms of the Impact of the Third Stage of EMU and the Introduction of the Euro

The third stage of EMU<sup>2</sup> was launched on 1 January 1999 and it meant the introduction of the euro in transactions between the countries that had joined EMU. Within the Eurozone countries the euro was introduced in transactions between businesses. Euro banknotes and coins will be introduced from 1 January 2002 and according to the current schedule, national currencies will be replaced with the euro in the EMU countries by 1 July 2002.

The impact of the launch of the third stage of EMU is not limited to EMU member states or members of the European Union. To some extent, the launch of a monetary union of that magnitude affects the economy of the entire world, including transition economies of Central and Eastern Europe (CEE).

Internationally, the euro is the second most important currency used after the US dollar and ahead of the

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<sup>2</sup> Eleven European Union countries joined the EMU: Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain, while Denmark, Great Britain, Greece and Sweden remained outside.

Japanese yen. The GDP of the Eurozone (the eleven members of the European Union that have joined EMU) is smaller than that of the USA (22% and 29%, respectively, of the nominal global GDP) but in terms of the export volume the Eurozone surpasses the USA (20% and 16%, respectively, of the total world exports; see ECBa, 1999). The deposits and loan portfolios of the Eurozone banks exceed those of the US banks but the stock exchange capitalisation is smaller.

Table 1 characterises the impact of the euro as an international currency across the functions of the single currency and economic sectors (see Bekx, 1998, and Köhler and Wes, 1999).

The ECB admits that the results of the introduction of the euro and the related costs will become known only after some time. The evaluations of the benefits so far have been rather speculative and predictive. The actual extent of the implications is hard to measure and some quantifying evaluations show that even within the Eurozone itself these are relatively modest as compared to the volume of the GDP (ECBa, 1999).

The main microeconomic effect in the financial sector of the Eurozone is believed to be the improved competitiveness of internationally active banks. It is expected that the large banks of the Eurozone, which have cheaper refinancing opportunities in euros, will

**Table 1. Impact of the euro as international currency**

Function	Private sector	Public sector
Evaluator	Foreign trade transactions accounting, international financial transactions, price quotations of international markets	Exchange rate relations (fixed rates, exchange rate differences etc)
Legal tender	Accounting of trade transactions and financial obligations, circulation means (as account money)	Interventions on financial markets, official financial flows
A means of accumulation	Euro-denominated financial instruments	Official euro-denominated external reserves

channel or mediate this liquidity also outside the Eurozone. Moreover, the empirical data reveal that the financial institutions of the issuer of the currency dominate in the primary market of bonds denominated in this currency. Thus, the growth of the market of the euro-denominated bonds should strengthen the market share of the Eurozone financial institutions in global investment banking.

The main microeconomic cost is considered to be the increase in the share of the euro-denominated short-term external claims and the related higher risks. As compared to the earlier period, the diversity of the external claims portfolio is smaller and a sudden change in the exchange rate or interest rate expectations can mean greater risks. The increased volatility of asset prices is also mentioned, which derives from the wider international use of the euro and the globalisation of the asset market and the resulting increase of risks (ECBa, 1999). In the conditions of greater isolation of national markets the spread of possible shocks was more limited and slower.

Although intensification of the use of the euro can be noticed in international financial markets, it is still considerably more limited than the use of the dollar. In the first half of 1999 the issuing of euro-denominated debt securities increased. They were issued even by countries like Brazil, Argentina, South Africa and the Philippines, which tried to change the structure of their external liabilities in favour of the euro. Of the demand side factors, the higher liquidity of the euro-denominated

debt securities certainly played a role. At the same time, a certain interest can be seen in the Eurozone countries in the diversification of the currency structure of securities portfolio and issuing of debt securities denominated in other currencies besides the euro.

The widening of the use of the euro in capital markets has been slower. In the USA and Great Britain the role of the stock market has traditionally been greater than in the Eurozone countries where banks dominate in financial intermediation. The structural integration of the national capital markets of the Eurozone countries will take some time. However, the elimination of the exchange rate risk and the emergence of new instruments has increased the interest of European investors in instruments denominated in national currencies (ECBa, 1999).

In Estonia and particularly in the local financial sector the impact of the launch of the third stage of EMU is mostly manifested in two ways. Firstly, the euro is used in international settlements as a new measure of value and a widely accepted universal tender that needs no conversion. This can be seen in payments for exports and imports which, in turn, has created the need to arrange the purchase and sale of the euro. The banks also began to use the euro in deposit and loan contracts.

The second important aspect is that after pegging the currencies of the Eurozone countries to the euro the exchange rates of the national currencies of all EMU

countries became fixed to the Estonian kroon.<sup>3</sup> The earlier claims and liabilities<sup>4</sup> denominated in the national currencies of the EMU countries also changed into contracts with a fixed exchange rate from 1 January 1999 and the exchange rate risk was eliminated from them, or in other words, the claims and liabilities denominated in the currencies of the EMU countries became identical with those denominated in the euro.

Indeed, the main microeconomic effect of the introduction of the euro should be the reduction of the exchange rate risk, which, in turn, should reduce the cost of transactions for the corporate and financial sector. Also, deposits and loans in the euro should reduce the costs of conversion of the currencies for economic agents. The reduction of the cost of transactions should, in the longer run, favour the growth of foreign trade and thus accelerate economic growth.

## The Share of the Euro in Estonian Export and Import Transactions According to Customs Data

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Even before the launch of the third stage of EMU and the actual introduction of the euro in settlements it was presumed that non-EU countries would mainly be affected by the euro through their trade with the Eurozone countries. The increase of foreign trade was linked with the expected acceleration of economic growth in the Eurozone countries whereas this positive effect was expected to be somewhat reduced by the tightening of competition within the Eurozone and more difficult access to markets. While these factors were believed to take place gradually, the transition to the euro in customs declarations and settlements was expected to be fairly quick (Bekx, 1998).

Imports within the Eurozone increased by 5% in the first half of 1999 year-on-year, imports from outside the Eurozone rose just by 3%. In the European Union as a whole imports was up by 4% but trade between EU countries themselves increased just by 2% (Eurostat, 1999). This indicates that trade within the Eurozone grew slightly faster and confirms the earlier reference to the increase of supply and tightening of competition in the Eurozone.

At the same time the so-called first-wave candidate countries to the European Union have been relatively successful in increasing their exports to the Eurozone. Thus, in the first half of 1999 the exports of Hungary, the Czech Republic and Poland to the Eurozone countries increased by 18%, 12% and 8%, respectively (Eurostat, 1999). Estonia's special export to the Eurozone increased by 11% against the first half of 1998. Thus, the exports of the EU candidate countries to the Eurozone has increased considerably faster than exports within the Eurozone itself and the opinion that growth in trade within the Eurozone would oust imports from the outside proved to be groundless in the first half of 1999.

However, we have to take into consideration that in case of the countries mentioned above export markets changed drastically after the Russian crisis and therefore this structural change does not derive entirely from the third stage of EMU. Partly, it is related to the collapse of the CIS markets at the end of 1998 and channelling of the existing export potential towards the Eurozone. At the same time, the decrease of exports to the CIS countries is just part of a long-term reorientation of exports to the European Union. This process was simply accelerated by the Russian crisis.

According to Bekx (1998), the choice of a currency to be used in international trade depends on the following criteria:

- industrial countries trade with manufactured goods mostly in the currency of the exporting country, in trade with other goods the currency of the importing country is used. The use of currencies of third countries is rare;
- trade between industrial countries and developing countries is usually in the currency of the industrial country or the currency of third countries (often in US dollars);
- trade in raw materials is mostly in dollars (also in pounds) because the prices of raw materials in international markets are usually quoted in dollars;
- stable currencies are used more often than inflationary ones;
- proceeding from the above, the use of US dollar in international trade exceeds the contribution of US exports to the world trade approximately four times and the use of the German mark exceeds the contribution of German exports approximately 1.4 times. The German mark is mainly used in trade between the EU countries.

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<sup>3</sup> Since the Estonian kroon is pegged, through the German mark, to the euro at 1 EUR = 15.6466 EEK.

<sup>4</sup> In addition to the German mark against which the kroon is fixed since the 1992 monetary reform (1 DEM = 8 EEK).

In case of Estonia, we should also mention the avoiding of the use of the CIS currencies and favouring of the US dollar in trade with the CIS countries in both settlements and as a legal tender.

The use of the euro as a means of payment in foreign trade is easier to trace than its impact on the volume of

foreign trade. In Estonian special export and import the value of goods is calculated in euros and payments are made in euros since January 1999. According to the customs statistics<sup>5</sup>, the monthly turnover in both exports and imports reached approximately 200 million kroons by the summer (see Figures 1 and 2).

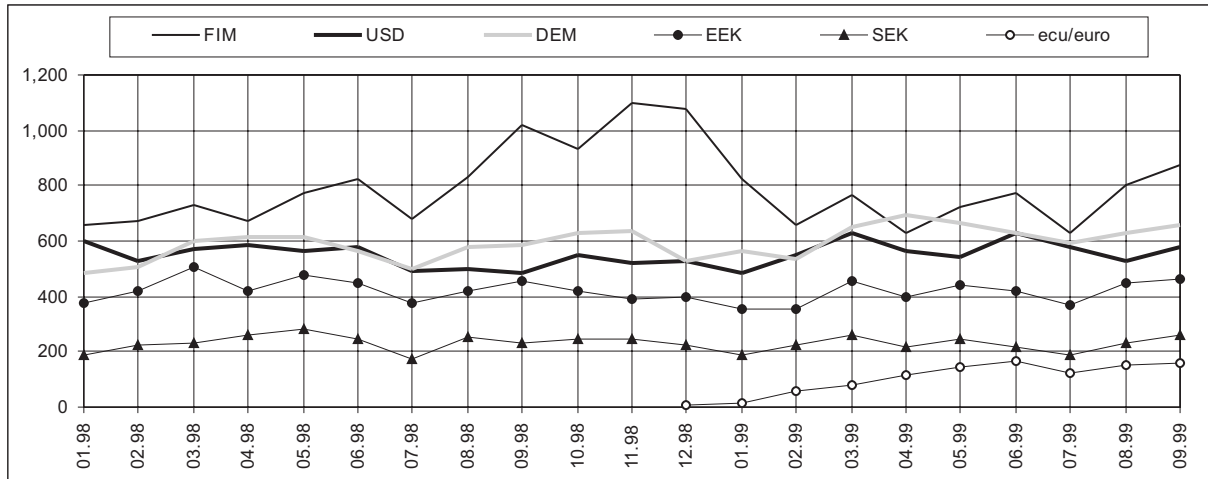


Figure 1. Major currencies used in special export (EEK mn)

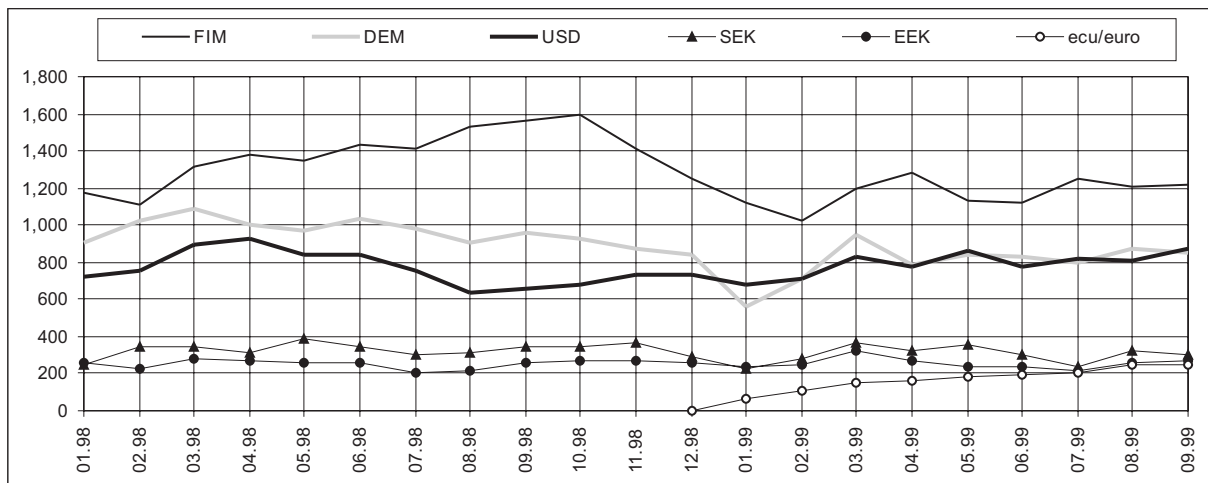


Figure 2. Major currencies used in special import (EEK mn)

By June 1999, the share of transactions made in euros amounted to 5% of the monthly value of exports and imports. By the middle of last year the euro raised to the sixth position among the most frequently used currencies, with the volume of transactions in euros equalling roughly the volume of transactions in Swedish krona.

