Tenth Annual

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Secondary Market Liquidity in Domestic Debt Markets

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Liquidity of Swedish Government Bonds

Swedish National Debt Office

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10th Annual OECD-WB-IMF Global Bond Market Forum

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SWEDISH NATIONAL DEBT OFFICE

Market liquidity - Sweden

- Cost minimization the starting point

The issuer perspective for smaller countries:

- Better liquidity attracts investor hence reducing costs
- Concentration of funding to a few benchmarks
- Switches and buy-backs
- Primary dealer system with incentives important for smaller countries: domestic banks important
- Obligatory participation in electronic interbank trading: risk management and price discovery
- Issuer support: securities lending
- Reducing uncertainty by being open and predictable

Falling debt

- Large surpluses: T-bills, Inflation-linked and bonds in foreign currencies are reduced. Rolling back diversification. Switches and buy-backs important
- New 10 years every second year
- Longer dated bonds than 10 year avoided

Credit turbulence in a small market

The Swedish market has performed very well in comparision...

...with only a marginal widening of spreads in both governments and mortgages (2-2,5 yield bps for SEK 5 bn) with NO disruptions. Why?

- A small market which has been hardened by competition. You won’t get spoiled. Survival of experienced market makers
- A ”friendly” market
- Infrastructure: A disciplined and reliable trading, clearing and settlement (both payments and securities)
- No order driven reference rate (like the Bund future) force market makers to BE (set independently) the rate
- Developed and large repo market
- Issuer support

Market commitment (Issuer support)

- Objective: minimize costs
- Set up: Offer securities lendning with no upper limit to a fixed price of 40 yield bps
- Usually used as a ”stop loss” by market makers when an instrument is difficult to find elsewhere
- During the turbulence the commitment was used extensively. From SEK 0-5 bn per day up to SEK 60 bn per day. The price effects was cushioned and trading could be maintained
- Drawbacks: SNDO did have to invest the borrowed money. We mainly invested in mortage bond by reverest repos. Shortages were not fully priced in

Liquidity

- When an investor buys a security he wants to know if he can sell it without any large transaction costs
  - Narrow spread
  - Deep market: transactions with large volumes without affecting the price
  - Organisation of market: possible to sell large volumes without public announcement (on a bilateral basis or trading a superliquid exchange traded contract like the Bund-future)

Liquidity

- Liquidity depends on
  - Market size
  - Substitutes or hedgeing possiblities
  - Investor base: most important
  - Interbank market
  - Price discovery
  - Derivatives like futures and swaps
- Debt Office policy
  - Openness, predictability, transparency
  - Size and concentration of debt to few benchmarks
  - Market support: securities lendning
  - Active in derivatives

For discussion

- Primary dealer structure
  - Primary dealers as a sales force
  - Debt Office being a customer paying for services
  - Obligatory activities like electronic trading in situations when the market needs to be pushed
- Auctions vs syndication depends on
  - Investor base
  - Need for attention
  - Investor participation in auctions

Measures for strengthening liquidity

- Concentration of the debt to a few liquid instuments (maturities)
- Attractive market characteristics, e g a complete yield curve, derivative market
- Issuing bonds and swapping exposure to short maturity
- Buy-backs and switches
- Market support (market commitments)
- Efficient market and PD structure
- Improving price transparancy
- Broad investor base with developed investor relations
- Open, transparent and predictable funding policy

Policy with large budget surplus 2007-2008

- We have given priority to funding in SEK bonds
  - Bonds are about 75 per cent and is assessed to be up to 80-85 per cent of central government debt
  - The large share is due to the fact that it is only the bond market that, with reasonable risks, offer the depth and liquidity to meet the funding volumes and the flexibility we need
  - It is the SEK bonds that constitute the cost efficient base of our bond funding
  - Bonds require an efficient infrastructure with market making, primary dealers, secondary markets and an established investor base: a long-term commitment
  - Swaps are used to avoid paying bond yields and shortening maturity, hence lowering interest payments but increasing interest rate refixing risks
  - Issues of Inflation-linked bonds are hampered by small maturing debt
  - Reducing the stock of T-bills, but keeping a critical stock for meeting intra year variations, and reducing the use of foreign currency bonds

Issuing in a Surplus Environment

- Fewer benchmarks in nominal bonds by issuing a new ten year bond every 18 month instead of every 12 month. Exchange auctions are used to build up liquidity in new bonds
- The better part of nominal bonds will be swapped to short maturity enabling us to continue issuing substantial volumes
- To reduce uncertainty and avoid short term changes in funding we have adjusted our funding plans well in advance of privatizations and support the market by being open and predictable
- Very large surpluses during shorter periods will be managed with money market instruments in dollars and euros, hence not affecting our bond funding and avoiding enforced buy-backs
- We reduce the outstanding stock of T-bills and foreign currency bond to make room for nominal bonds in our funding
- Inflation-linked bonds debt have reached their long-term target of 25 per cent of the debt. As the debt is declining the share will be above its target during the upcoming years, hence limiting issuance volumes

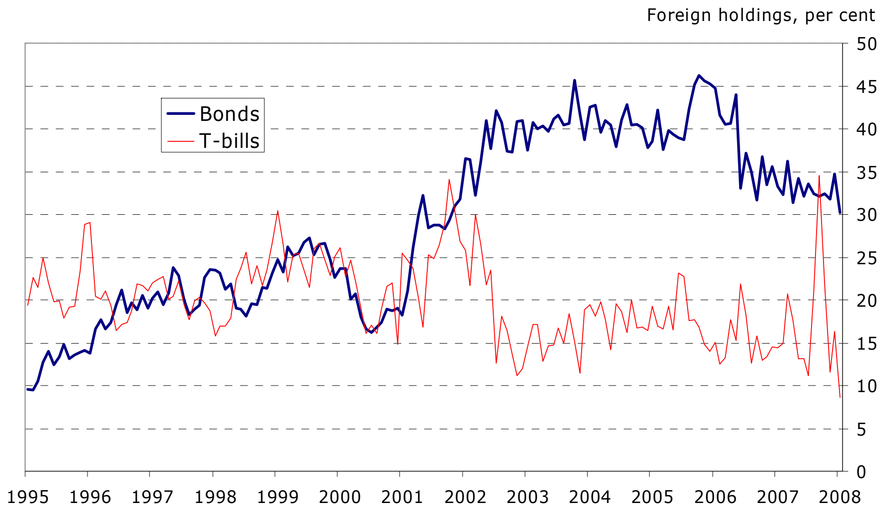
Sweden

- Floating exchange rate
- Independent central bank with price stability target
- Debt to GDP ratio about 30 per cent and declining
- Budget surplus of some 3 per cent of GDP
- Eight primary dealers (two in London)
- Some 60-70 per cent of investor base is domestic
- No syndications but frequent auctions
- Bid/ask spreads: 1-1.5 bps or 0.08-0.10 price ticks on 10 year bonds

