III SECURITIES AND MONEY MARKET

International financial markets[1]

At the beginning of the second half of 2007, major **stock markets** witnessed a turn in the strong upward trend that had been prevailing since 2003. The turn was triggered by liquidity and credit problems in the US financial sector, which diminished investors' risk appetite. Later it became evident that it was a large-scale crisis that comprised also the financial sectors of other advanced economies. At the same time, the growth outlook of the non-financial sector began to deteriorate, giving an additional boost to the ongoing price decline.

As regards **advanced economies**, the euro area stock index (Stoxx 50) fell by 14.8%, the S&P 500 index in the US by 7.8% and the Nikkei 225 index in Japan by 24.1% (see Figure 1). The stock indices in Finland and Sweden declined by 14.3% and 21.5%, respectively. The relatively modest fall in the US stock market can be explained by the fact that one of the hot spots of this economy is the housing market where sales began to decrease already in 2005. This, in turn, restrained growth in US stock prices for a while.

The investment climate of **developing economies** has been more favourable, but compared to the beginning of 2008, there was a setback also in the Chinese and Indian stock markets. Nevertheless, in terms of the whole period the outcome was considerably better than in developed countries: by the end of April, the Shanghai Composite Index had fallen by only 3.3%, whereas the Bombay Sensex 30 index had increased by 18%. Growth in major Asian countries is expected to stabilise, as more moderate slowdown is expected than in advanced economies.

Among developing markets, the **Central and Eastern Europe** (CEE) has probably been the least affected by the slowdown in the US economy, as CEE trade with the US forms only 1–2% of the total trade of CEE. For CEE countries, economic convergence towards wealthier EU Member States is currently in the focus. Yet, due to the turmoil in the global financial sector in the past six months, all CEE securities markets have been undergoing low trading activity, a sharp fluctuation in stock prices and an overall downward trend.

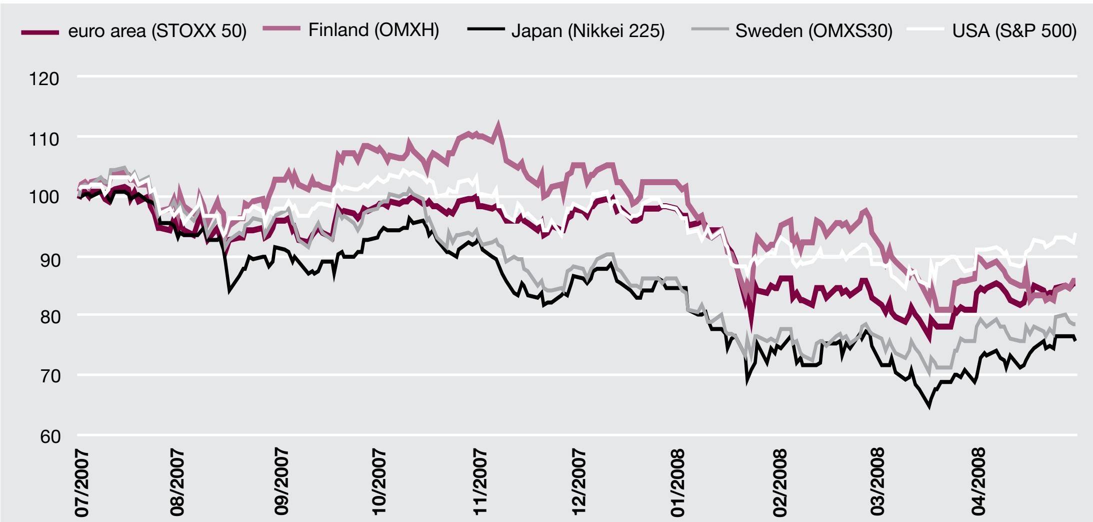

Figure 1. Stock indices in the United States, the euro area, Japan, Sweden and Finland (29 June 2007 = 100)
Source: EcoWin

[1] The Review covers the period from July 1, 2007 to May 1, 2008.

The strongest decline was witnessed by the Baltic market where stock indices fell from the beginning of July 2007 to the end of April 2008 by 17% in Lithuania, 25% in Latvia and 38% in Estonia (see Figure 2). The CEE stock markets were in decline too; the composite index fell 11%. The stock markets in the Czech Republic, Hungary and Poland fell by 14%, 18% and 29%, respectively. Owing to the continuing oil price rise, Russia maintained its leading position with stock prices increasing by 19% after going up and down since June 2007.

However, the stabilisation of stock prices in recent months indicates that investors are regaining interest in Central and Eastern Europe. Although economic growth will probably slow and inflation may be higher than expected, CEE countries are still able to develop faster than Western Europe. However, their growth prospects are affected by developments in global markets and the reassessment of credit risks.

Developments in **bond markets** were shaped by the weakening growth outlook for advanced economies, which influenced both the monetary policy development and government bond yields. In general, though, the development in different countries varied quite a lot. Furthermore, the markets were strongly affected by the concurrent credit and liquidity crisis.

The biggest change concerned the US monetary policy. Namely, the crisis in the subprime mortgage market and the possibility of economic decline forced the Federal Reserve to start lowering the **base rate** in September 2007. The rate was lowered from 5.25% to 2% by April 30, 2008.

The key policy rate was cut also by the Bank of Canada (from 4.5% to 3.0%) and the Bank of England (from 5.75% to 5.0%). Since the overall economic situation in Europe was more stable, European central banks remained focused on inflation risk. For this reason the European Central Bank maintained the key interest rate at 4% and Sveriges Riksbank (Bank of Sweden) increased it from 3.5% to 4.25% due to the rise in inflation. Other developed countries that increased their key interest rates included Norway and Australia (to 5.5% and 7.25%, respectively).