Both in exports and imports the euro was quickly

introduced in trade with Finland (see Tables 2 and 3). However, the euro did not gain a dominating position in the first half of 1999 in transactions with Estonia's most important trade partners.

Although Finland had a big share in transactions in euros, the share of the euro did not exceed 16% of the total export volume to Finland in any month. Also in the case

<sup>5</sup> The statistics based on customs declarations can contain inaccuracies concerning both the currencies used in making payments as well as the exchange rates. Although these data covered the volume of foreign trade in the balance of payments 85%-95% in 1998 and 100% in 1999, this distribution of currencies may not be entirely correct. Therefore, we also use the currency distribution according to the payment orders at the disposal of the Statistics Department of Eesti Pank in discussing the foreign trade transactions in the next chapter.

**Table 2. The use of the euro (as a means of payment) in exports and the share of major trade partners in payments made by euro in 1999**

	Jan	Feb	March	Apr	May	June	July	Aug	Sept
<b>Total (EEK mn)</b>	<b>16.6</b>	<b>59.4</b>	<b>77.0</b>	<b>115.6</b>	<b>146.6</b>	<b>164.9</b>	<b>125.4</b>	<b>149.9</b>	<b>156.6</b>
<i>o/w (%)</i>									
Finland	72.3	71.5	52.2	55.0	55.2	59.1	47.1	57.3	59.9
Sweden	0.6	3.2	4.0	18.6	16.2	15.3	15.2	15.7	7.8
Netherlands	2.0	0.9	8.2	4.7	7.9	7.8	6.8	6.0	10.5
Norway	0.0	3.9	5.6	5.1	5.7	4.5	2.5	3.5	5.5
Italy	16.2	4.5	5.4	2.0	1.8	2.0	2.0	0.9	1.9
France	0.0	0.4	1.3	3.5	1.5	1.5	1.6	0.7	1.6
Denmark	0.0	1.2	1.1	0.9	1.0	1.3	1.4	0.5	0.7
Latvia	1.8	1.7	1.0	0.8	1.0	1.2	1.4	1.6	2.9
Germany	3.6	0.8	2.2	1.8	1.4	0.9	1.7	1.2	1.5
Other countries	3.6	11.8	18.9	7.6	8.3	6.5	20.2	12.6	7.6

**Table 3. The use of the euro in imports and the share of major trade partners in payments made by euro in 1999**

	Jan	Feb	March	Apr	May	June	July	Aug	Sept
<b>Total (EEK mn)</b>	<b>60.7</b>	<b>102.6</b>	<b>156.3</b>	<b>165.4</b>	<b>178.8</b>	<b>191.8</b>	<b>200.7</b>	<b>245.4</b>	<b>245.9</b>
<i>o/w (%)</i>									
Finland	72.8	54.9	42.8	49.3	38.2	39.9	40.3	34.5	37.3
Germany	10.8	16.2	18.3	10.7	17.8	19.1	15.2	16.7	10.2
Ireland	0.9	0.4	10.0	8.9	8.0	9.1	13.2	10.2	3.4
Belgium	1.6	2.7	4.5	6.9	7.6	5.8	6.3	11.2	16.1
Sweden	5.7	8.0	6.5	7.2	7.5	5.7	4.6	3.7	5.8
Netherlands	1.3	4.2	2.9	2.4	2.1	2.9	2.4	1.3	2.3
Italy	0.5	2.6	1.4	1.5	2.5	2.7	1.4	3.5	2.2
Spain	0.5	1.0	0.5	0.8	0.6	2.6	0.7	1.0	0.7
Latvia	1.0	0.2	0.4	3.0	3.5	2.3	3.9	4.1	5.1
France	0.4	2.7	1.0	2.3	2.9	2.1	1.3	2.2	2.6
Austria	0.4	0.6	1.3	1.6	1.7	1.2	1.5	1.4	0.6
Other countries	4.0	6.6	10.4	5.2	7.5	6.6	9.1	10.2	13.7

of other major export partners the share of transactions in euros remained below 10% of the monthly turnover. However, in case of some less important partners like Spain, for example, the share of the euro as a means of payment amounted to 83% in March 1999 and 48% in July. Very likely some single euro-denominated transactions accounted for a large part of that month's export volume.

In Estonia's imports, too, the euro failed to become the dominating payment facility in trade with major partners. However, 51–78% of the goods imported from Ireland in the summer months were paid for in euros.

Articles written even before the launch of the third stage of EMU expressed hope that the euro would be particularly quickly introduced in foreign trade by the countries whose currencies are not widely used in international settlements and for whom the euro would offer an opportunity to start settling accounts in a new universal and widely used currency (Bekx, 1998). And on the contrary, countries, which use widely accepted

currencies in international settlements, such as the German mark or the US dollar, might not feel the need to switch over to the use of the euro. The Estonian foreign trade data indicate that the euro as a universal currency was more extensively used in transactions with the partners with whom no close links and payment traditions had been established.

The ECB said in August 1999 that the volume of exports denominated in the euro and the currencies of the Eurozone countries is unlikely to exceed substantially the volume of the Eurozone exports, which means that third countries are not using the euro (ECBa, 1999). However, the Estonian data indicate that the euro was relatively extensively used also in transactions with such countries outside the Eurozone as Sweden, Denmark and Latvia.

Although the euro rose to the sixth position among Estonia's most widely used currencies in both export and import payments, this is obviously not the main impact of the third stage of EMU. In terms of economic content

it is more important that the share of currencies with a fixed exchange rate increased in foreign trade.

According to the customs data, 36% of Estonia's special export in 1998 was paid with the Estonian kroon and its anchor currency the German mark. In June 1999, however, the share of the Estonian kroon and currencies of fixed exchange rate amounted to 66% of the total cost of the special export. In 1998 the share of the imports free of the exchange rate risk (that is, imports paid for in Estonian kroons and German marks) stood at 29% of the total value of the special import, while in June 1999 the share of the euro and the currencies of the Eurozone countries together with the Estonian kroon amounted to 66% of the value of special import.

Thus, although the customs statistics put the share of the euro as a means of payment in Estonian foreign trade at just 5%, the share of the Estonian kroon and the currencies of the Eurozone countries (with fixed

exchange rates against the kroon) has increased to two thirds of the total turnover of foreign trade. This has lowered the exchange rate risk for both exporters and importers and reduced the need to secure the risk through derivative instruments.

Actually, the number of countries whose currencies are fixed to the Estonian kroon through the German mark is even bigger. These include, for example, Bosnia and Herzegovina, Bulgaria, Cyprus, Denmark and Greece<sup>6</sup>, as well as 14 Central and West-African countries that use the CFA franc, pegged to the French franc until the end of 1998 (ECBa, 1999). The exchange rate of the Estonian kroon is somewhat more loosely connected with the currencies of another 27 countries that use the crawling peg or a currency basket that contains the euro. The share of these countries in Estonia's foreign trade is, however, relatively small and does not increase the share of currencies with fixed exchange rate in foreign trade.

## The Use of the Euro in the Current Account Transactions

In order to estimate changes that have taken place in the distribution of currencies in the Estonian current account transactions, we can use the data on payment orders at the disposal of the Statistics Department of Eesti Pank. Unfortunately, this does not cover the entire volume of current account transactions due to the specific nature

of drawing up the balance of payments.

The data is relatively good on the **export and import of goods**, the payment orders of which cover some 60–70% of the total volume of exports and imports (see Table 4). This differs somewhat from the customs data used above.

**Table 4. The use and share of the ecu and the euro in current account transactions as seen by credit orders (data by Statistics Department of Eesti Pank)**

		EEK mn							The share of credit orders and euro/ecu credit orders in a quarter (%)						
		Q1 1998	Q2 1998	Q3 1998	Q4 1998	Q1 1999	Q2 1999	Q3 1999	Q1 1998	Q2 1998	Q3 1998	Q4 1998	Q1 1999	Q2 1999	Q3 1999
<b>Total credit orders by currencies</b>															
Goods	export	5,908.0	6,534.3	5,687.3	5,298.4	4,717.2	5,680.1	6,561.5	64.8%	67.0%	63.1%	53.5%	57.6%	63.8%	71.7%
	import	8,802.6	9,384.3	8,689.4	8,123.5	6,412.8	7,688.7	8,783.1	69.1%	65.8%	64.5%	62.3%	59.6%	65.0%	72.6%
Services	credit	1,500.1	1,676.3	1,938.9	1,499.4	1,413.0	1,717.4	1,935.9	35.6%	29.3%	31.9%	31.3%	35.9%	30.6%	29.1%
	debit	1,039.0	947.8	893.6	1,098.6	1,014.5	1,198.3	1,112.0	36.3%	32.6%	26.5%	30.4%	35.1%	35.6%	31.6%
Income	credit	9.9	10.6	27.3	10.0	8.7	10.4	32.5	2.2%	2.7%	5.6%	1.9%	1.8%	2.6%	7.5%
	debit	97.6	246.2	100.9	217.5	113.3	260.8	167.5	12.4%	25.5%	12.9%	43.5%	19.1%	23.4%	20.6%
Transfers	credit	161.9	269.3	180.8	197.1	255.6	161.3	243.6	30.4%	42.5%	31.9%	28.5%	45.7%	28.5%	40.9%
	debit	48.6	47.4	37.0	52.0	85.1	113.1	54.2	69.7%	54.5%	49.8%	46.4%	54.2%	59.4%	53.9%
<b>Euro/ecu credit orders</b>															
Goods	export	38.6	46.1	35.6	45.4	581.1	684.4	1,051.2	0.4%	0.5%	0.4%	0.5%	7.1%	7.7%	11.5%
	import	19.6	9.0	9.9	25.5	199.6	397.4	626.9	0.2%	0.1%	0.1%	0.2%	1.9%	3.4%	5.2%
Services	credit	4.9	9.7	15.7	10.7	125.4	173.3	450.6	0.1%	0.2%	0.3%	0.2%	3.2%	3.1%	6.8%
	debit	5.7	9.9	7.0	18.2	19.3	61.3	58.9	0.2%	0.3%	0.2%	0.5%	0.7%	1.8%	1.7%
Income	credit	0.0	0.0	0.0	0.0	0.1	1.4	1.2	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.3%
	debit	0.7	0.1	0.0	13.3	6.9	13.5	2.8	0.1%	0.0%	0.0%	2.6%	1.2%	1.2%	0.3%
Transfers	credit	50.7	82.0	61.5	21.0	148.8	37.0	112.1	9.5%	12.9%	10.9%	3.0%	26.6%	6.5%	18.8%
	debit	0.7	0.1	0.0	13.3	6.9	13.5	2.8	1.0%	0.2%	0.0%	11.8%	4.4%	7.1%	2.8%

<sup>6</sup> Since 1 January 1999 Denmark and Greece are members of ERM2 and their currencies are pegged bilaterally to the euro on a voluntary basis.

In the case of some foreign trade transactions payment is made from accounts in foreign banks or to accounts on which there is no information given in the payment orders. The use of barter deals and trade credit (payments for exports or imports are made later) cannot be excluded either. Therefore, payment orders cannot nor should they correspond exactly to the volume of special export and import fixed on the basis of customs statistics. Moreover, we have to keep in mind that in the balance of payments imports is calculated in f.o.b. prices, while payment orders are in c.i.f. prices (including insurance and transport costs paid in addition

to the price of the goods).

The increase in the share of payment orders in euros after the introduction of the euro can be clearly seen in both export and import of goods (see Table 4 and Figures 3 and 4). Earlier the use of the ecu reached a maximum of 0.5% of the volume of exports or imports, while in the third quarter of 1999 the share of payment orders in euros amounted to 11.5% in exports and 5.2% in imports. Payment orders in euros were used in 16% of incoming export payments and 7.1% of outgoing import payments.