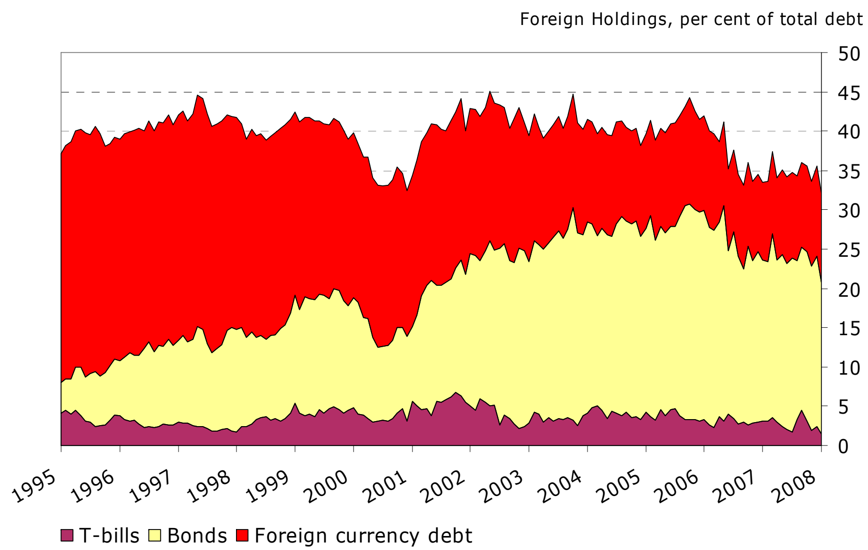
Broad Investor Base

- 30-40 per cent of government (nominal and inflation-linked) bonds are owned by foreign investors
- About 35 per cent of total government debt is owned by foreign investors assuming that foreign currency debt is owned solely by foreigners
- The Kingdom of Sweden's investor base has a core of some 25 domestic investors, but is essentially international - comprising investors in UK, Euroland, Asia and US

Foreign holdings of Government bonds and bills



Foreign holdings of Government debt



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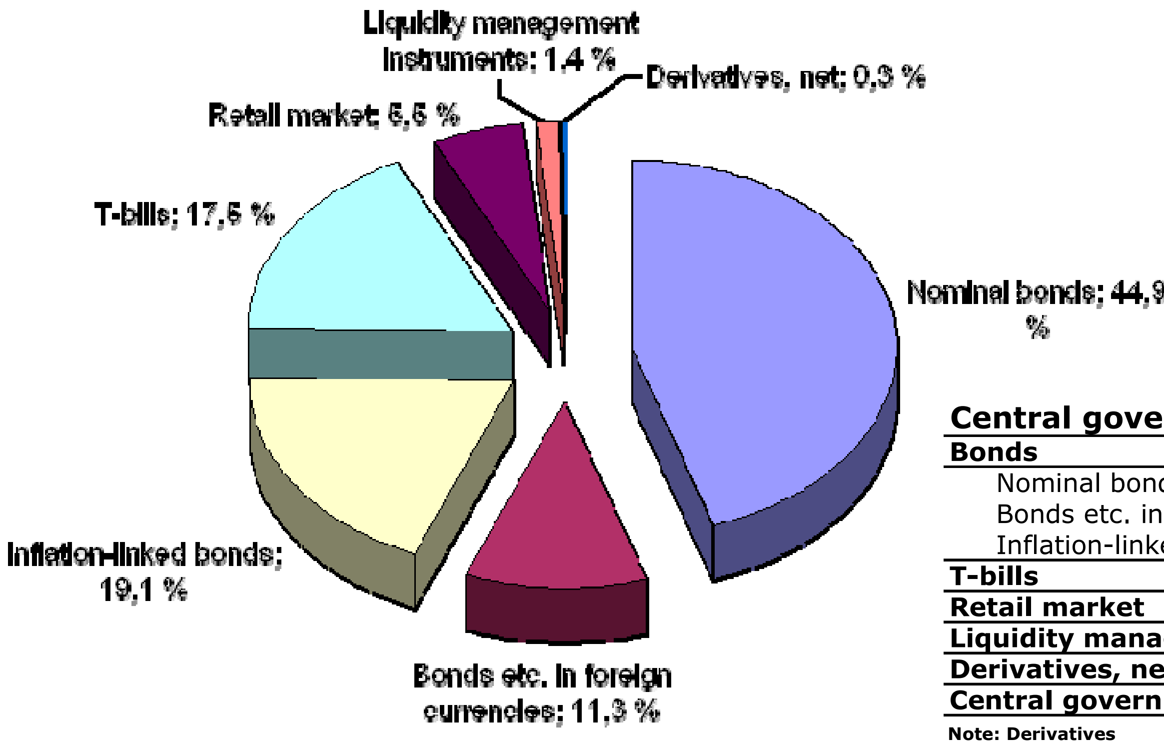
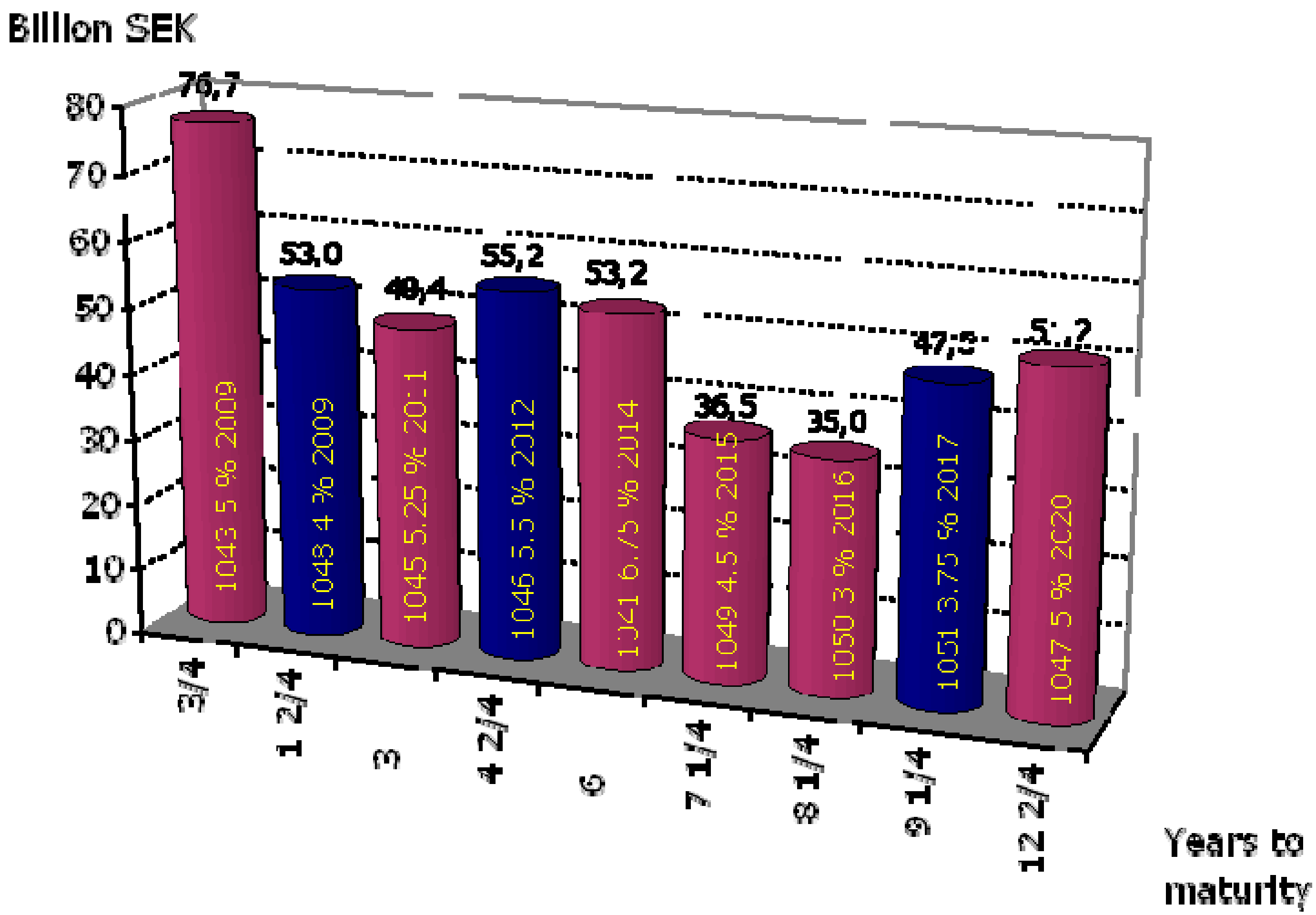
The structure of the debt