Changes in **short-term interest rates** were also characterised by the fact that due to the liquidity crisis in the money market, developments in

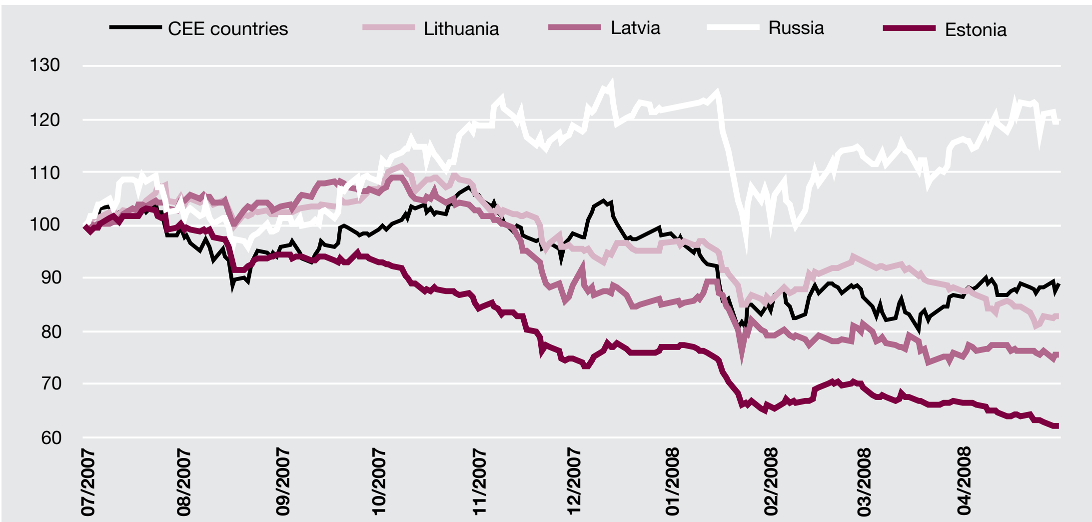

Figure 2. Stock indices in the CEE countries, the Baltic countries and Russia (29 June 2007 = 100)

Source: EcoWin

national interest rates and interbank interest rates varied substantially. The liquidity crisis boosted the risk premium of interbank interest rates, which is why the spread between these rates and government interest rates increased sharply. The US three-month government T-bill rate fell by 340 basis points, while the three-month US dollar Libor decreased by only 258 basis points. The same could be noted in the euro area, where the respective changes were -8 and +68 basis points, and in Sweden (+58 and +122 basis points; see Figure 3).

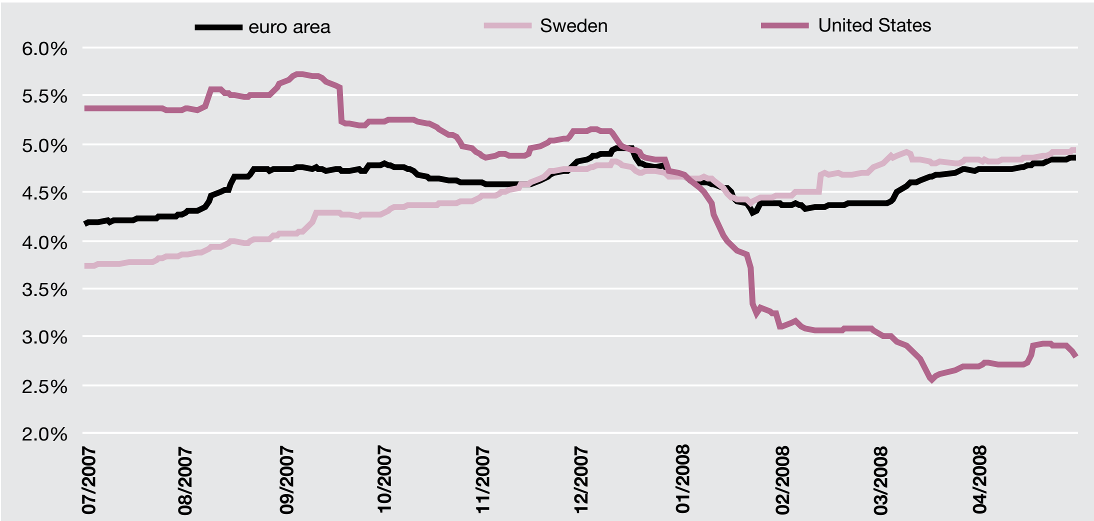

Figure 3. 3-month interest rates in the euro area, Sweden and the United States

Source: EcoWin

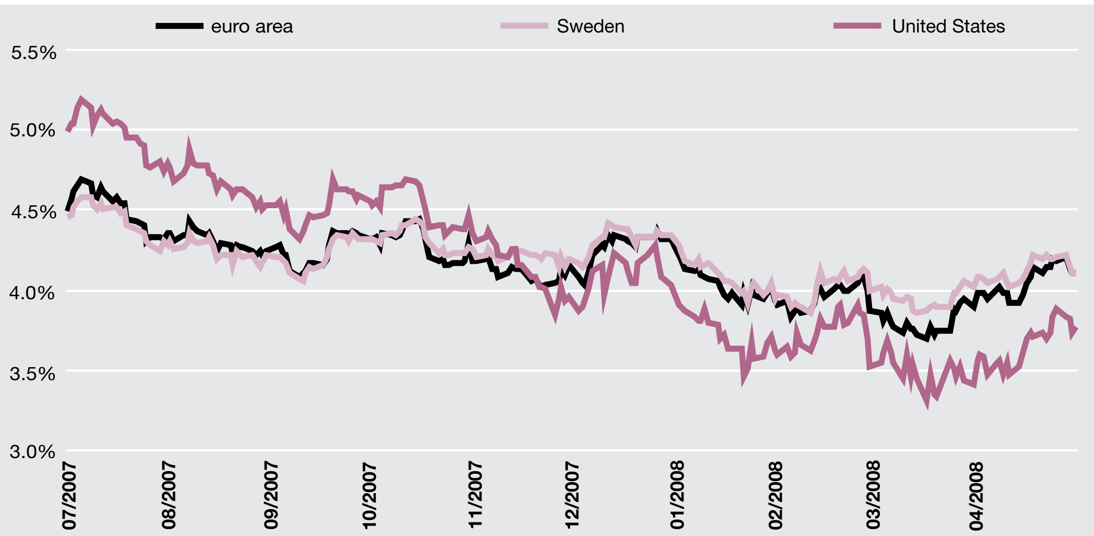

Figure 4. 10-year interest rates in the euro area, Sweden and the United States

Source: EcoWin

Long-term (ten-year) government interest rates declined by 126 basis points in the US, 46 basis points in the euro area and 37 basis points in Sweden (see Figure 4).