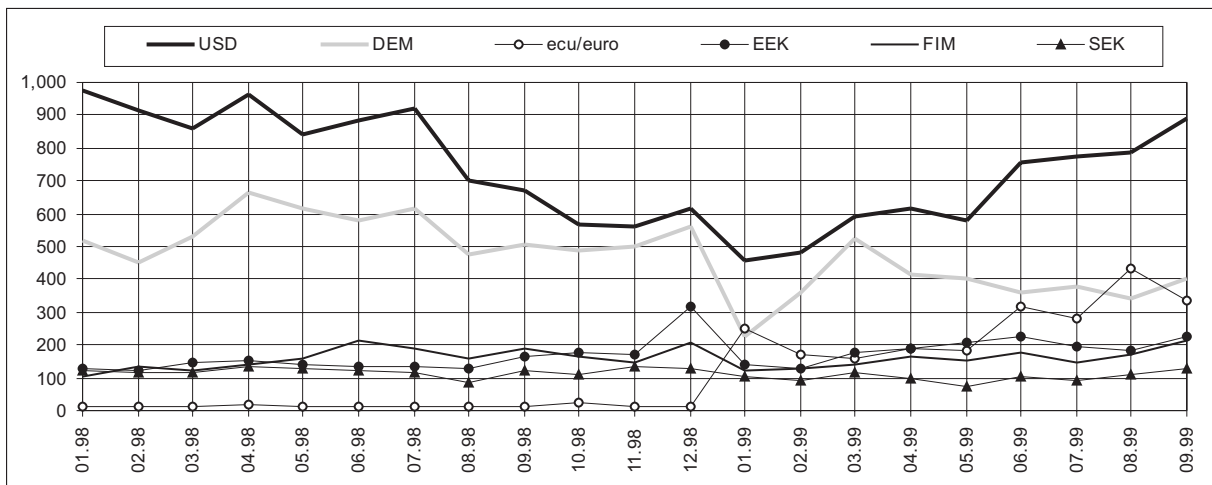


Figure 3. Incoming payments for goods by major currencies (EEK mn)

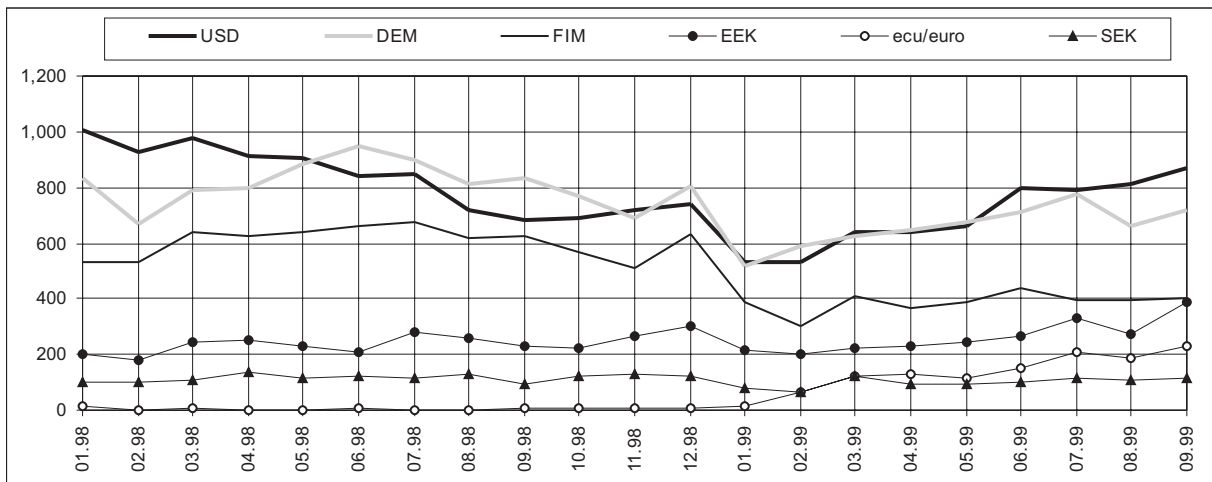


Figure 4. Outgoing payments for goods by major currencies (EEK mn)

The dynamics of the use of the euro by payment orders more or less coincided with the results of the customs data, while in case of other major currencies the differences were more noticeable. Payment orders put the share of the dollar in export and import payments much higher than indicated by the customs data and the share of the Finnish markka lower.

In **services** the payment information is less representative. Understandably, such services as travel or tourism are mostly paid for in cash. Therefore, payment orders reflect only a small part of the export and import of services. Regardless of that, a marked increase could be noticed in the use of the euro in services credit: euro payments were used in 6.8% of the total

volume of services export in the third quarter of 1999. In the export of services, 23.3% of all payment orders were in euros.

Information is most scarce in case of **income** transfers. As income transfers also include reinvested income for which there can be no payment orders, the small share of income transfers reflected in payment orders is understandable and does not allow any substantial conclusions on the extent of the use of the euro.

**Current transfers** are better covered with payment orders. Payment orders in euros covered 18% of all current transfers (46% of incoming payment orders) in the third quarter of 1999. However, the share of payment orders in euros did not exceed significantly the share of earlier payment orders in the ecu (see Figure 5). The volume of transfers in euros varied greatly – unlike payment orders of foreign trade the payment orders of transfers lacked a clear trend.

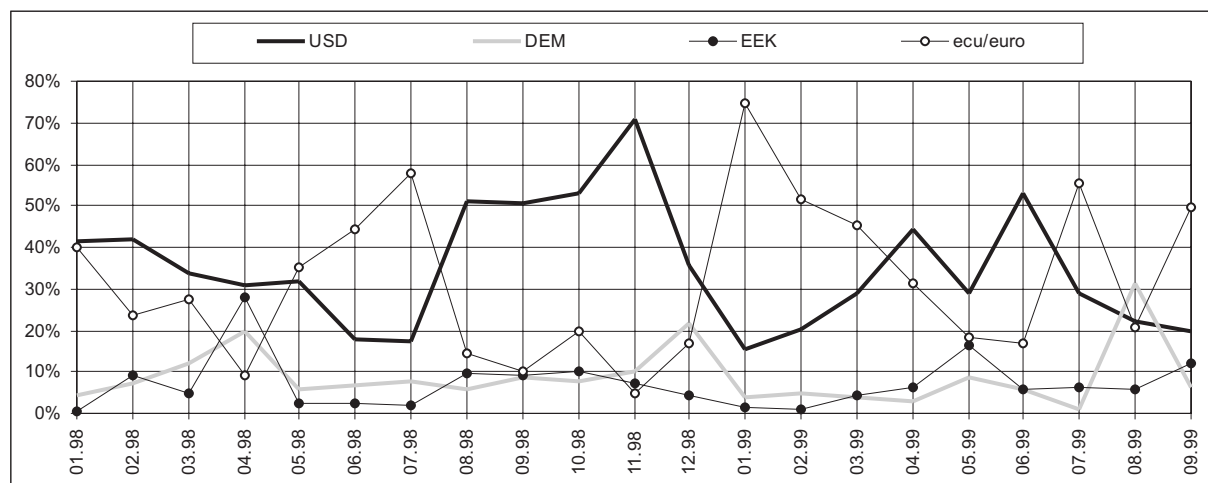


Figure 5. Incoming payments made by transfers, by major currencies

As a whole, the distribution of currencies used in the current account transactions has no big impact on the economy. Although the use of the euro or currencies of the Eurozone countries means lack of exchange rate risk for the parties involved, these transactions are usually

based on short-term contracts in which the exchange rate risk is not very big. The current account transactions do not lead to long-term claims or liabilities in case of which avoiding or hedging of the exchange rate risk would be of greater importance.

## Currency Exchange of the Banks for Settlements in Euros

The introduction of the euro in foreign trade transactions created the need for buying and selling the euro as a settlement instrument. As we can see from Figure 6, the euro at once became one of the most bought currencies by the banks. Purchases of the euro for 4–5 billion kroons per month partly replaced earlier purchases of the German mark.

The share of the euro in account currency purchases stayed within the limits of 30–43% in the first nine months of 1999. The three most important currencies, the dollar, the euro and the German mark, accounted for over 90% of the purchases. However, it has to be noted that in the ten months of 1999 48% of the account currency purchases were made up of purchases from non-resident credit institutions and 16% from Eesti Pank. Purchases from the corporate sector made up 27% of

the total, including 22% from resident companies. Purchases from companies were characterised by the replacement of the purchases of the German mark with the purchases of the euro. In case of other major currencies (USD, FIM, SEK) no significant changes were registered (see Figure 7).

In the sale of account currency the euro with its approximately 4 billion kroon turnover to a large extent replaced the German mark which had a monthly turnover of 9 billion kroons at the end of 1998 (see Figure 8). In early 1999 the euro became as important as the US dollar in the sale of account currency. The three main currencies in sales were the same as in purchases – USD, EUR and DEM – and their combined share also amounted to over 90% of the turnover.



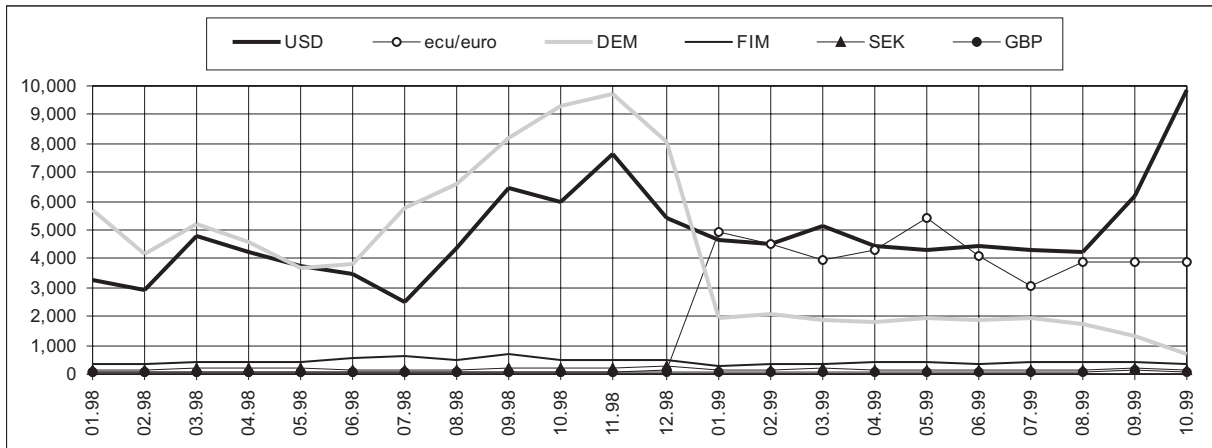


Figure 6. Purchase of account money (EEK mn)

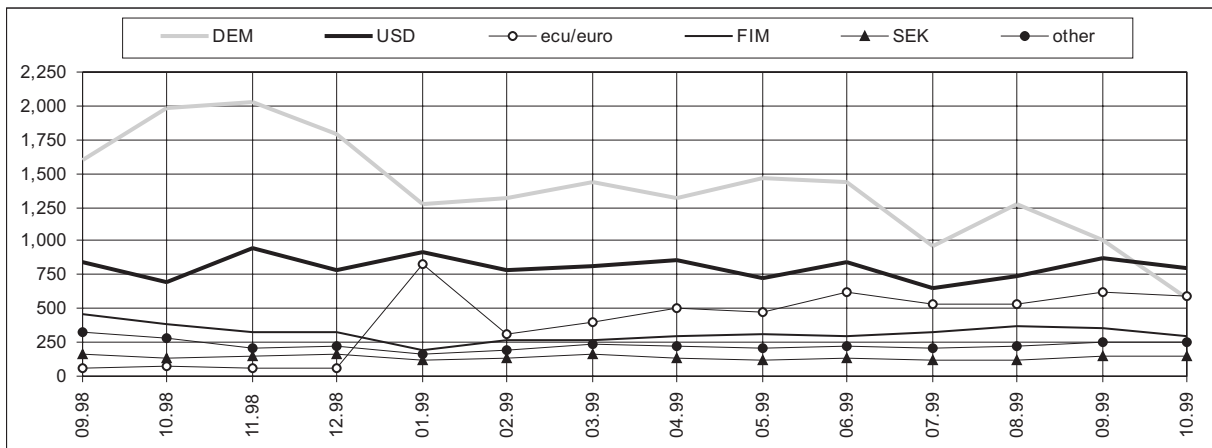


Figure 7. Purchase of account money from companies (EEK mn)

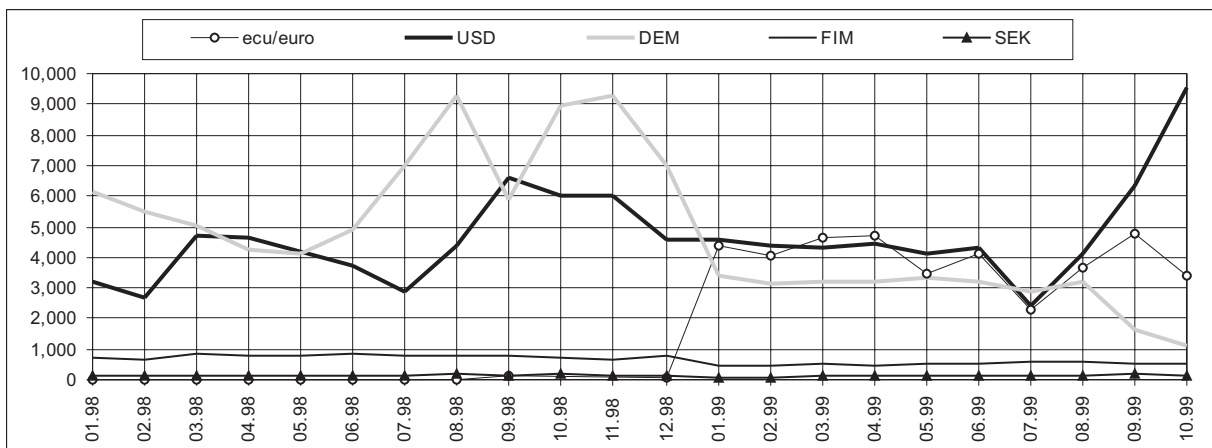


Figure 8. Sale of account money (EEK mn)

The sale of account currency was considerably affected by the currency sold to non-resident credit institutions, which accounted for 46% of the total sales. In ten months, the sales to companies accounted for 26% of the total volume of account currency, with the share of resident companies being 22%. The sale of account currency to companies was also characterised by the reduction of

the sales volume of the German mark, particularly in the second half of 1999, and the gradual increase of the sales volume of the euro (see Figure 9).