Central government debt	SEK bn	%
Bonds	**862,1**	**75,3**
Nominal bonds	514,0	44,9
Bonds etc. in foreign currencies	129,4	11,3
Inflation-linked bonds	218,7	19,1
T-bills	**200,5**	**17,5**
Retail market	**63,3**	**5,5**
Liquidity management instruments	**15,6**	**1,4**
Derivatives, net	**3,4**	**0,3**
Central government debt	**1 144,8**	**100,0**
Note: Derivatives		
Interest rate and currency swaps	-223,3	-19,5
Interest rate swaps	110,5	9,7
Currency swaps	114,6	10,0
Foreign exchange forwards in SEK etc	13,9	1,2
Foreign exchange forwards in SEK etc	-12,5	-1,1

Nominal Government Bonds



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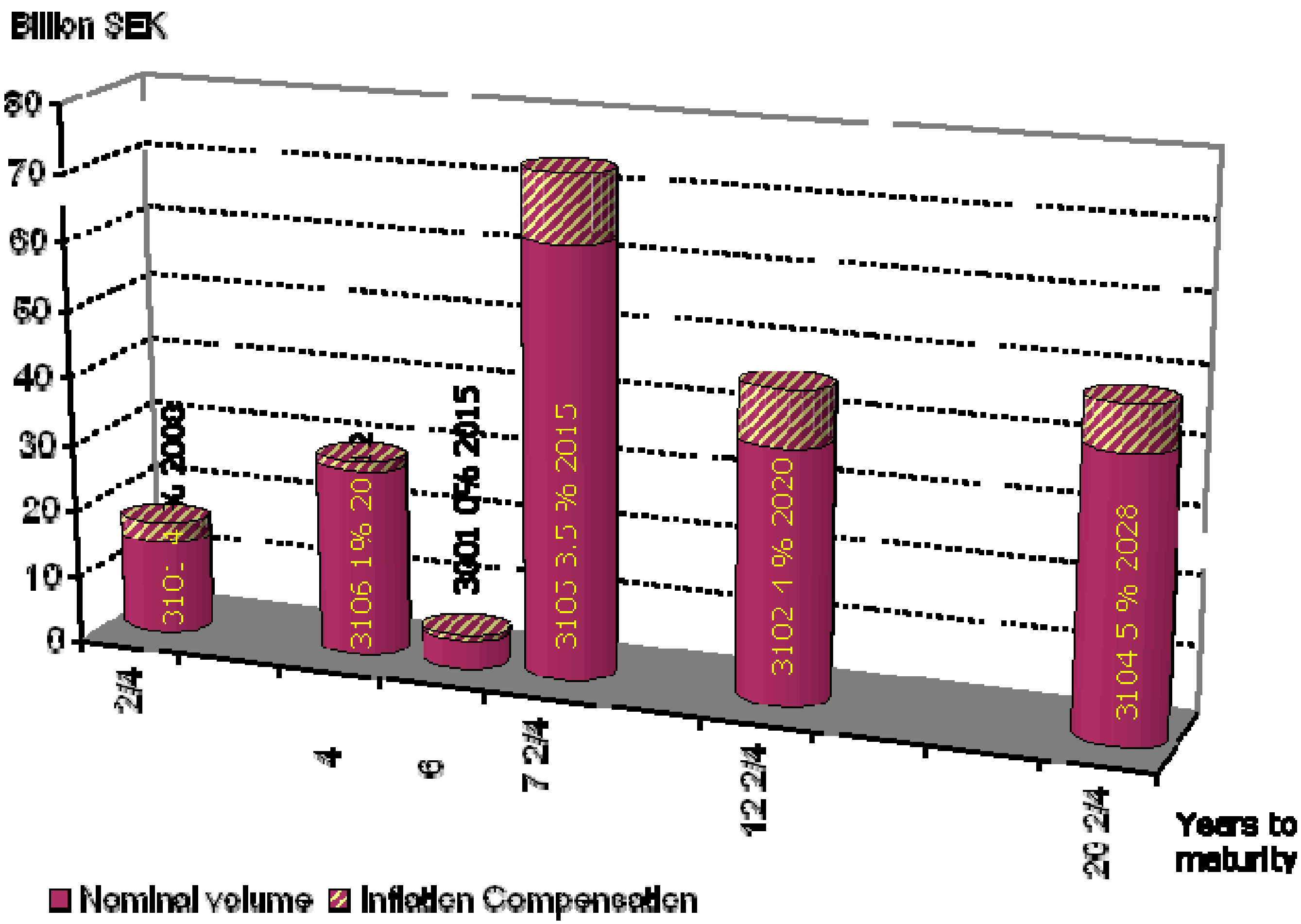
Inflation-linked bonds