As regards **foreign exchange markets**, the US dollar continued to depreciate against other major currencies, driven by sudden deterioration in the US financial and non-financial sectors. The exchange rate of the euro appreciated against the dollar by 15% and reached a historical high (1.6018) in intraday trading on April 22 (see Figure 5). The dollar weakened by nearly 15% also against the yen, falling at one time below 100 yen per dollar (the lowest

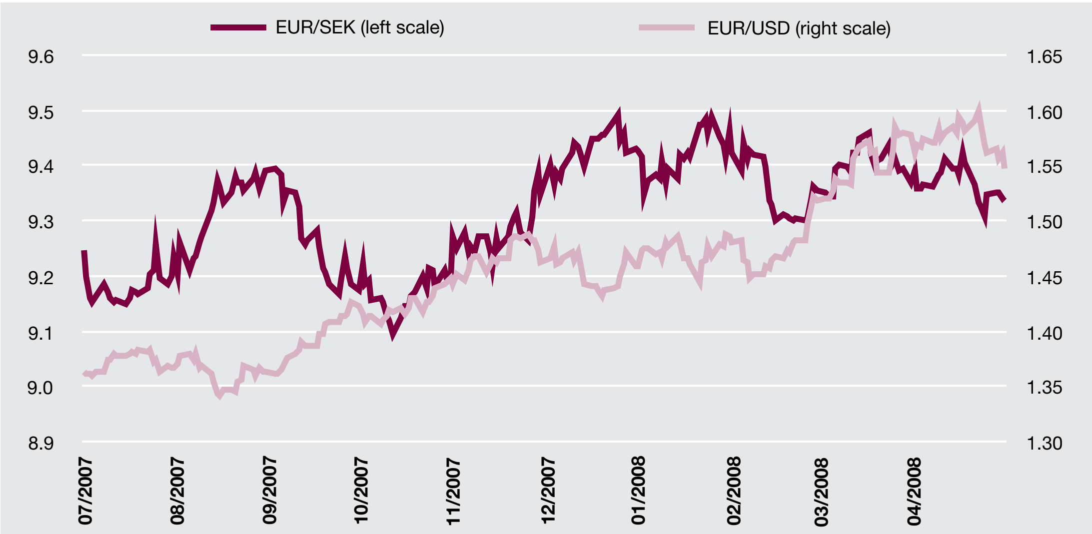

Figure 5. Exchange rate of the euro against the Swedish krona and the US dollar

Source: EcoWin

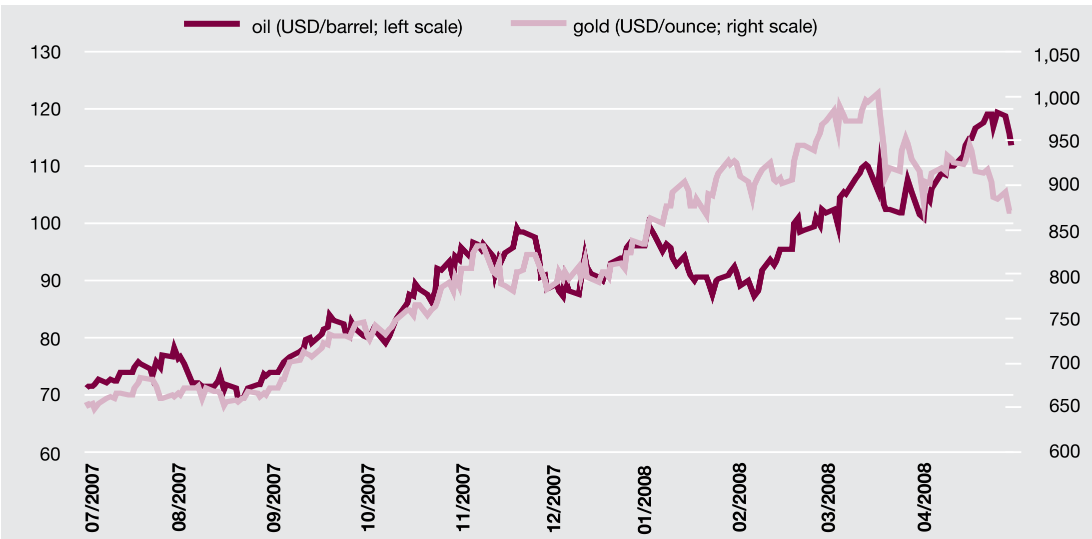

Figure 6. Prices of gold and crude oil (WTI)

Source: EcoWin

level of the last 12 years). The exchange rate of the Swedish krona against the euro ranged between 9.1 and 9.5 (by the end of the period the euro had appreciated by 1.3%). Since 2001, the exchange rate of the euro against the Swedish krona has been fluctuating between 9.0 and 9.5 kronas per euro.

The **commodity markets** continued to trend upwards despite the worsening growth outlook in advanced economies. The CRB index, reflecting the prices of 22 major commodities, rose by nearly 14%. The price of crude oil (WTI) increased from 70 to 113 dollars per barrel (62%) and the price of gold from approximately 650 to 852 dollars per ounce (32%), reaching the all-time high of 1,002 dollars on March 17 (see Figure 6). Prices of food (including rice, wheat and other cereals) rose sharply as well, the sub-index increased by 26%. Growth in food and energy prices has been the primary inflation factor in the current economic cycle.