The monthly amount of account currency bought from companies and sold to them has remained within the limits of 3 billion kroons. The launch of the third stage

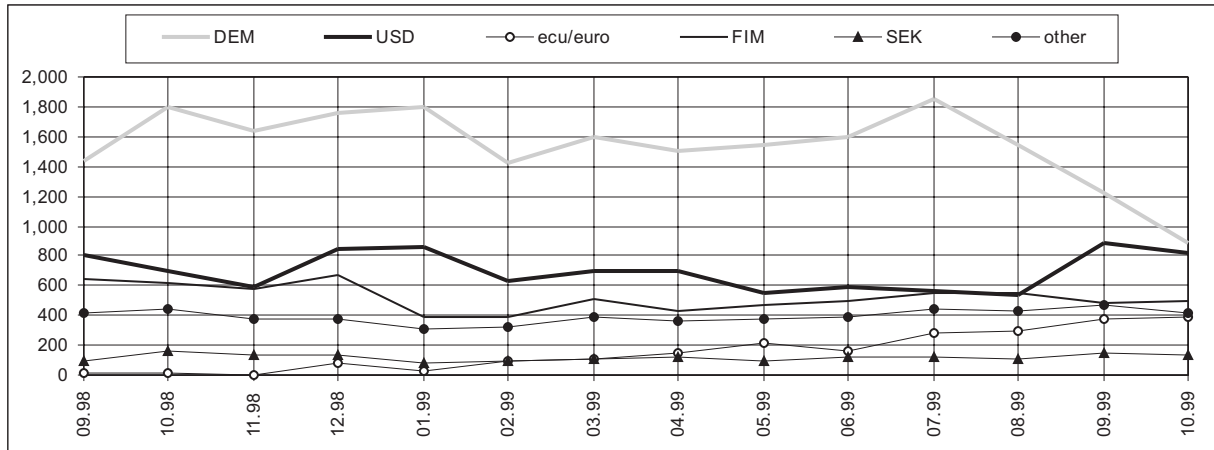


Figure 9. Sale of account money to companies (EEK mn)

of EMU and the introduction of the euro has not considerably changed the volume of the purchases and sales of account currency between companies and credit institutions. The certain replacement of the German mark with the euro does not have any economic significance because both have a fixed exchange rate against the Estonian kroon. In purchases the share of the currencies of the EMU countries and the euro mostly reached 60–70%, while in sales the share of currencies with a fixed

exchange rate was 65–75%, or approximately five percentage points higher.

The total structure of the purchases and sales of the account currency depends greatly on the currencies used in transactions with non-resident credit institutions. In Figures 6 and 8, for example, the increase of the purchases and sales of the dollar in October 1999 mostly derived from changes in transactions with non-resident credit institutions.

## The Use of the Euro in Deposits and Loan Contracts and Its Impact on Interest Rates

### Deposits

Depositing money in Estonian banks was not much affected by the launch of the third stage of EMU and the introduction of the euro. The monthly turnover of foreign

currency deposits remained stable at 2.5 billion kroons since the fourth quarter of 1998 whereas the turnover of kroon deposits decreased considerably (see Figure 10).

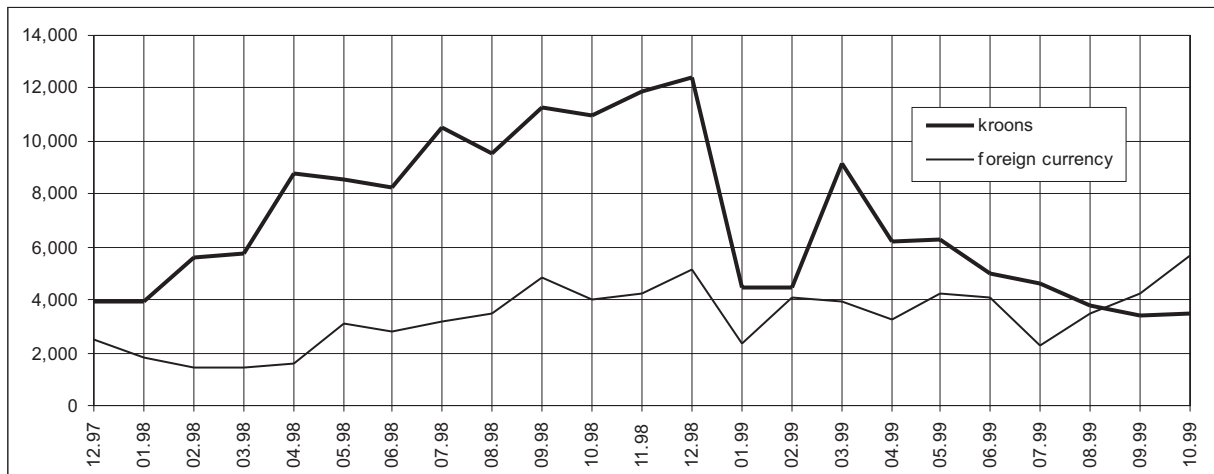


Figure 10. Monthly turnover of kroon and foreign currency deposits (EEK mn)

In the second half of 1998 deposits in foreign currency accounted for slightly over a quarter of the monthly turnover of deposits, while by September 1999 their share had grown to over 50%. However, the turnover of foreign currency deposits did not change considerably – the increase of their share mostly derived from the decline in the turnover of the kroon deposits. The reasons for the reduction of the kroon deposits can be found in the economic cycle (economic recession set in at the end of 1998 and the growth of income slowed down), decline in the interest rates, as well as bank failures (*Eesti Maapank* (Land Bank of Estonia), *EVEA Pank*, *ERA*

*Pank*) and apparently the resulting loss of trust in banks. This trend cannot be associated with the introduction of the euro.

The turnover of foreign currency deposits did not change much across the currencies (see Figure 11). Deposits were mostly in dollars and the turnover of the euro deposits was close to that of the German mark deposits. The turnover of euro deposits accounted for just 5–7% of the total turnover of deposits but 10–18% of the turnover of foreign currency deposits. The share of the dollar (50–80%) was considerable in the turnover of foreign currency deposits.

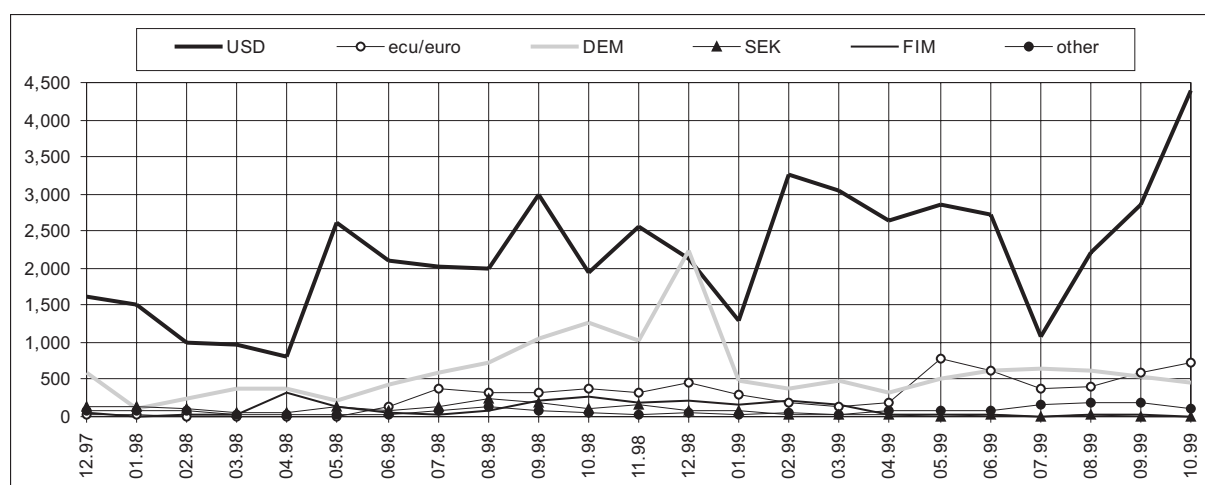


Figure 11. Monthly turnover of foreign currency deposits by currencies (EEK mn)

Changes in the deposit stock were even smaller in 1999. As part of the foreign currency term deposits date back to the period prior to the introduction of the euro, the modest turnover of euro deposits in 1999 had no major impact on the breakdown of the deposit stock by currencies. The share of euro deposits in the total deposit stock amounted to just 1.6% at the end of September (5.4% in foreign currency deposits). Dollar deposits dominated in deposit stock.

## Loans

The structure of the Estonian kroon and foreign currency loans granted by Estonian banks changed little after the launch of the third stage of EMU (see Figure 12).

The decline in foreign currency loans in the first half of 1999 apparently had nothing to do with the introduction of the euro, resulting rather from the overall decline of economic activity, particularly the volume of imports. This decreased the demand for foreign currency used in settlements.

The foreign currency loans were dominated by loans in

The present development does not point to any increase in the exchange rate risk reducing euro deposits. Of foreign currencies, first and foremost US dollars are deposited. One reason for this might be the lack of a negative experience of the currency risk (like there was no experience of a stock market risk prior to the 1997 crisis and no knowledge on how to take it into consideration).

German marks or currencies pegged to the German mark. The monthly turnover of the euro loans increased until May, then stabilised and did not exceed 200 million kroons (see Figure 13). Although in some months the share of loans in German marks fluctuated greatly, from 76% in March 1998 to 28% in August of the same year, the loan stock in German marks has remained stable at 66–68%. The introduction of the euro did not shake the leading position of the German mark as a major currency.

Currently, there is no essential difference between the loans in German marks and euros, since the Estonian

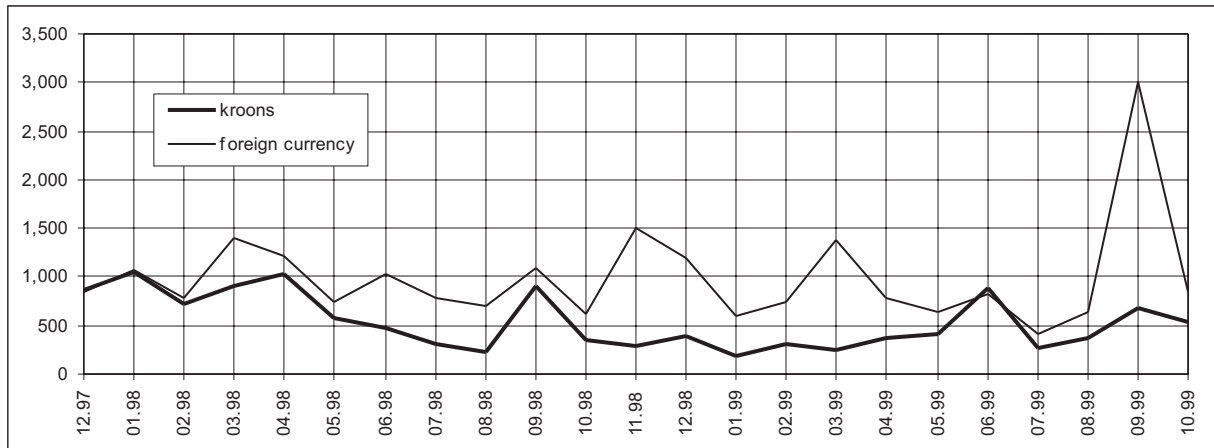


Figure 12. Turnover of loans (EEK mn)

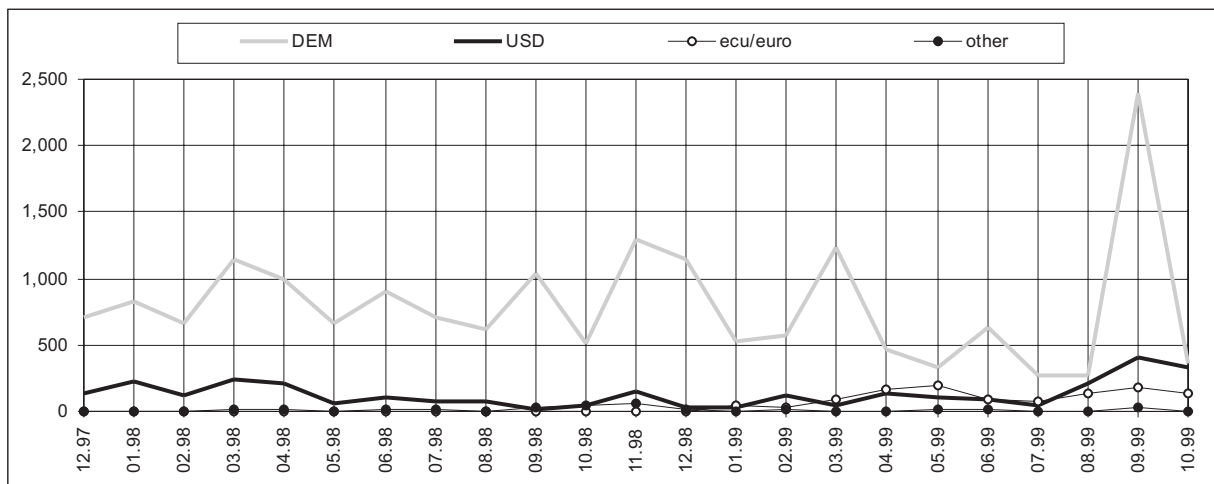


Figure 13. Turnover of foreign currency loans (EEK mn)

kroon is fixed against both. The share of loans in foreign currencies with fluctuating exchange rates (mostly US dollars and Swedish krona) reached 20% in some months but usually remained much smaller. The share of loans in currencies with an exchange rate risk amounted to 6–7% of the loan stock.