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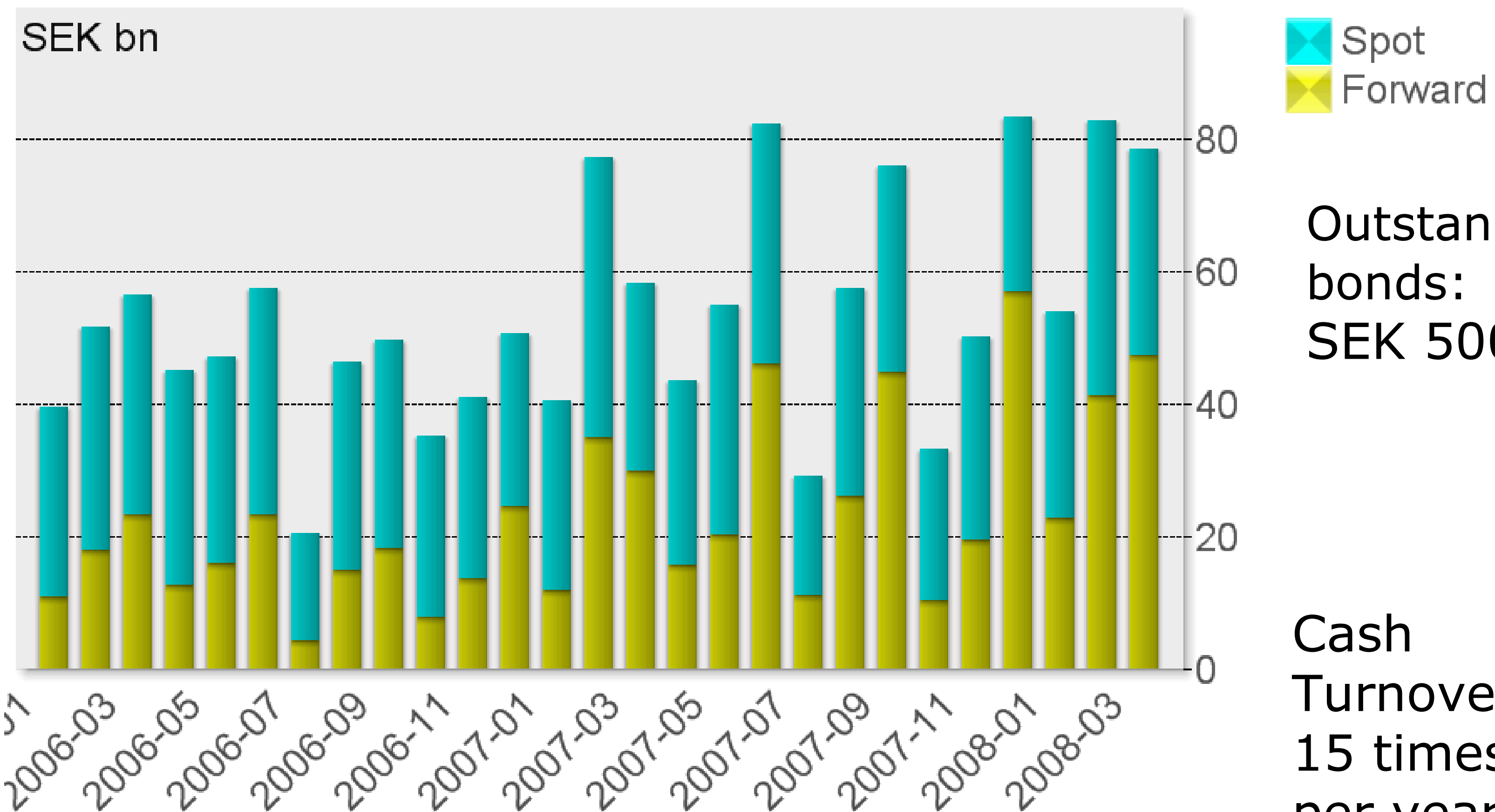
Daily turnover in the Swedish bond market