The general reasons behind strong growth in commodity prices were the rapid weakening of the dollar on the one hand, and the persistent strong demand in developing countries (primarily in China) on the other hand. The limited supply of commodities is becoming more pronounced, and some of them have changed from ordinary production inputs into strategic resources. Price growth has been further boosted by investors' desire to hedge inflation risk caused by the economic cycle and a few other factors. Thus, to some extent, price growth has been driven by structural factors, but speculative demand also plays a role here. The supply-demand ratio of commodities (be it crude oil, rice or something else) in different markets is influenced also by market specific factors.

Money market

The interest rate applied to main refinancing transactions with the European Central Bank remained unchanged at 4% over the last year. The **euro area money market interest rates**, on the other hand, were rather volatile (see *International financial markets* and background information).

At the end of November, some foreign investors wished to hedge more their kroon positions. Since the market for derivatives issued in Estonian kroons is relatively small, the unexpected increase in demand for kroons brought about a relatively large difference between the **Estonian money market interest rate quotations (Talibors)** and respec-

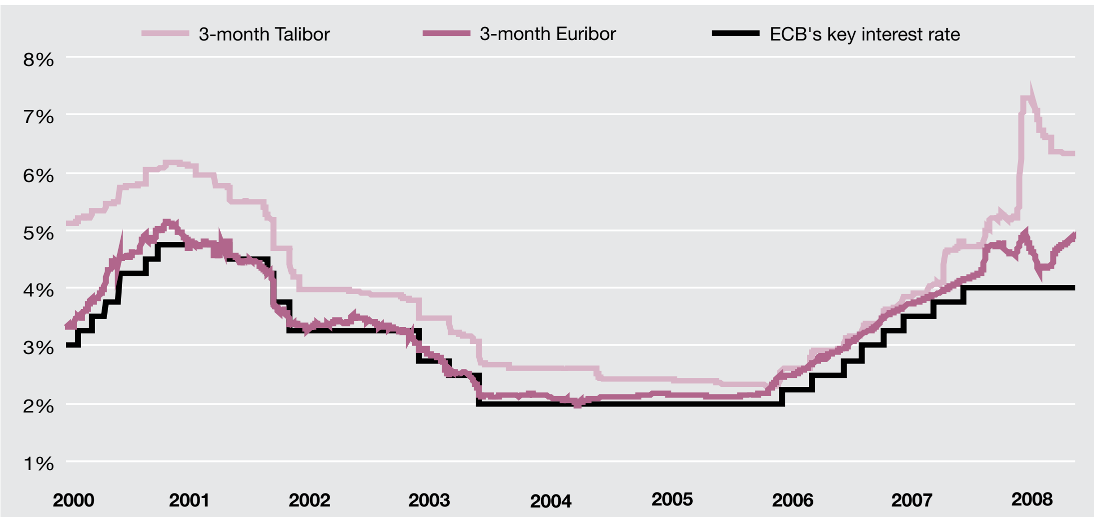

Figure 7. Money market interest rates in Estonia and the euro area
Source: EcoWin

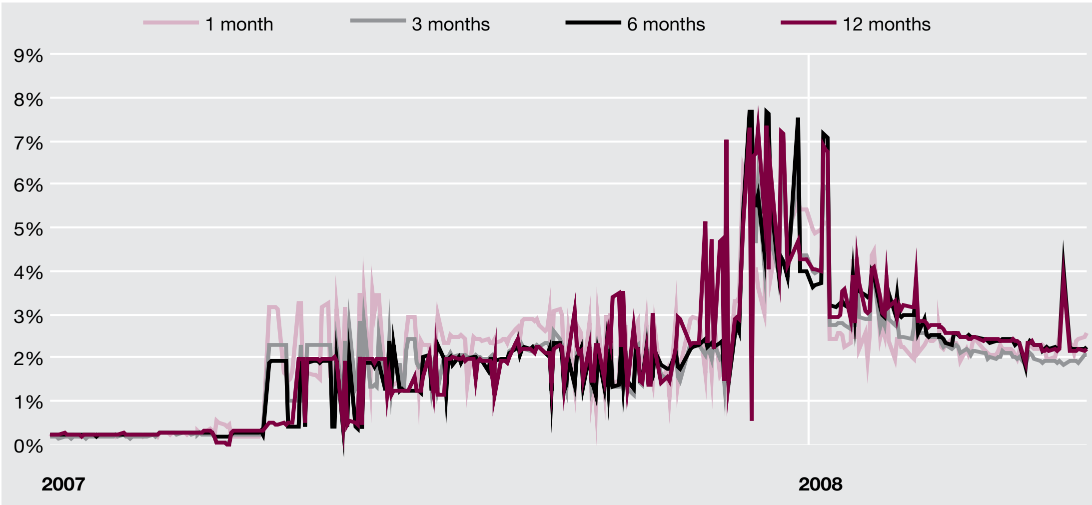

Figure 8. Forward premiums of the Estonian kroon against the euro

Source: Reuters

tive Euribors. By the end of December, the spread between the three-month Talibor and Euribor rose to approximately 265 basis points. In the first half of 2008, the kroon money market was relatively quiet and undisturbed by the tensions in global markets. By the end of April, the spread between the three-month Talibor and Euribor had drawn back to approximately 146 basis points (see Figure 7).

The difference between interest rate quotations that form the basis of future kroon and euro transactions (forward premiums) has also withdrawn smoothly in spring 2008. In April, the derivatives market achieved a balance in the range that is only a little higher than the average level of the period from April to November 2007 (see Figure 8).

The rise in price quotations at the end of last year did not exert pressure on the kroon exchange rate. Neither did it bring about a considerable decrease of confidence in the kroon in the domestic market. When rumours about the possible devaluation of the kroon that spread in the retail market at the end of November increased the share of euro deposits by 3–4 percentage points, then demand in the money market brought about a rise in the interest rates on kroon deposits. This, in turn, renewed interest in kroon deposits in the first half of 2008. Yet, due to the kroon interest rate, which is much more volatile compared to the interest rates in the euro area, borrowers rather conclude loan contracts in euros (see Chapter II, *Quality of assets*).