Risk bearing dollar deposits dominated in foreign currency deposits, while loans in currencies with fixed

exchange rate dominated in foreign currency loans. It is of no importance whether the loan is given in euros, German marks or Finnish markkas. The launch of the third stage of EMU and the introduction of the euro did not bring about any significant changes in the foreign currency loans issued by banks. The main difference was that the relatively insignificant loans in Finnish markkas became loans with a fixed exchange rate.

## — The Impact of the Euro on Derivative Transactions —

The volume of foreign currency-related derivative transactions decreased considerably in 1999 (see Figure 14). However, the role of the introduction of the euro was apparently of no significance in this development. As the total volume of derivative transactions depends mostly on the evaluation of the external environment of the financial markets and a concrete currency, the large volume of derivative transactions in 1998 can be attributed to the Russian crisis

and the spread of its impact into the Baltic region which prompted foreign investors to use forward dealings to hedge the investment risks. The volume of the transactions was boosted by speculators. But since the situation has stabilised in the financial sector and the attitude of the investors has improved, the volume of derivative transactions has reduced. Thus we can say that the introduction of the euro has not reduced the trust in the kroon.

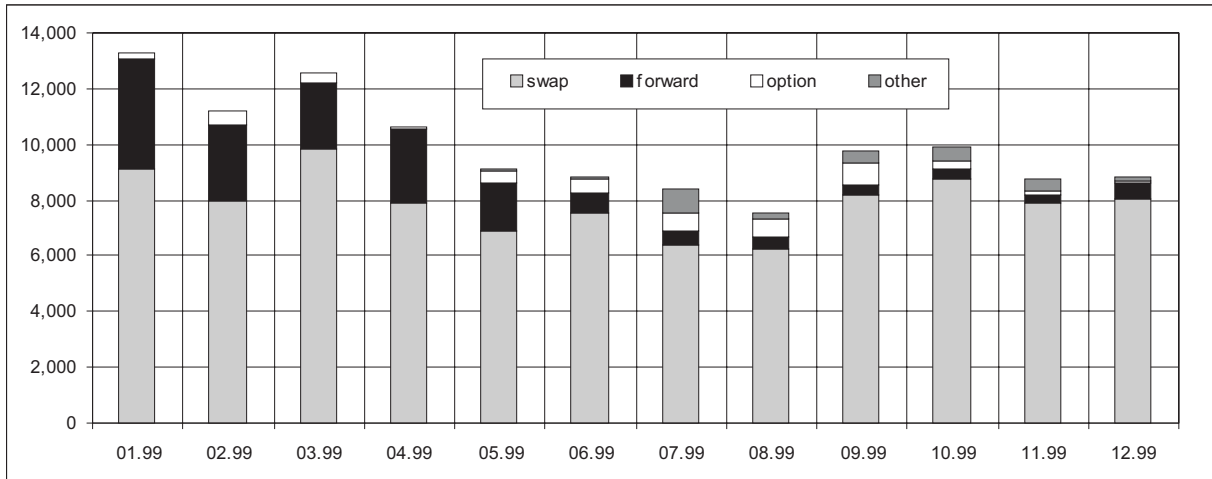


Figure 14. Volume of foreign currency-related derivatives (EEK mn)

### Forward Dealings

In 1997–1998 the total volume of forward dealings at one point exceeded 10 billion kroons, while at the end of September 1999 their volume amounted to just 382 million kroons (see Figure 15). Besides the reasons described above, the volume of forward dealings has probably decreased by changes in instruments and emphasis on swap contracts and issuing of kroon-denominated bonds.

The share of non-residents has decreased considerably in forward dealings. At the end of 1998 non-residents were the second party in 80% of the transactions, while in the second half of 1999 their share stood around 30%. Thus, the volume of transactions decreased mainly due to the decline in the share of non-residents, which should confirm the change of attitude of foreign investors towards the kroon. In a stable situation the role of speculators was also insignificant.

According to the reports of credit institutions, forward dealings can be divided into three categories (see Figure 16):

- the Estonian kroon is one of the currencies in the majority of transactions;
- another large group is made up of forward dealings using the US dollar as one currency and the euro or the German mark as the other in 99% of the cases;
- forward dealings with other currencies account for 3–4% of the total volume.

The maturity structure of the forward contracts in turn reflected lack of activity: at the end of September up to six-month transactions made up 34% of the total, while in six months time the maturity of 96% of the transactions expired.

Forward dealings with currencies of the EMU countries, which might have decreased after the introduction of the euro, were practically non-existent before the introduction of the euro.

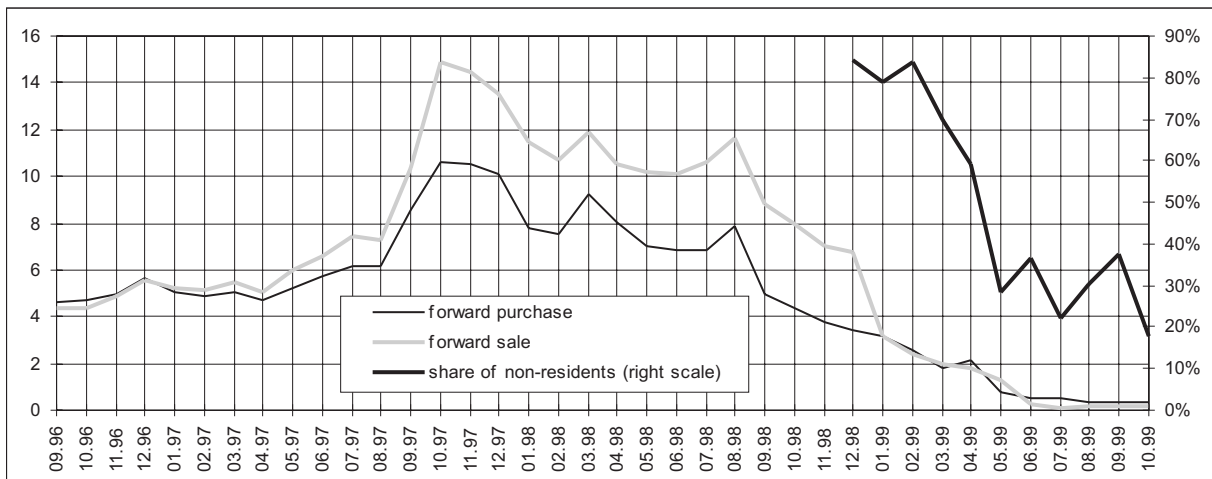


Figure 15. The volume of forward deals (EEK mn) and the share of those made by non-residents (%)

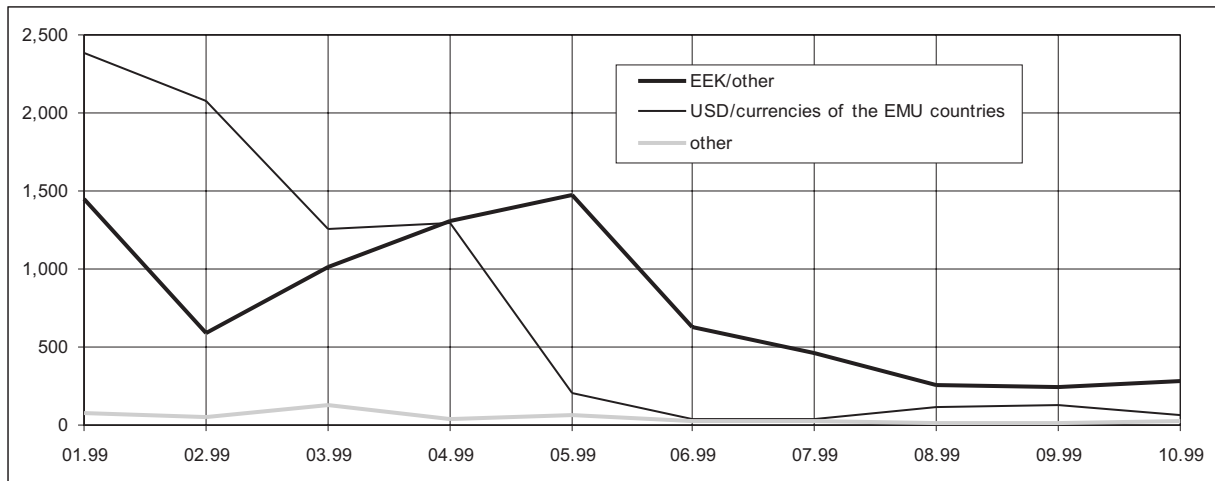


Figure 16. Forward deals by currencies (EEK mn)

### Swap Contracts

The volume of swap contracts fell by approximately one third as compared to the end of 1998 (see Figure 17). At the end of 1998 swap transactions between the kroon and the German mark made up some 60% of the total volume of such contracts, while at the end of September

1999 the share of the kroon, the euro and the EMU countries' currencies was approximately of the same size (including EEK/DEM 23%, EEK/EUR 30% of the total volume of swap transactions). The maturity structure did not change much in the first nine months of 1999:

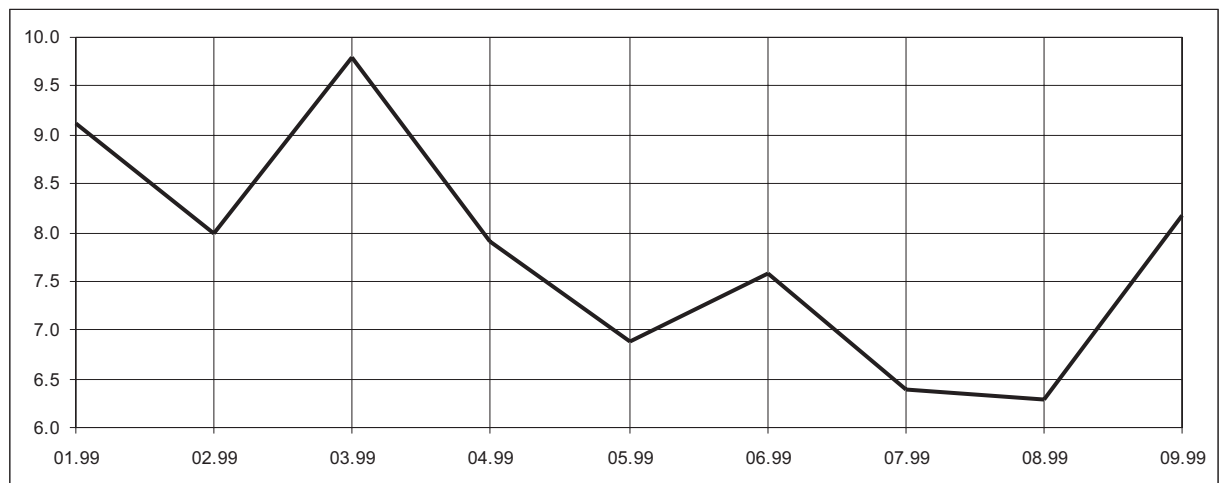


Figure 17. Swaps (EEK billion)

transactions with the term of up to 12 months accounted for some 80%, of which 30% were with the term of up to one month. In forward dealings the kroon position was short in the third quarter of 1999, while due to swap transactions the position of derivatives was long throughout the year.

The attractiveness of the transactions was probably also reduced by the decline of the interest margin and the increase of guarantee sums. The decrease of the volume

of derivative contracts was also supported by the decrease of exports and imports and the volume of investments in 1999.