Outstanding bonds: SEK 500 bn

Cash Turnover: 15 times per year

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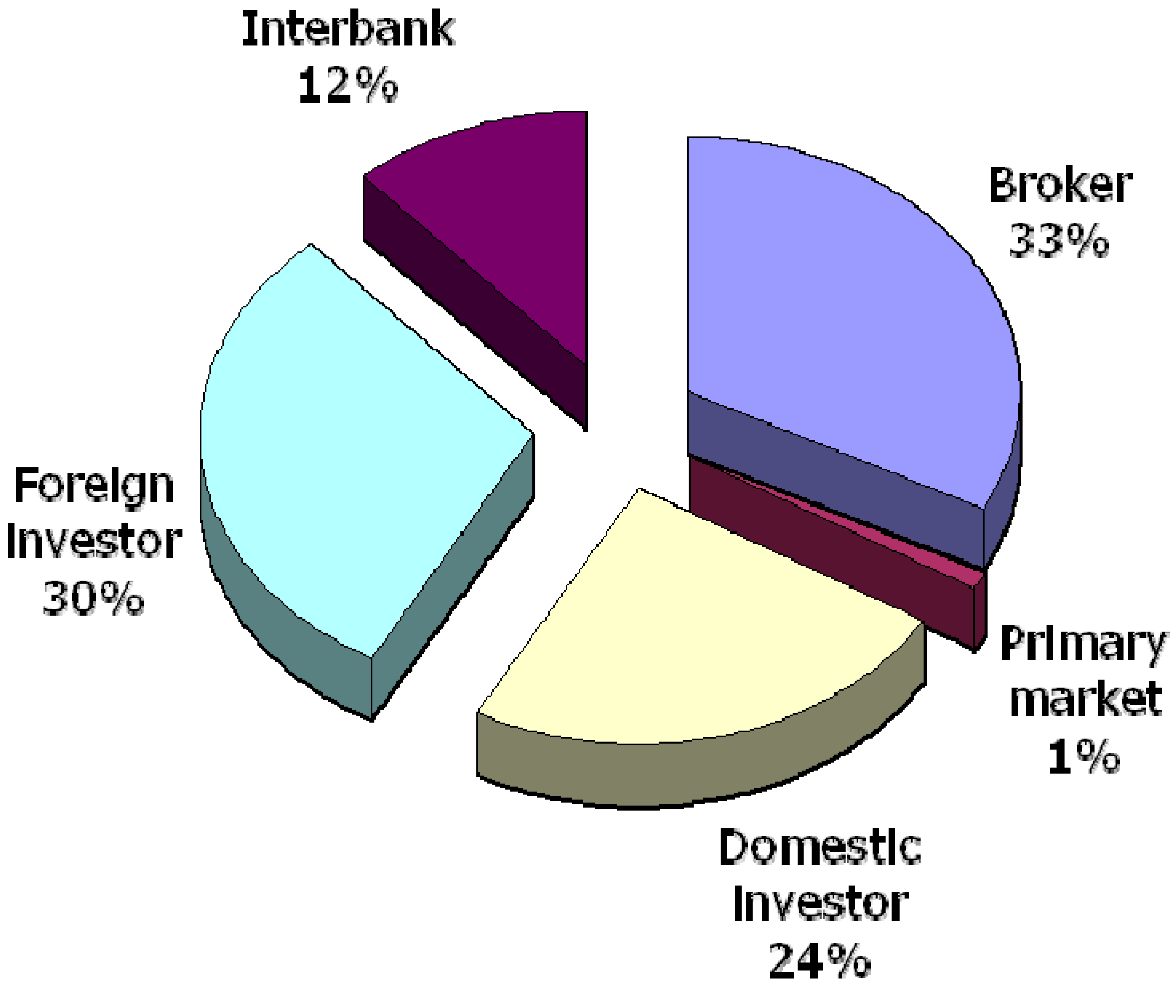
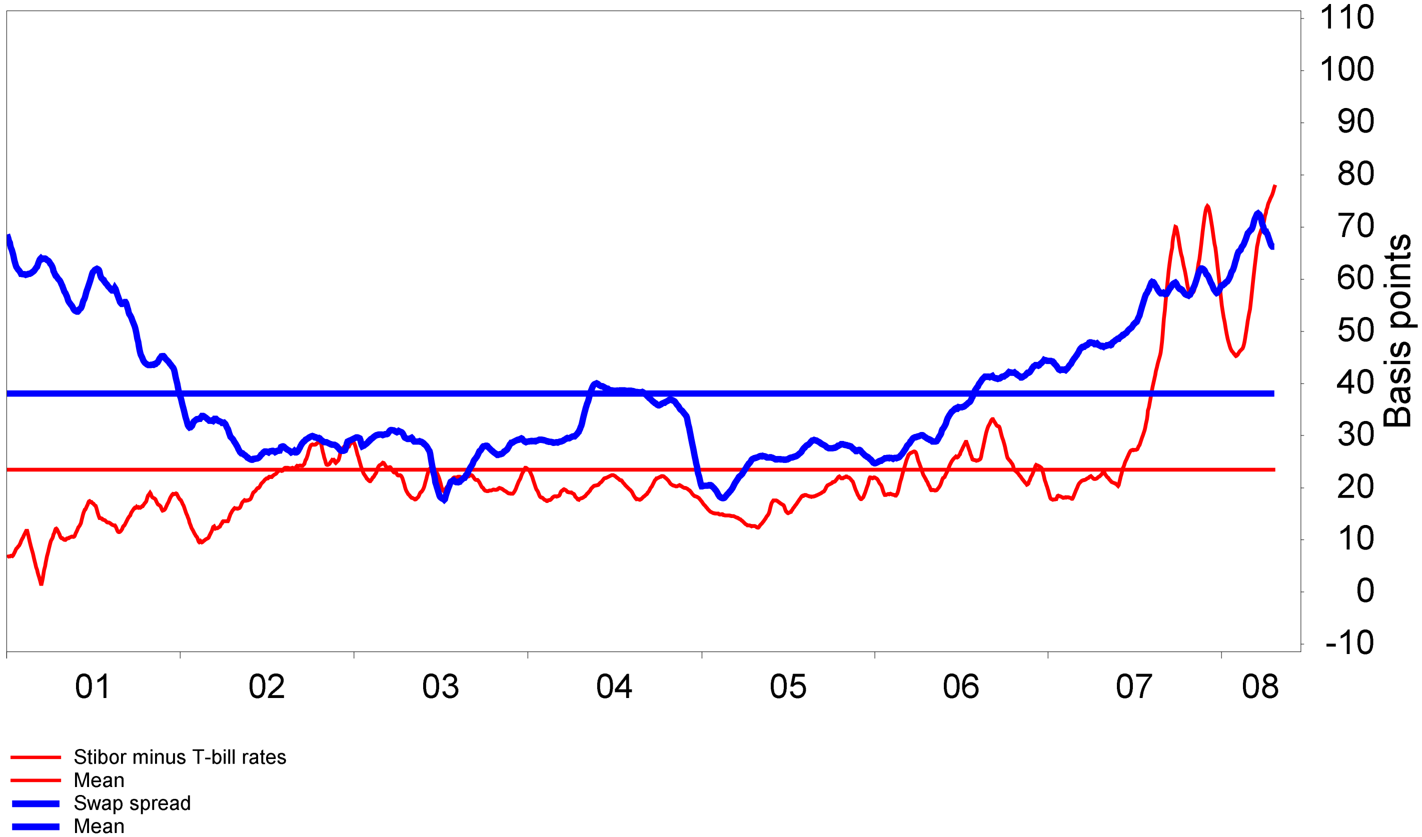
Turnover: Type of counterparty