The **turnover of the derivatives market** decreased considerably in May 2007 and has been several times smaller since then compared to the high levels of the two previous years (see Figure 9). However, in earlier quarters the turnover was significantly influenced by large foreign exchange transactions between Hansapank and its parent bank (see *Financial Stability Review*, May 2006). In the second quarter of 2008, these transactions were not that extensive any more. Excluding these transactions, the turnover of the derivatives was slightly above usual in the last months of 2007 but declined to previous levels in the first quarter of 2008. The transactions of non-residents comprised approximately 80% of the first-quarter turnover of the foreign exchange derivatives market. In addition to derivative transactions, spot transactions (exchange of Estonian kroons for foreign currency) gained popularity in the final months of 2007. But, similar to the futures market, at the beginning of 2008 trading edged down also in the spot market.

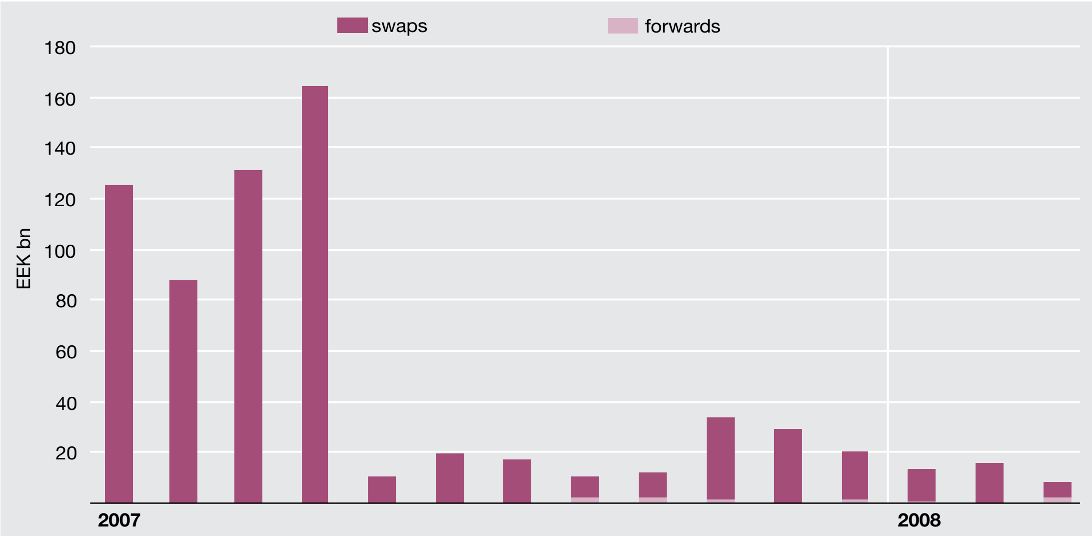

Figure 9. Monthly turnover of derivatives transactions with Estonian credit institutions

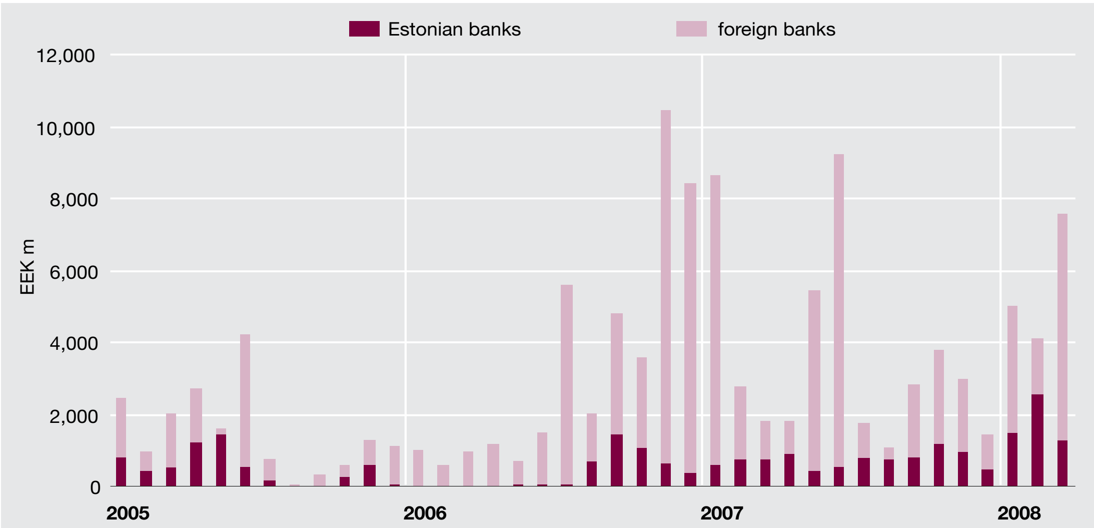

Figure 10. Monthly turnover of short-term kroon loans in the interbank money market

The **turnover of short-term kroon loans** remained low as usual in the fourth quarter of 2007 and first quarter of 2008, although in 2008 an increase in the lending activity of local credit institutions could be observed (see Figure 10). Swedish and Finnish credit institutions still prevailed among non-resident market participants. Estonian credit institutions manage their liquidity mainly in euro via parent banks or directly on external markets, using the central bank's forex window to convert euros to kroons.

The liquidity of the Estonian kroon has been stable and no significant failures have occurred in the financial sector's kroon liquidity. **Banks' settlement buffers in the central bank** have been high enough and the banking sector has not had difficulties with fulfilling the reserve requirement.