Thus, if we study the structure of the transactions by currency and residency and take into account also changes in the economic environment and the stability of the financial sector, the role of the introduction of the euro can be regarded as insignificant in the decline of the volume of derivative transactions.

## The Impact of the Euro on the Estonian Financial Markets Through Foreign Capital Flows

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The impact of the euro on the Estonian financial markets through foreign capital flows should first and foremost

be reflected in foreign portfolio and other investments, and to a lesser extent in foreign direct investments.

### **The Impact of the Euro on the Interest Rates of the Eurozone Countries**

First of all the introduction of the euro can influence foreign capital flows directed to Estonia through its impact on the interest rates of the Eurozone countries. In view of the widely spread opinion that foreign investments into developing countries in the 1990s have been significantly influenced by the level of nominal interest rates in developed countries<sup>7</sup>, the decline of the interest rates in the Eurozone, all other conditions being equal, should facilitate capital flows into Estonia and vice versa.

In the first half of 1999 interest rate level of the Eurozone was lower than in the two previous years. However, this was most likely a reflection of the decline in economic activity of the so-called core countries of the Eurozone rather than the interest rate reduction associated with

the introduction of the euro. At the same time the interest rate level of the Eurozone countries have been slightly increasing since the third quarter of 1999. Supposing that economic growth in the Eurozone is accelerating, we can expect an increase of the interest rates. All other conditions being equal, this tendency will have a negative impact on foreign investments made into Estonia. As the positive impact of the euro on the economies of the Eurozone countries (the increase of efficiency deriving from the reduction of the cost of transactions and the deepening of macroeconomic stability due to the elimination of the exchange rate risks) should first of all become manifest in the medium term, we can suppose that the impact of the introduction of the euro on the interest rates of the Eurozone will remain relatively modest, at least in the immediate future.

### **The Impact of the Euro on the Diversification of the Asset Portfolio of Investors**

The euro can influence the Estonian financial sector also by encouraging the investors of developed countries (Western Europe, first of all) to diversify their asset portfolios more than so far. The importance of this kind of impact is underlined by the fact that in the 1990ies foreign investments into developing countries (including CEE countries) have been facilitated namely by the desire of the investors to diversify their asset portfolios (World Bank, 1997). This trend is partly testified by the fact that as compared to earlier decades the share of portfolio investments into equity securities has made a sudden jump in the structure of portfolio investments into developing countries. On one hand, this diversification has been facilitated by the deepening of the capital markets of the developing countries. On the other hand, this trend has been supported by the low mutual correlation between changes in the income earned from investments made into developing countries and into industrial countries.

Bodart and Reding (1996) and Frankel (1996) have found that the stability of the exchange rates and economic

integration increases the correlation between price changes of the stock exchanges of those countries. Supposing that the introduction of the euro will help to deepen economic integration of the Eurozone countries and lead to the evening out of the cyclical development with the Eurozone, the price changes of financial assets can also become more harmonised in the Eurozone. This tendency may force EU investors to seek new investment opportunities outside the Eurozone in order to diversify their asset portfolios. In other words, such development should increase capital flows into CEE countries. Such investments may also be supported by the fact that due to the launch of the third stage of EMU, the interest rates of the southern EU countries (Portugal, Spain, Italy and, to a lesser extent, Greece) have approached the interest rate level of the core countries of the EU. As investors strive to diversify their asset portfolios so that to include assets with different yield and risk combination, the southern EU countries could be partly replaced with the CEE countries. In view of the IMF the most suitable candidates would be the Czech Republic, Poland, Hungary and Slovenia.

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<sup>7</sup> See, for example, Calvo, Leiderman and Reinhart (1993) and Fernandez-Arias and Montiel (1996).

But still we could presume that in the near future the tendency described above would have no significant impact on the Estonian financial markets<sup>8</sup>. First of all this can be put down to the smallness of the Estonian

stock market and its low liquidity. However, supposing that in the medium and long term the stock market will deepen and its institutional framework is improved, this impact should increase.

**The Impact of the Euro on Investments into the Eurozone and Borrowing from the Eurozone**

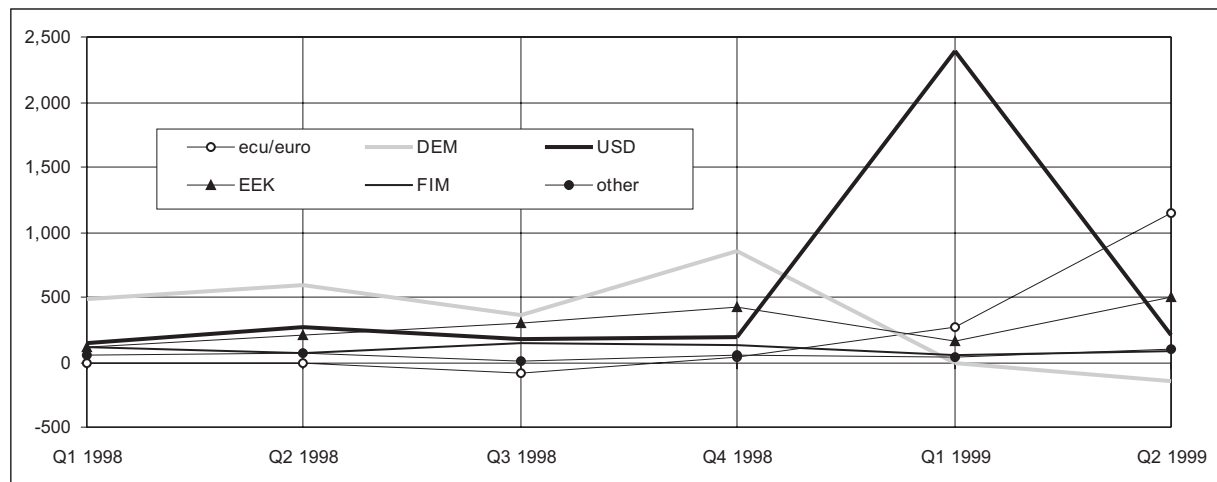
Prati and Schinasi (1997) and McCauley and White (1997) have said that the integrated, larger and more liquid stock exchange of the Eurozone deriving from the third stage of EMU will boost foreign investments into the Eurozone. If this scenario is to become true, investors of the CEE countries (including Estonian financial institutions) may increase their investments into the Eurozone countries. Also, EU investors may curb investments outside the Eurozone. According to the ECB (ECBc, 1999), however, the surplus of the Eurozone financial and capital account did not increase in the first half of 1999 – while in the first half of 1998 the net inflow of capital amounted to 8.6 billion euros, then in the first half of 1999 capital outflow from the Eurozone exceeded inflow by 28.7 billion euros.

surplus of Estonia’s financial account reached some 4.6 billion kroons and the increase of residents’ external claims (according to capital flows) amounted to 1.9 billion kroons, while in the first six months of 1999 the respective figures were approximately 2.5 billion and 5.2 billion kroons. Still, it would be premature to link these developments to the introduction of the euro. Most probably the relatively small surplus of the first half of 1999 first of all reflected low domestic demand and the rapid increase of external claims resulted from the big capital inflow due to the privatisation of *Eesti Telekom*.

In the first half of 1999 the surplus of the Estonian financial account decreased and investments from Estonia abroad increased. In the first half of 1998 the

*The Share of the Euro in Foreign Capital Flows*

At the same time, the share of the euro in foreign capital flows increased sharply in 1999: in the first quarter it stood at 9%, in the second quarter at 61% (see Figure 18)<sup>9</sup>. The share of the euro was the highest in foreign portfolio investments and other investments.



**Figure 18. The share of major currencies in foreign capital flows (EEK mn)**

Data on the share of major currencies in foreign capital flows indicate that the sharp increase of the share of the euro mainly took place on the account of the German mark. In 1998 the share of the German mark amounted to approximately 50% in foreign capital flows, while in 1999 the role of the mark decreased sharply. However,

the first half-year data do not indicate any significant decline in the exchange rate risk of the foreign capital flows. Namely, in the first two quarters of 1999 the share of the US dollar increased sharply. However, this can be put down to a single large transaction in the first quarter of 1999.

<sup>8</sup> In the first half of 1999 the share of foreign portfolio investments in the structure of foreign capital flows into Estonia increased considerably but this was mostly due to the privatisation of *Eesti Telekom* (Estonian Telecom).

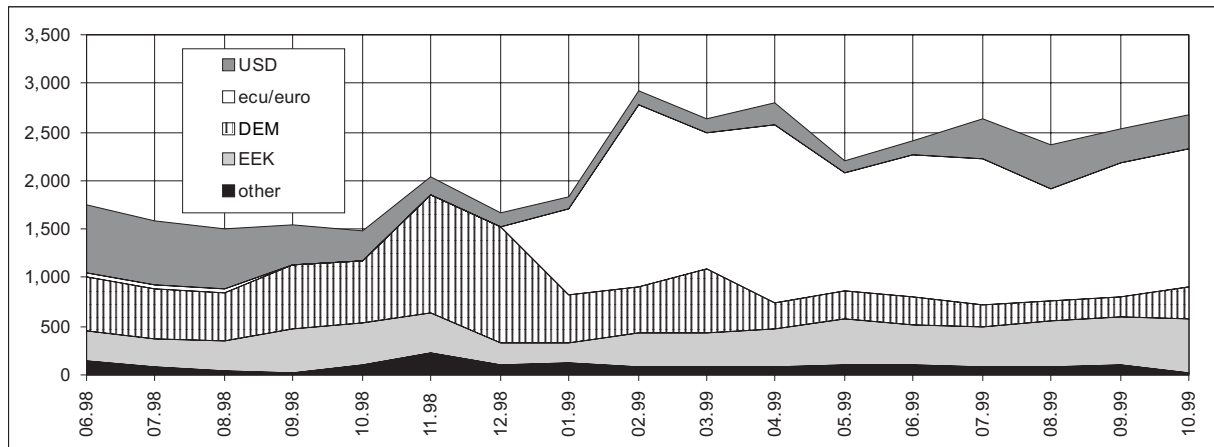
<sup>9</sup> The data on the share of the euro in foreign capital flows do not reflect all the items of the balance of payments and therefore the data below are estimations.



*The Share of the Euro in the External Claims and Liabilities of Estonian Credit Institutions*

The first ten months of 1999 indicated an increase of the share of euro-denominated foreign assets and liabilities of the Estonian banks. Particularly clearly could this tendency be seen in the structure of the banks' foreign assets.

In 1999, the share of euro deposits increased sharply in the structure of deposits placed by Estonian banks with foreign credit institutions abroad. As we can see from Figure 19, by the end of the second quarter euro deposits made up approximately half of all deposits kept abroad. The increase of the euro deposits was achieved through the decrease of deposits in German marks. In December 1998 the share of the German mark deposits amounted to 28%, while in October 1999 it had fallen below 1%.

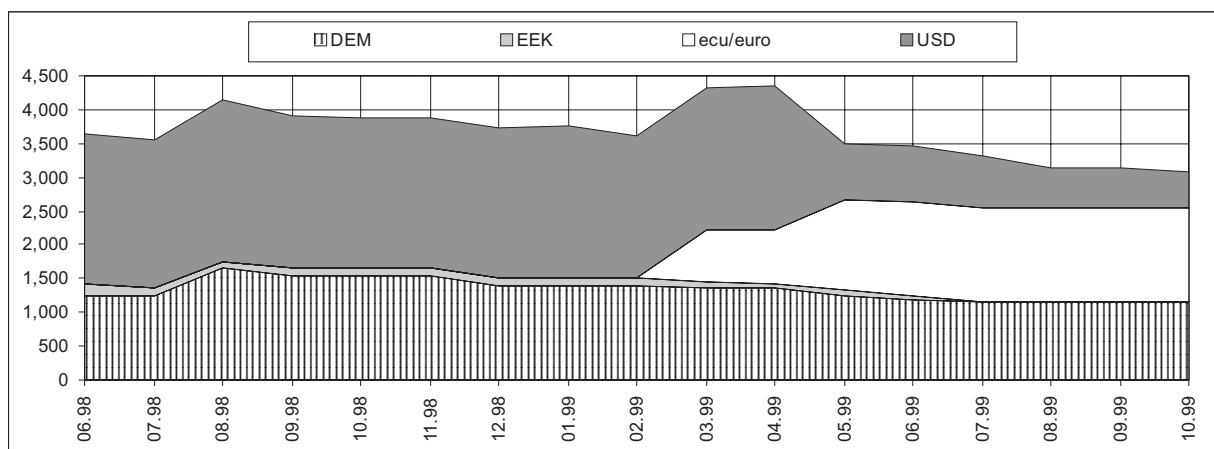


**Figure 19. Deposits of Estonian banks in foreign credit institutions by currencies (EEK mn)**

Similarly, the share of euro-denominated securities increased in the security portfolios of Estonian commercial banks (see Figure 20). This was most clearly manifested in the case of foreign securities with a fixed yield. Thus, the share of euro-denominated fixed-income securities amounted to 54% in October 1999. This change became apparent already in January when the share of the euro-denominated fixed-income securities rose to 48%. Just like in the case of deposits in foreign banks,

this structural change took place on account of the decrease in the share of the German mark-denominated securities.