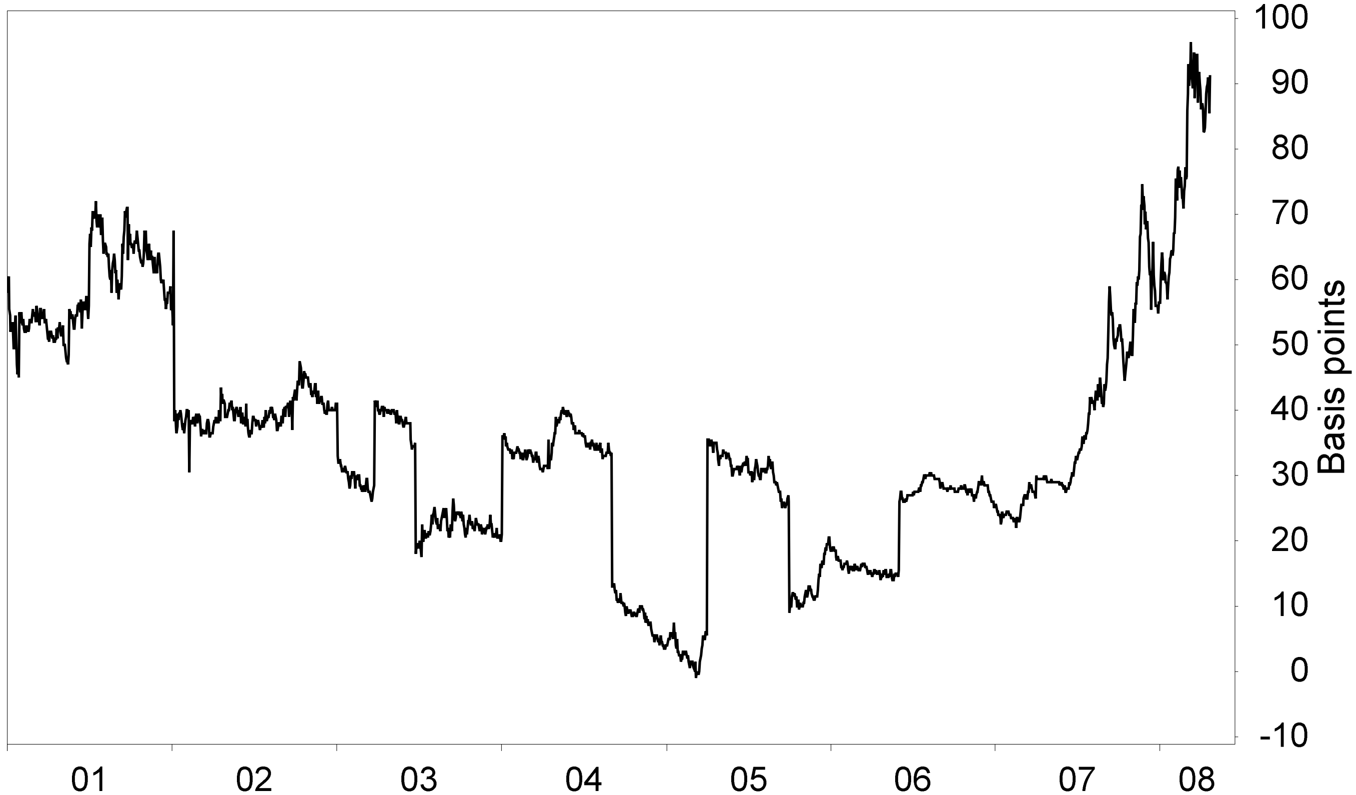


Swap spreads and Stibor vs T-bill rates



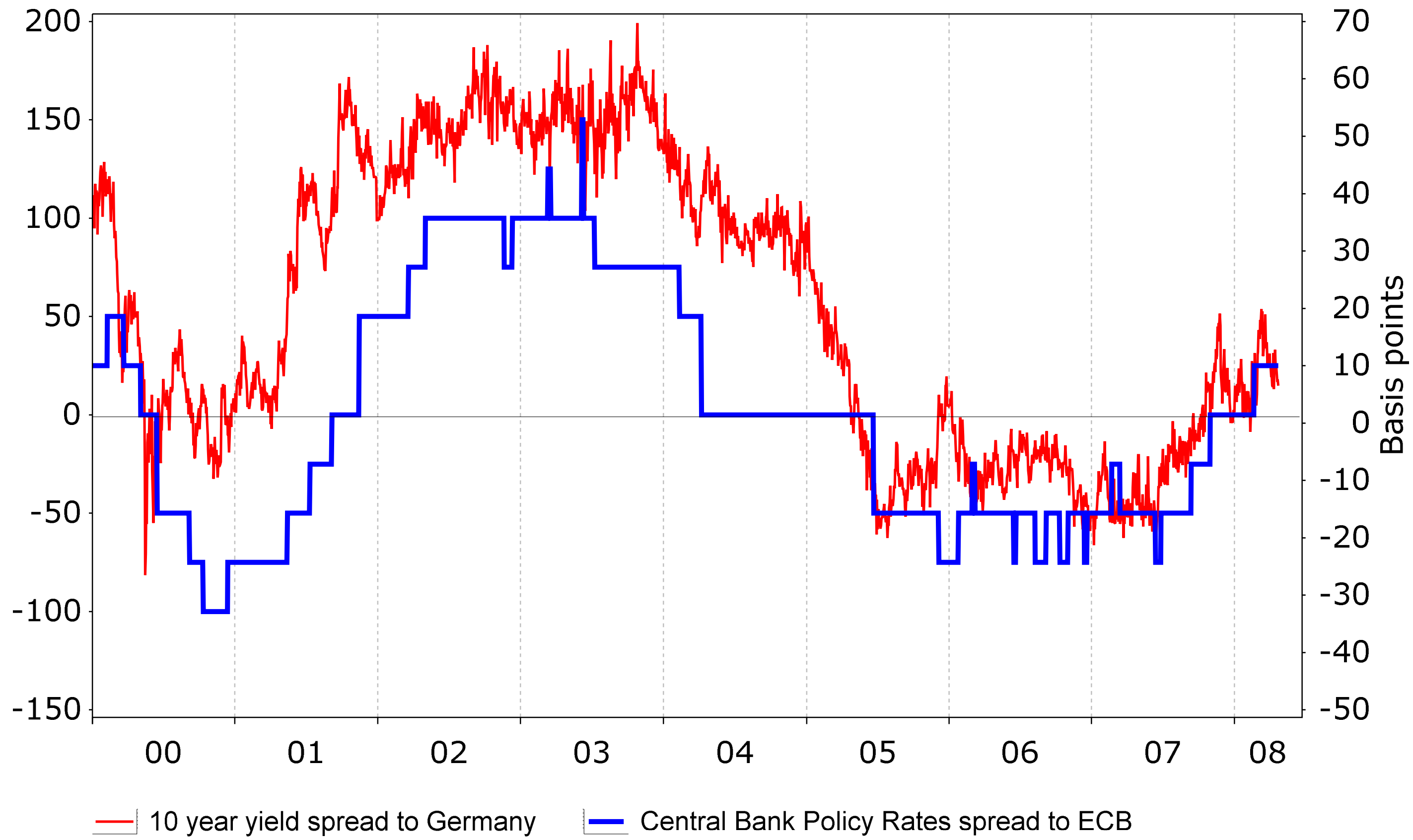
Source: Reuters EcoWin

Spread to mortgages



Source: Reuters EcoWin