Bond market

The **primary bond market** was very active in the last two quarters of the period under analysis. The volume of issues in the primary bond market was record high in the last two quarters of 2007, totalling over 3.7 billion kroons (see Figure 11). Owing to a high comparison basis, annual growth in the turnover of the primary bond market decreased to 12% by the end of March. The total market capitalisation of bonds grew by more than 4 billion kroons in the past six months and exceeded 16 billion kroons at the end of March. Although the 54% annual growth

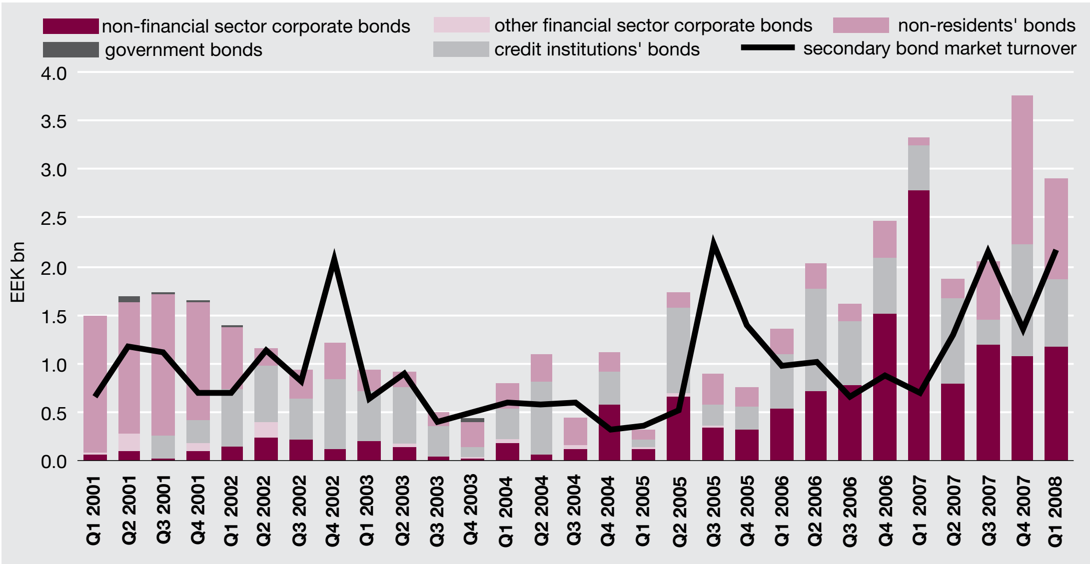

Figure 11. Bonds issued and secondary bond market turnover on a quarterly basis

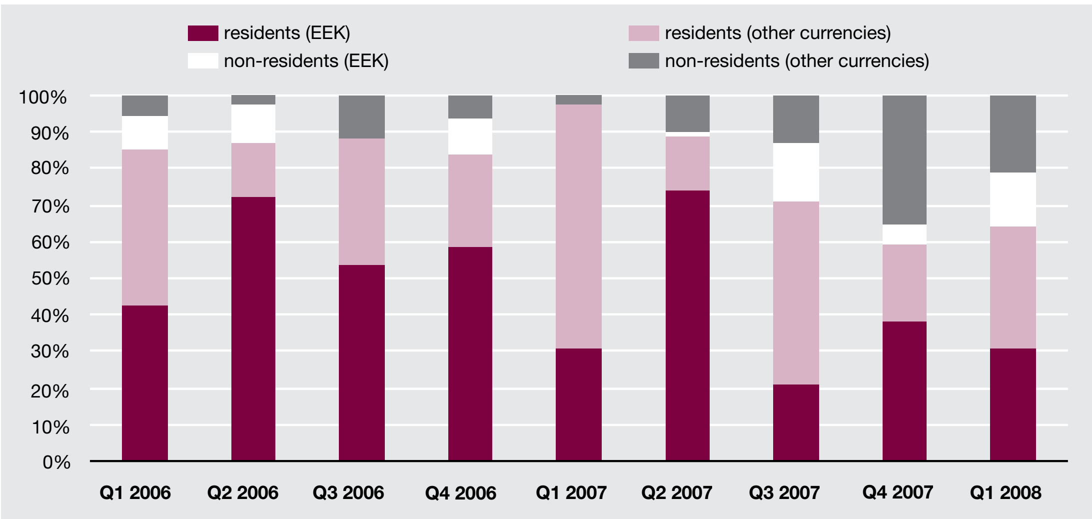

Figure 12. New bonds issued by residency and currency on a quarterly basis

in total market capitalisation is not as high as in the previous periods, it still shows an upward trend (bond market capitalisation was approximately 6.4% of GDP at the end of March).

The majority of primary bond market turnover comprised bonds issued by resident companies and credit institutions. The volume of bonds issued by non-residents increased three times over the last six months and accounted for about 39% of the total volume of the primary bond market (see Figure 12). Growth was facilitated by MP Investment Bank's entry into the market and its bond issues in the total of 938 billion kroons, which constituted 40% of the total turnover of the primary market of bonds issued by non-residents in the last two quarters.

Most of the bonds were issued in foreign currencies. The primary issues in Estonian kroons comprised approximately 45% of the total volume of new issues in the last six months.

Similar to the primary market, the **secondary bond market** was also very active in the first quarter of 2008. The average daily turnover was by two thirds higher than the average quarterly turnover in 2007. In the first quarter of 2008, the average daily turnover was 35 million kroons.

Over the past six months, no corporate bonds have been redeemed or listed on the Tallinn Stock Exchange. At the end of March, the bonds of four companies had been listed at the Tallinn Stock Exchange with a total market value of approximately 521 million kroons; that is, merely 3.3% of the total capitalisation of the bond market.