Compared to foreign assets, the increase of the share of the euro-denominated liabilities was clearly smaller. Thus, for example, the euro accounted for just 1.2% of the loans taken by Estonian banks from foreign credit institutions<sup>10</sup>. The share of euro deposits of non-residents



**Figure 20. The structure of fixed-income foreign securities in the portfolios of Estonian banks by currencies (EEK mn)**

<sup>10</sup> At the end of September 1999 such loans amounted to 3.8 billion kroons, ie to 27% of the external liabilities of the banking sector.

(excluding foreign credit institutions) in Estonian banks was just 0.6%<sup>11</sup>. At least the exchange rate risk of the loans taken by Estonian banks from foreign credit institutions is minimal, since at the end of October 1999 95% of the loans were taken in German marks. The exchange rate risk of deposits kept in Estonian banks by non-residents is considerably higher, since 60% of such deposits were in US dollars.

Still, we can presume that in short term the share of euro-denominated external liabilities should increase at least

in the case of loans taken from foreign credit institutions. This claim is partly supported by the fact that in 1999 the share of euro-denominated bonds issued by Estonian banks increased considerably in the structure of bonds<sup>12</sup>, amounting to 45% by the end of October (see Figure 21). Unlike in the case of external assets, the share of euro-denominated bonds has increased on account of the decrease of the dollar-denominated bonds: at the end of 1998 the latter made up approximately 60% of all bonds, while at the end of October 1999 their share had shrunk to slightly under 20%.

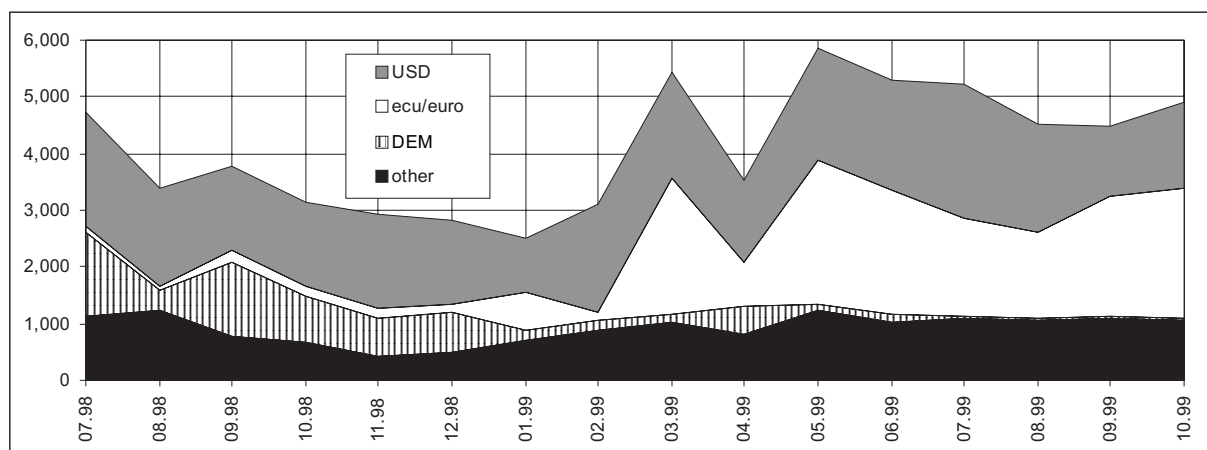


Figure 21. The structure of bonds issued by Estonian banks by currencies (EEK mn)

To a lesser extent the increase of the share of the euro can be seen in the deposits attracted by Estonian banks from foreign credit institutions. At the end of October 1999 this share was 17%. Similarly to changes in the external assets of Estonian banks the increase of the euro-

denominated external liabilities took place on account of the share of the German mark decreasing (see Figure 22). The volume of the respective dollar-denominated deposits was practically unchanged in the first ten months of 1999.

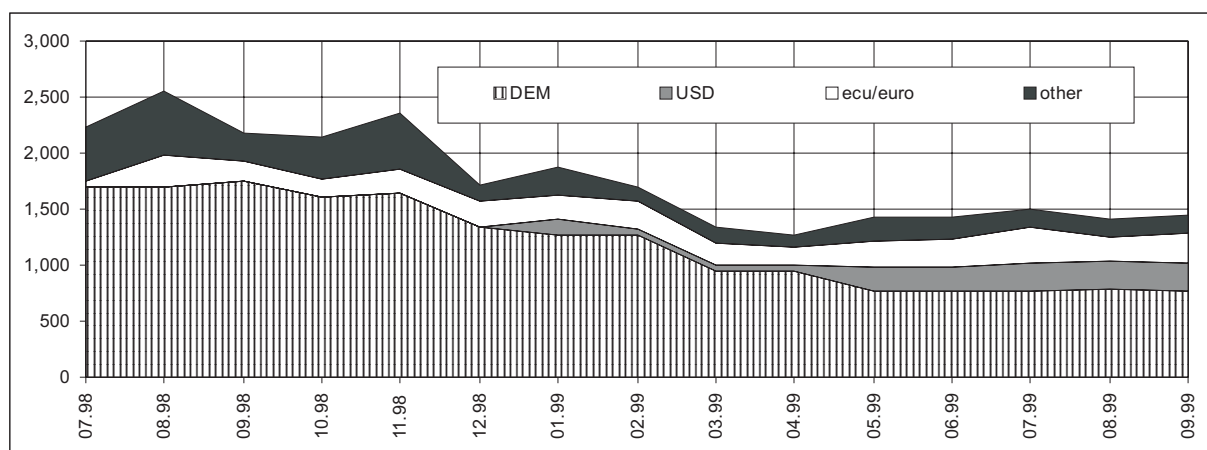


Figure 22. The structure of deposits of foreign credit institutions incorporated by Estonian banks by currencies (EEK mn)

<sup>11</sup> At the end of September 1999 these deposits amounted to 3.3 billion kroons, ie to 24% of the external liabilities of the banking sector.

<sup>12</sup> Bonds issued by Estonian credit institutions and held by non-residents.

In conclusion we can say that the increase of the share of euro-denominated external assets and liabilities mainly occurred on account of the German mark. Therefore, the exchange rate risk of the external claims and liabilities of Estonian banks did not decrease much.

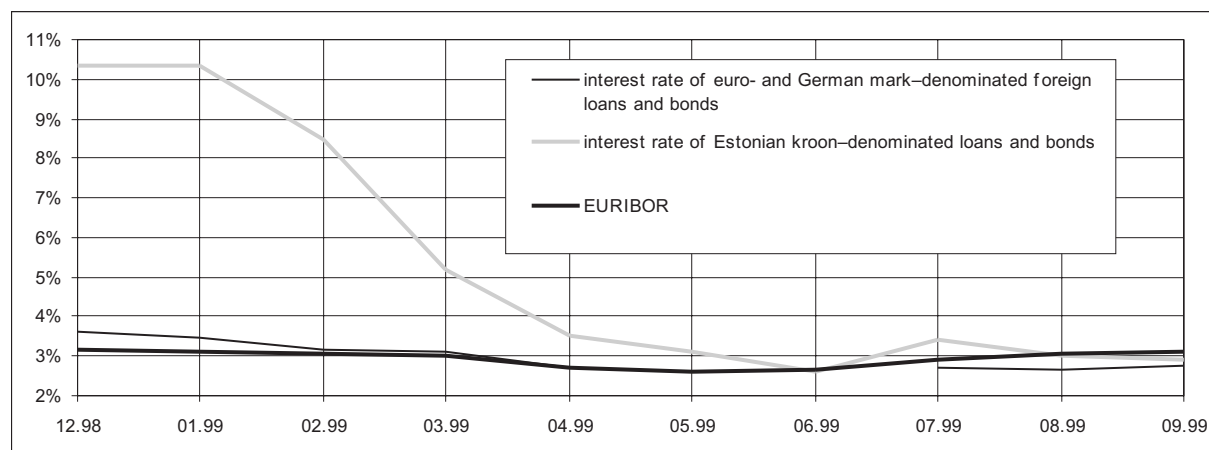
#### *The Cost of Funds Raised by Credit Institutions Abroad and Its Link with Estonian Interest Rates*

As we could see from the above, the change of interest rate level in the Eurozone should also affect foreign investments into Estonia – all other conditions being equal, the fall of interest rates in the Eurozone should favour foreign capital flows into Estonia and vice versa. At the same time, the change of interest rate level in the Eurozone could also have a significant impact on interest rates in Estonia. Should the integration of the financial markets of Estonia and the Eurozone increase, Estonian interest rates should depend more and more on the

developments in the money and capital markets of the Eurozone. In order to estimate this possible link we take a brief look at the changes that have taken place in the cost of foreign euro- and German mark-denominated capital (more specifically, foreign loans and bonds sold to non-residents) raised by Estonian banks and the interest rates of the Eurozone.

In the first half of 1999 money market interest rates fell in the Eurozone. The three-month EURIBOR was 3.17% in December 1998, but 2.58% in May 1999 (the six-month EURIBOR was 3.14% and 2.6%, respectively). From May, EURIBOR started to rise and by September 1999 it stood at 2.73% and 3.1%, respectively.

As we can see from Figure 23, in the first three quarters of 1999 the changes in the cost of less-than-three-month euro- and German mark-denominated external funds (loans and bonds) raised by Estonian banks and the three-



**Figure 23. Interest rates of less-than-three-month foreign loans and bonds, and three-month EURIBOR (%)**

month EURIBOR were to some extent similar. Like the three-month EURIBOR, the cost of the foreign funds raised by Estonian banks for less than three months fell in the first five months of 1999 – if in December 1998 the average interest rate was 3.6% then in May 1999 the rate was 2.7%.

In the first three quarters of 1999 the dynamics of the cost of the 3–6-month euro- and German mark-denominated foreign funds raised by Estonian banks and the 6-month EURIBOR were similar. Like the 6-month EURIBOR, the cost of the 3–6-month funds raised by Estonian banks decreased somewhat in the first months of 1999 (from 3.3% in December 1998 to 2.7% in April 1999) and then increased slightly in the third quarter (to 3.1% in September; see Figure 24). Another significant fact is that the interest rates of foreign loans taken by Estonian banks (for up to six months) and bonds sold to

non-residents were practically equal to the rates of the Eurozone money market instruments of similar maturity. Therefore, we can presume that changes in the interest rate level of the Eurozone money market are and will be one of the main factors affecting the euro-denominated short-term foreign funds.

At the same time it has to be taken into account that Estonian interest rates are particularly dependent on the cost of foreign long-term credit resources attracted by Estonian banks. At the moment we can not see any clear link between the cost of euro-denominated long-term foreign loans and bonds sold to non-residents and the interest rate level of the Eurozone. As we know, in the first half of 1999 the interest rates of long-term loans fell slightly against 1998. However, the interest rates of long-term euro-denominated foreign loans taken by Estonian banks and the interest rates of bonds in the first

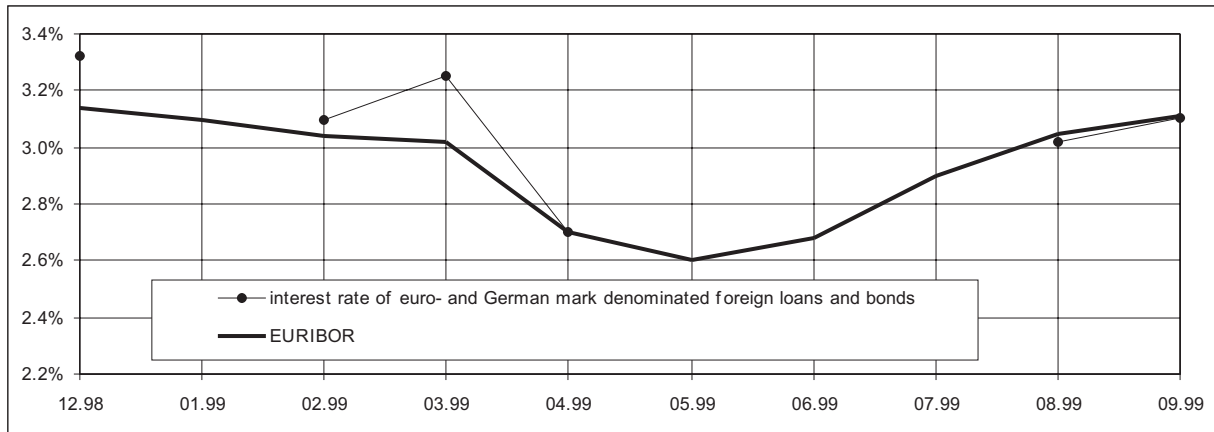


Figure 24. Interest rate of 3–6-month foreign loans and bonds, and 6month EURIBOR (%)

nine months of 1999 exceeded the level of 1998 (see Figure 25)<sup>13</sup>.