Yield and Central bank rate spreads to Germany



Source: Reuters EcoWin

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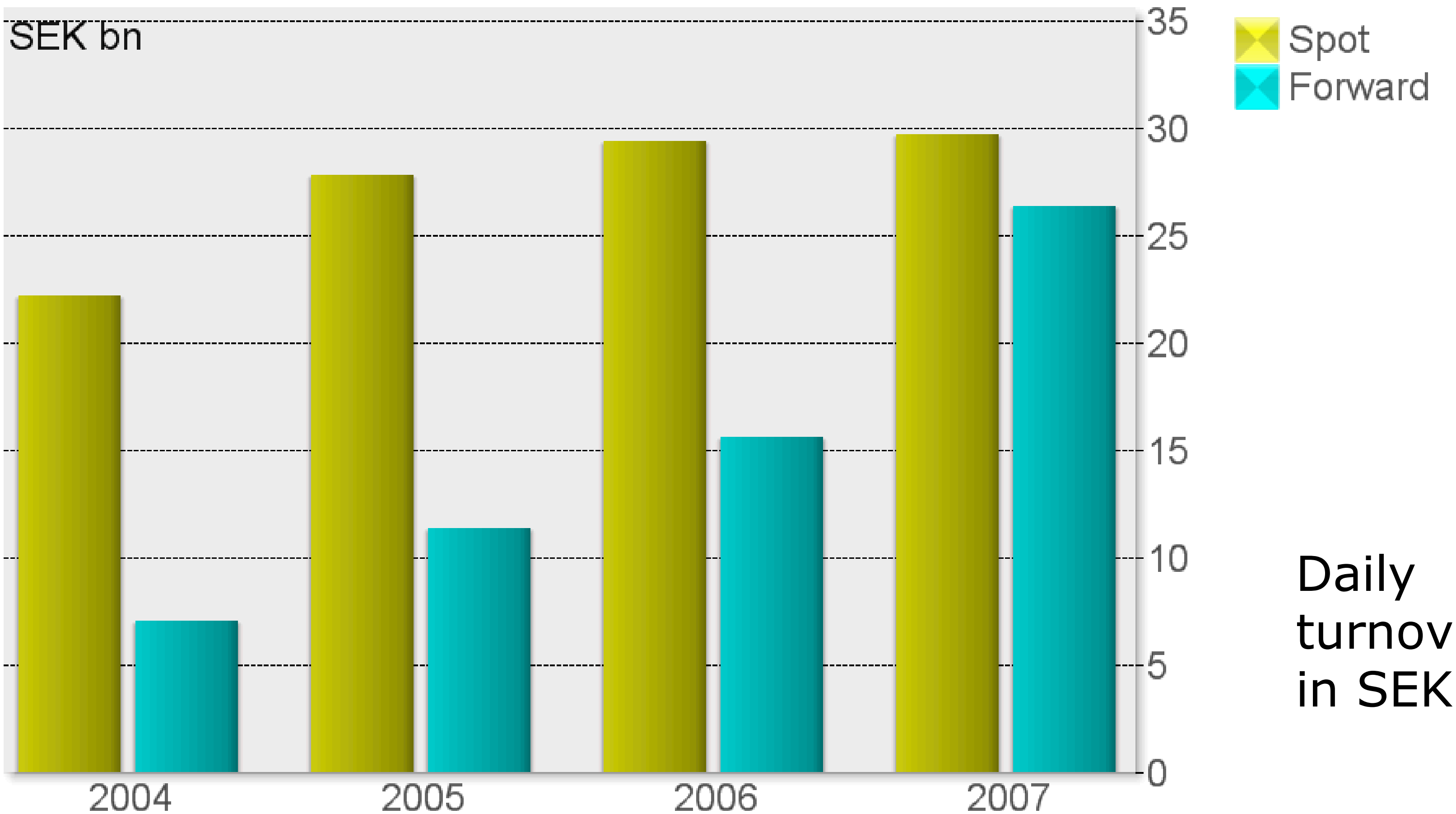
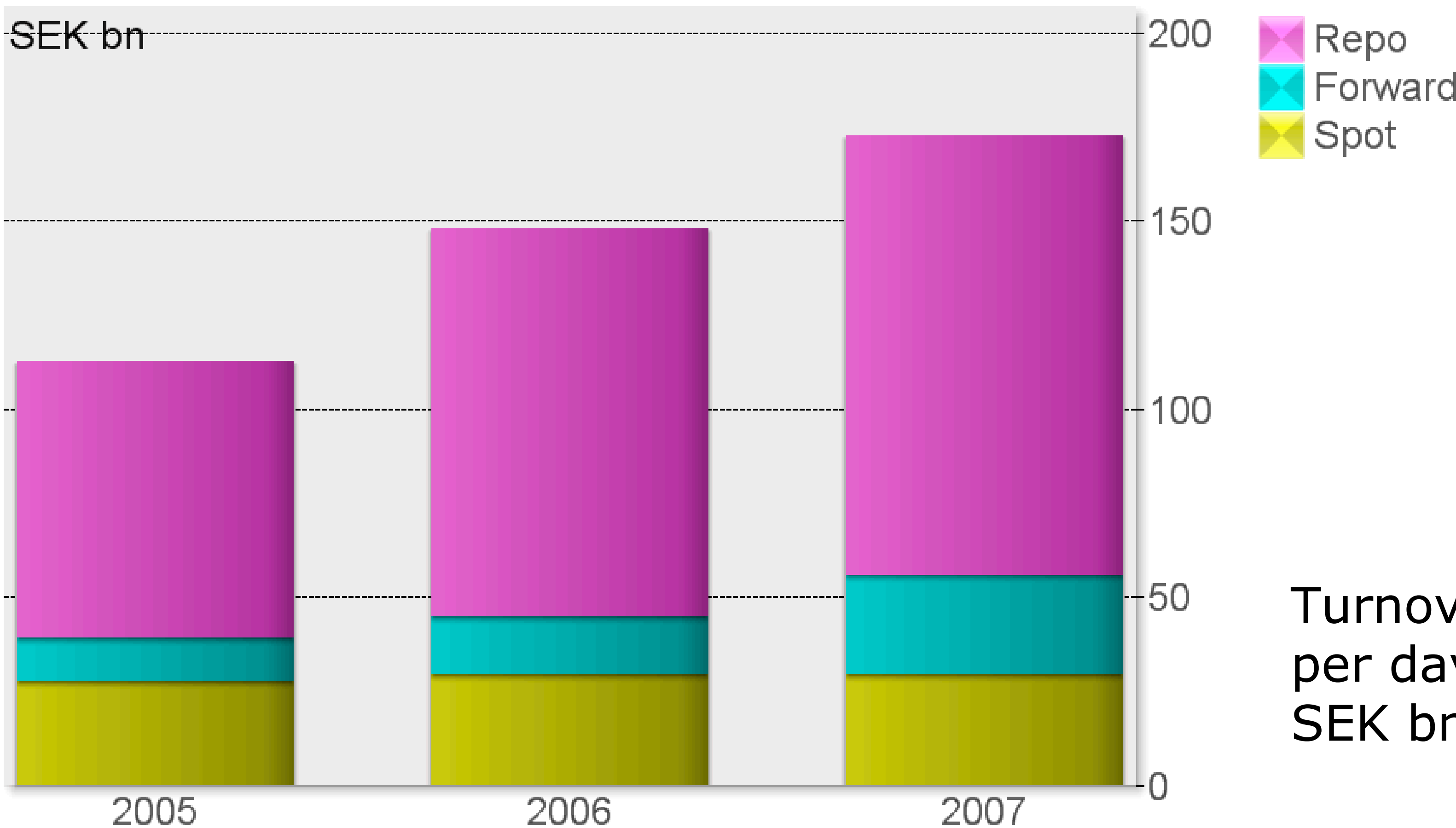
Forward turnover increase vs cash