Stock market

One of the most important strategic events in the Estonian stock market took place in February 2008, when the **Baltic and Nordic stock exchange group OMX AB, the majority shareholder of the Tallinn Stock Exchange, merged with NASDAQ Stock Market, Inc., a company operating mainly in the US stock exchange**. The outcome of the merger is NASDAQ OMX Group – currently the world's largest exchange company. In the long run, the establishment of NASDAQ OMX Group will provide better access for the Baltic markets to

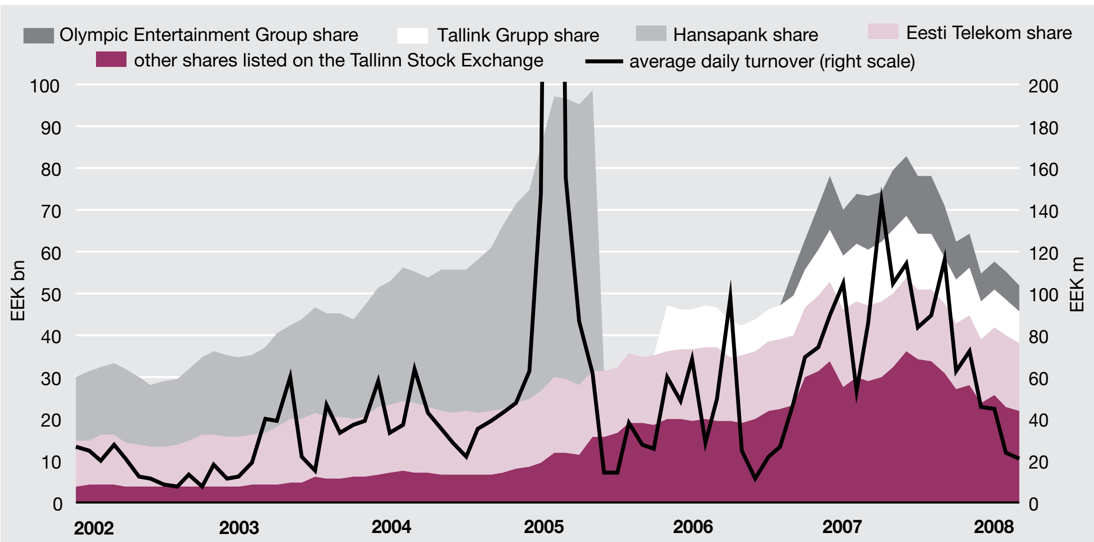

Figure 13. Market capitalisation of shares listed on the Tallinn Stock Exchange and average daily turnover of the stock exchange

global securities markets. However, a **cross-Baltic capital market and appropriate infrastructures** need to be developed first, both in technological terms and identity-wise, to achieve a further goal of integrating into the single Nordic capital market.

The value of Tallinn Stock Exchange index OMXT has been fluctuating a lot over the past six months, but has generally followed a downward trend. At the end of April, the index fell below 600 points. Annual decline was approximately 34%. Stock market capitalisation has also been fluctuating over the past six months because of stock price volatility (see Figure 13). Compared to the levels recorded before the uncertainty in international markets, the value of the total market capitalisation of listed companies declined by nearly 27 billion kroons and reached 55 billion at the end of March. Consequently, at the end of March, the total market capitalisation of listed companies was 22% of GDP, which is almost 10 percentage points less than at the end of September.

After the emergence of uncertainty in the financial markets at the end of summer, the Tallinn Stock Exchange has experienced a continuous decrease in trading activity. The daily average turnover was only 24 million kroons in March (see Figure 14). The average daily turnover of the past six months was 61 million kroons, which is 40 million kroons less compared to the previous period's figure.

Most of the transactions in the last six months were made with the shares of the Olympic Entertainment Group, Tallink Group, Starman and Eesti Telekom, forming the majority of the stock market turnover.

In March Instinet Europe Limited, a global agency brokerage, was listed on the Tallinn Stock Exchange, which increased the number of members to 30 by the end of the month. More than 67% of the stock exchange transactions in the last six months were intermediated by AS Hansapank (35%), SEB Eesti Ühispank (21%; now SEB Pank) and AS LHV (11%).

Since 2006, the share of local investors in the stock market has been slightly over 50% (see Figure 15). The share of local and foreign investors has remained the same also after the turmoil in stock markets.

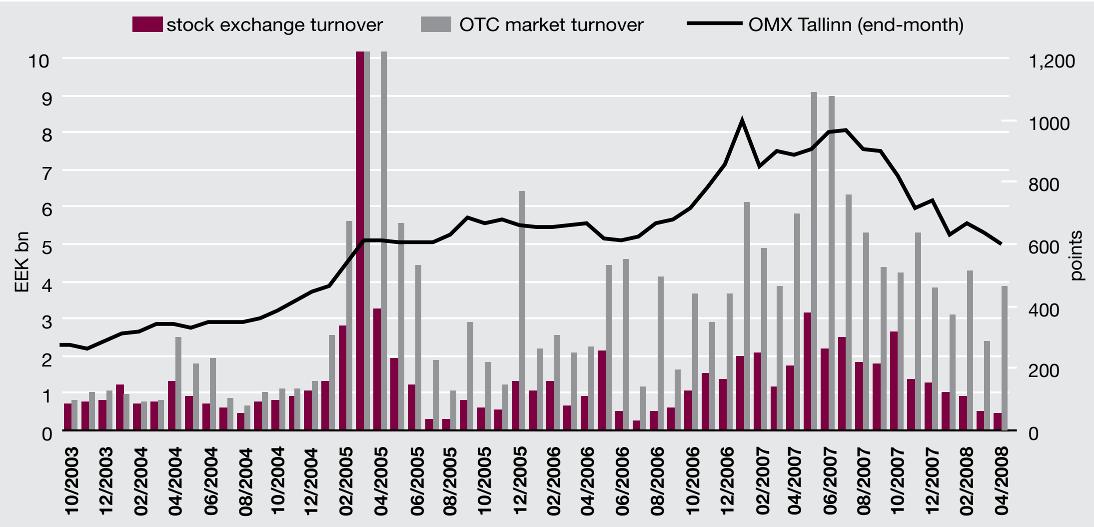

Figure 14. Stock turnover on the Tallinn Stock Exchange and OTC market (left scale) and Tallinn Stock Exchange index OMX Tallinn (right scale)

Figure 15. Structure of investors by residency and share of foreign investors of shares listed on the Tallinn Stock Exchange

At the end of March, the share of foreign investors was 49% (about 27 billion kroons), approximately 50% of which belongs to Swedish foreign investors. Finns have cut their investment by nearly 1.5 billion kroons in the last six months and their share has declined to only 3%. The percentage of retail investors has grown from 3.8% to 5.2%.