funds raised by Estonian banks has been broadly similar to changes in the interest rates of the Eurozone, the interest rate level of the Estonian money market differed greatly from the level of the Eurozone (see Figure 26). This can first and foremost be seen from the dynamics

Regardless of the fact that the dynamics of the cost of short-term euro- and German mark-denominated foreign

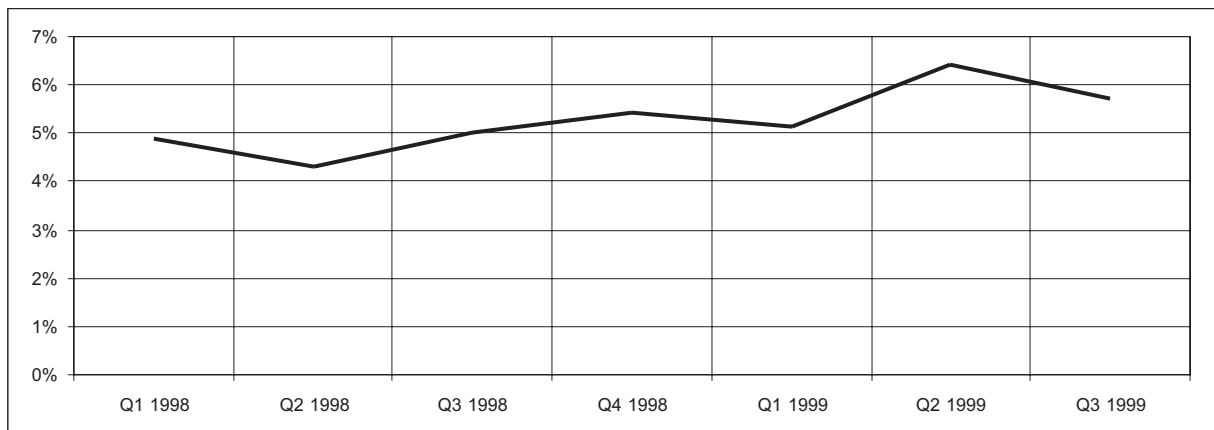


Figure 25. Interest rate of euro- and German mark-denominated foreign loans and bonds with the maturity exceeding 6 months (%)

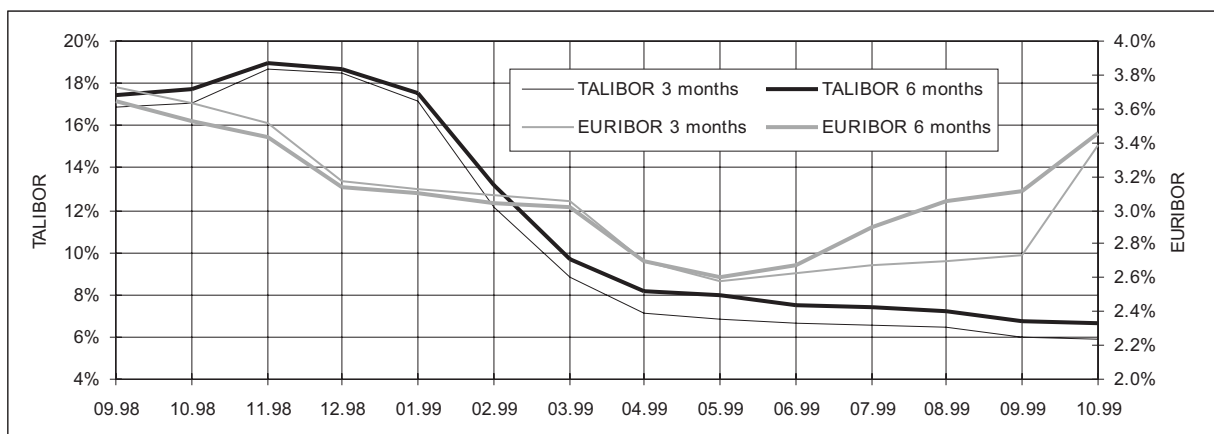


Figure 26. TALIBOR (left axis) and EURIBOR (right axis; %)

<sup>13</sup> This was partly due to the fact that in the first nine months of 1999 the terms of foreign loans taken by Estonian banks and the terms of bonds sold to non-residents were longer than in 1998.

of TALIBOR and EURIBOR – at the end of 1998 EURIBOR fell, while TALIBOR increased. During the slight increase of EURIBOR in June 1999 TALIBOR continued to fall. Changes in TALIBOR have first and foremost depended on the liquidity level of the banks and risk estimations on the kroon forward dealings market. We can presume, however, that in case of generally positive economic development the decrease of interest rate level of the Estonian money market should continue in the near future. As a result, the impact of changes in the interest rates of the Eurozone on the rates of the Estonian money market should probably continue to increase. However, it has to be stressed that the expected levelling of short-term interest rates might not derive from the introduction of the euro but rather from the gradual integration of the Estonian financial sector with the EU financial markets.

After the launch of the third stage of EMU interest rate level continued to fall, bringing the interest rates of loans granted to companies down by approximately one percentage point in 1999 (ECBb, 1999). A similar trend could also be seen in the Estonian loan market. The

interest rates of loans in Estonian kroons, German marks, euros<sup>14</sup> and dollars, which in December 1998 had been 16.54%, 11.05%, 11.47% and 12.78%, respectively, fell to 9.45%, 10.56%, 10.1% and 10.3%, respectively, by October 1999. However, it would be too hasty to attribute the decline of loan interest rates in Estonia to the decline of interest rate level in the Eurozone. Most likely, the 1999 fall in loan interest rates reflected low demand, conservative loan policy of the banks<sup>15</sup> and their higher liquidity.

The share of euro-denominated deposits and deposits in currencies pegged to the euro is relatively small – approximately 6% of all deposits. Therefore, the impact of the Eurozone interest rates should remain relatively limited although the nominal interest rates of deposits fell in the first ten months of 1999 similarly to the loan interest rates. This probably reflected the increased liquidity of the banks as well as the fall in the inflation rate. The impact of the Eurozone interest rate level (let alone the impact of the introduction of the euro) on the interest rate of deposits was relatively modest.

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## In Conclusion

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The launch of the third stage of the European Economic and Monetary Union (EMU) and the introduction of the euro from 1 January 1999 had a considerable impact on the entire world economy. The euro rose to the second most important currency after the US dollar and it became to be used in various transactions also by countries outside the Eurozone.

The introduction of the euro had a certain impact also on Estonia. Right after the launch of the third stage of EMU the euro became to be used as a means of payment in Estonia's exports and imports. The euro was most extensively used in foreign trade transactions with Finland. But still, the euro did not become a dominating currency in trade with Finland. On the contrary, the share of euro transactions was the biggest in trade with such partners as Spain, Ireland, Canada, Portugal, etc. Apparently, the advantages of the euro as a universal means of payment became most clear in case of less common currencies.

In foreign trade, another important result of the third stage of EMU and the introduction of the euro was the elimination of the exchange rate risk in transactions with currencies of the Eurozone countries. In 1998 settlements

in Estonian kroons and German marks (for Estonian companies, currencies with a fixed rate, that is, currencies with no exchange rate risk) accounted for 36% of the special export, according to customs statistics, while by June 1999 the volume of settlements in Estonian kroons, euros and currencies of the Eurozone countries amounted to 66% of the special export. In special import, the share of exchange rate risk-free settlements increased from 29% in 1998 to 66% by June 1999. The reduction of the exchange rate risk should lower the cost of foreign trade transactions (presuming that so far forward dealings had been used to hedge this risk). This helps to increase the competitiveness of the foreign trade.

The use of the euro in foreign trade transactions was one of the reasons that gave rise to the need to buy and sell euros as an account currency. Already from January 1999 the euro rose to the third place after the German mark and the US dollar in the list of currencies bought by banks from businesses. In the last months of the year the purchases of the German marks from businesses declined and in October the euro purchases exceeded them in terms of volume.

In the sale of the account currency to businesses the share

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<sup>14</sup> Euro-denominated loans are compared to January 1999.

<sup>15</sup> The conservative loan policy of the banks meant that more attention was paid to the quality of the loan projects than a couple of years ago and that more was lent to finance project with a lower risk level. This, in turn, led to lower interest rates.

of the German mark has been decreasing in recent months and the share of the euro has kept increasing. However, until October the volume of the sale of euros was considerably below the sale of marks and dollars but was catching up with the Finnish markka.

The deposits turnover of Estonian credit institutions is characterised by the decline in the turnover of kroon deposits, with the monthly turnover of foreign currency deposits remaining relatively stable. The latter are dominated by the dollar (50–80% of the monthly turnover) but in recent months the turnover of the euro deposits has amounted to approximately 15% of the total turnover of foreign currency deposits. Still, the share of the euro in the deposit stock has stood at approximately 2% in recent months (5–7% of the foreign currency deposit stock).

In the banks' loan turnover the share of foreign currency loans is considerably bigger. The German mark is still dominating among the foreign currencies, followed by the dollar and the euro. The introduction of the euro has not weakened the leading role of the German mark but due to the fixed exchange rate this has no great significance. An important difference from deposits is that while foreign currency deposits were dominated by the fluctuating-rate dollar, the fixed-rate German mark and the euro accounted for over 80% in the turnover of foreign currency loans. The share of the fluctuating-rate currencies (mostly the dollar and the Swedish krona) has reached 20% in some months only.

The volume of foreign currency related derivative transactions fell considerably in 1999. However, this cannot be attributed to the impact of the introduction of the euro but rather to the decline in foreign trade and investments. The large volume of derivative transactions in earlier years was also a result of the evaluation of the environment on financial markets and the currencies. Derivative transactions were used for both hedging the investment risks and speculating.

The launch of the third stage of EMU and the introduction of the euro changed somewhat the motivation of foreign investors to invest into Estonia. Together with the levelling out of the interest rates this could increase the interest of foreign investors to invest into transition economies, first and foremost in order to diversify their portfolios.

The first half of 1999 was characterised by the decrease in the surplus of the financial account and the increase of investments from Estonia abroad. However, this can be attributed to low investment demand and foreign capital inflow after the privatisation of *Eesti Telekom* (Estonian Telecom) rather than to the introduction of the euro. The currency structure of foreign capital flows

changed considerably in 1999. In the first quarter the share of the euro amounted to 9%, while in the second quarter it was already 61%. The share of the German mark reduced considerably in capital flows.

From the beginning of 1999 the structure of the foreign assets of the Estonian banks changed considerably. The share of euro-denominated deposits abroad increased to approximately 50% by the end of the second quarter, mainly due to the decrease of deposits in German marks. In the securities portfolios of Estonian banks the share of euro-denominated securities increased, reaching 54% of the fixed-income securities in October.

The increase in the share of euro-denominated foreign liabilities was smaller than the increase in the share of foreign claims. Thus, the euro accounted for just 1.2% of the loans taken by Estonian banks from foreign credit institutions. However, in the bonds issued by Estonian banks to non-residents the share of the euro amounted to 45% in October 1999.

The cost of short-term (up to three months) euro- and German mark-denominated foreign funds raised by Estonian banks decreased considerably in 1999 and was nearing EURIBOR. The cost of the 6month capital was also nearing EURIBOR.

At the same time the development of the Estonian money market differed considerably from the money market of the Eurozone. The fall of the 3month and 6month TALIBOR followed the pattern of EURIBOR until May 1999, while TALIBOR continued to fall despite the rise of EURIBOR from the summer on. The reduction of the spread between TALIBOR and EURIBOR continued as well. However, this can be attributed to the increased liquidity of the banks and the developments in the derivative instruments' market rather than the launch of the third stage of EMU.

**The conclusion from this study is that the launch of the third stage of EMU and the introduction of the euro in settlements changed considerably the operational framework of the European and world economy. In 1999 the first implications of this change could also be seen in the Estonian financial sector and the real economy but unfortunately the empirical data for evaluating the economic development that has already taken place is too scanty at the moment. In some areas the reaction was quicker and the changes started already from the beginning of the year (for example, currency exchange for settlements in euros). In the majority of areas the gradual increase of the use of the euro could be noticed but these processes had not been completed by the time this paper was being written. At the same time the study indicated that in no area viewed the impact of the**

introduction of the euro was so big that it would have forced to change the established attitudes and regulations. Obviously, a number of the issues discussed must be taken up again in the future. The

authors hope that the present study still provided some information on what happened or is happening in the Estonian financial sector after the introduction of the euro.

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