Daily turnover in SEK bn

The repomarket essential for liquidity



Turnover per day in SEK bn

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The Swedish market during the turbulence

- The market has worked surprisingly well. The government and mortgage markets has been up and running without any major disruptions. Why?
- The banks have not been directly hit by sub-prime and are in fairly good shape
- The Swedish market has developed in an environment with less liquidity than many other and experienced several very turbulent periods. Hence, market making, interbank, broker trading, prices, risk management, customer relations, repo market etc have been fostered to create better liquidity than would be expected by size alone
- The Debt Office is actively supporting liquidity by market commitments

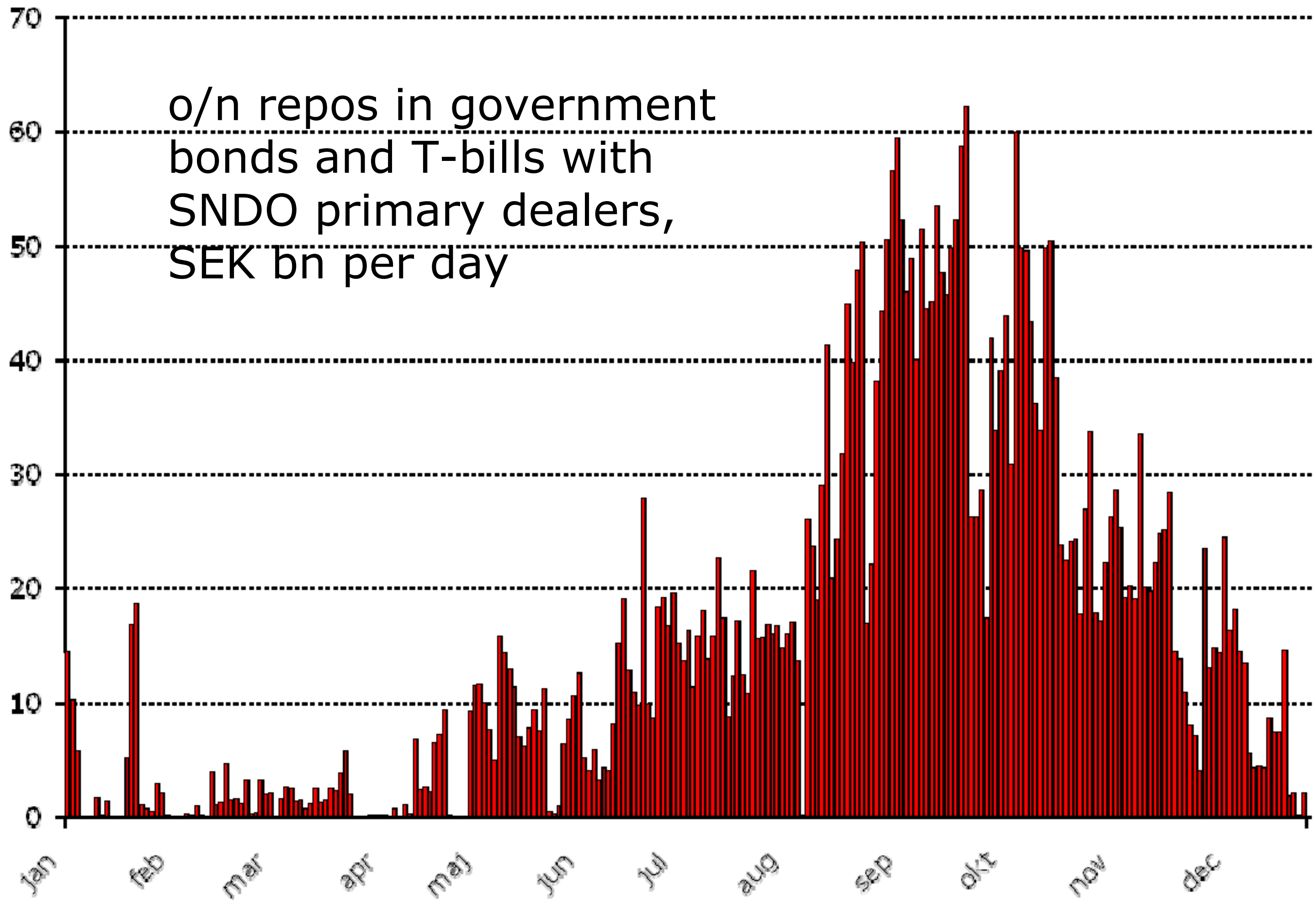
Market commitment

- The repo market is very important for liquidity
- The repo market, together with derivatives, contributes to a liquidity that exceed the size of outstanding cash bonds
- The Debt Office contribute to liquidity by commitment to securities ledning (repos)
- The commitment is part of the market structure and partly explains why the market works as well as it does taking into account its relative smallness

Securities lending

- Commitment to sell government securities on a o/n sell/buy back basis (repos) to PDs irrespective of our daily cash position (surplus och deficit)
- Fixed premium of 40 bps relative to central bank key rate for bonds and 25 bps for T-bills
- Objective is to reduce uncertainty for market makers: the stop loss price in the case of squeeze is known in advance. This contributes to limiting the bid/ask spread
- By reducing uncertainty and contributing to liquidity we increase the attractiveness and risk taking propensity in the market and hence to cost reduction for the government debt

Market commitment – Securities lending 2007



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Experiences of securities lending

- Compensation for smallness of the market
  - Reducing uncdertainty and preventing squeezes
  - Policy contributing to lower long-term funding costs
- Risks and drawbacks
  - Scarcity in the excess demand situation for government bonds was not fully priced in the market during the turbulence. Hence, the price mechanism was cushioned/distorted by our repo commitment
- Our securities lending
  - also serves as a cheap funding vehicle when we have funding needs
  - In situations when we have surpluses we have to invest the borrowing resulting from securities lending. One alternative being reversed repos in mortgages. In this case mortgages can be viewed as collateral during periods when the market demands government securities in excess of our issuance volumes
  - Compare this to the discussion in US and UK. The option to buy government papers and selling mortgages on a repo basis happened to be in place during the autumn by our commitment in combination with a cash surplus situation