PROGRESS OF THE GLOBAL LIQUIDITY AND CREDIT CRISIS

The last Financial Stability Review (November 2007) took a closer look at the sources of the global liquidity and credit crisis, its development and the reactions of central banks. Since the crisis has continued, below is an account of events until the beginning of May 2008, underlining the key characteristics of the crisis and its possible impacts on financial intermediaries and markets.

The change in the spread between three-month interest rates of the interbank money market and three-month government interest rates indicates that the development of the liquidity crisis in the US and euro area has been quite synchronous (see Figure 16). Yet in the US, the spread has been much more extensive and volatile. So far, three main waves of the crisis can be distinguished.

The **first wave** marks the beginning of the crisis, which relates to the emergence of problems arising from the US subprime mortgage loans and the subsequent financial shock. In September, the Federal Reserve began to lower the key interest rate, which stabilised the situation in money and credit markets to some extent.

However, the end of the year witnessed the **second wave of crisis** that can be character-

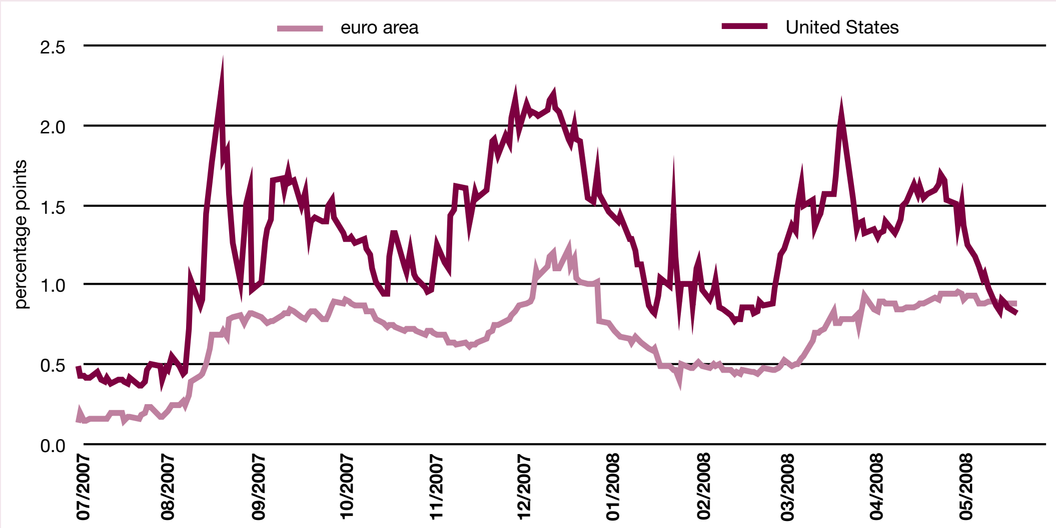

Figure 16. Difference between interbank money market interest rates and government bill interest rates in the United States and the euro area

ised as the globalisation phase of the crisis. In addition, there emerged the risk of US economic recession and the possibility that the situation would get out of control. The vulnerability of the euro area's financial sector also became more evident and the economic outlook for the euro area worsened. The drastic easing of monetary policy in the US and expectations regarding lowering the key interest rate also in the euro area contributed to the stabilisation of the situation in January and February 2008.

In spite of that, the **third crisis wave** followed, which was related to the financial difficulties of a major US investment bank Bear Stearns & Co. and the takeover of this bank by JP Morgan. As a result, the Federal Reserve took several measures to safeguard financial stability. More precisely, liquidity was added to the market and made available to a greater number of banks, and the list of acceptable collaterals was expanded. Additional liquidity to the euro area financial sector was provided by the European Central Bank, but unlike the Federal Reserve, the ECB did not rush to lower the key interest rate because of the increasing inflation rate and persistent inflationary pressures. This disappointed those investors who had already discounted the easing of monetary policy in the euro area.

At the beginning of May, the money market interest rate spread was 91 basis points in the euro area and 138 basis points in the US, which indicates the persistence of **serious tensions in the money market**. Economic forecasts expect growth to be weak both in the US and euro area, meaning that financial intermediaries may face new problems in the near future as well.

In the meantime, the causes, scale and possible consequences of the current liquidity and credit crisis have become clearer. **In general, it can be said that the crisis was caused by excessive risks that accumulated in the financial**

sector in three areas: lending (especially as concerns housing loans), financial leverage and reliance on short-term financing.

As noted in the case of the US, the ratio of household credit and assets (mostly houses) continued to increase until the insolvency of riskier borrowers emerged. The evolving crisis was exacerbated by a decline in house prices. At the same time, the impact of crisis on economy was intensified by increasing financial leverage, as the financial sector relied ever more on external resources that were obtained by reselling loans as securities to investors outside the scope of central bank supervision. These investors often used short-term loans for longer-term investment. The investment bank JP Morgan has estimated the amount of these loans to be around 5.9 trillion dollars. All these processes together turned the US financial system into an unstable pyramid with a relatively narrow base, whose crisis symptoms affect also the financial sectors and economies of other countries through global economic relations.

Although the crisis is not over yet, it is already possible to pinpoint some of its specifics that will be affecting credit market participants, central banks and financial supervision authorities also in the future. First, the crisis has proved that housing loans can be much riskier than initially seemed. The crisis has also undermined the reliability of rating agencies that have not been able to adequately assess the riskiness of various securities and their holders.

Apparently, greater caution regarding the use of financial leverage is to be expected in the future – both on the part of households and financial institutions. Experience has shown that in the case of a systematic crisis, the insurance companies may not be able to provide help either, as they too may face serious financial difficulties. The use of extensive short-term financing for longer-term investment must also be constrained, since the interbank money market might become non-liquid in a crisis situation.

These lessons may affect the behaviour and regulation of markets for several years. Yet, the periodic recurrence of different financial crises shows that it is not realistic to expect their complete disappearance once the current crisis has passed.