

# **Portfolio shifts in securities held by households in Austria: analysis based on security-by-security information**

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## **Introduction**

The growth rates of financial assets of households (including NPISH) for the period from 1996 through 2005, shown in the financial accounts of Austria, indicates that deposit growth was strongly correlated with savings developments. The respective contributions of individual financial instruments reflect the increasing trend towards capital market investments and private pension plans on the one hand, and a substitution effect in portfolios on the other. The development of bank deposits and tradable securities turned out to be negatively correlated, which was also in line with current financial market trends.

This paper examines the developments in the holdings of securities of households, and is structured as follows. Section 2 provides a general assessment of the use of security by security information derived from a central master file and reports of custodian banks and end-investors. Section 3 describes in detail the structure and the portfolio shifts in the holdings of tradable securities of households in the last ten years reflecting also the change in the preference for different types of securities, mainly towards investments in mutual fund shares. Section 4 illustrates the asset allocation of different types of mutual funds held by households and compares the differences to the investment by households made directly in different types of debt securities and quoted shares.

## **Use of security-by-security information for the compilation of portfolio investment of households**

With reference to portfolio investment in bonds and notes, quoted and unquoted shares, mutual fund shares and tradable financial derivatives, we use a comprehensive and reliable compilation system that was initially designed for BOP statistics but has, over time, been extended to cover domestic and cross-border portfolio investment flows and stocks as well. This compilation system was developed and continually modified during 1988-98 in order to improve the reliability of portfolio investment data. The main reasons for implementing such a system were:

- Experience showed that instructions to reporting agents to classify individual securities under certain aggregates were becoming increasingly complicated in fast developing international financial markets.
- Additionally the users of these statistics have expanded continuously their requests which cannot be captured by a compilation system based on reported aggregates.

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<sup>1</sup> Oesterreichische Nationalbank. We would like to thank Erich Hille, Günther Sedlacek and Robert Zorzi for their contributions. The views expressed in this paper are solely those of the authors and do not necessarily reflect the views of the Oesterreichische Nationalbank. For additional information please contact the authors by e-mail: michael.andreasch@oenb.at, aurel.schubert@oenb.at.

Therefore, the reporting of securities is now<sup>2</sup> based on the International Securities Identification Number (ISIN code) for each individual security: (i) monthly stocks and flows of each individual security reported by banks acting as primary custodians held for their own account or on behalf of their resident and non-resident customers. (ii) Stocks and flows of securities held with banks abroad or in self custody have to be reported by domestic non-banks on a quarterly / yearly basis.

The Balance of Payments division within the Statistics section generates an internal master file from data provided by commercial data providers and from additional information reported by Austrian banks providing information on the main feature of each security (eg nominal amount outstanding, currency of denomination, maturity, sectoral allocation and interest rate). At present the master file contains structural information for more than 12,000 different “living” individual domestic securities (provided by the domestic national numbering agency) and for more than 290,000 different “living” individual non-resident securities (provided by German numbering agency). One third of these single securities are reported by custodian banks and/or end-investors. Supplementary data on quotation are stored in the master file. The database is updated at least on a weekly basis. Comprehensive quality checks and amendments are made by the Balance of Payments Division in order to improve the information received from external sources.

This system allows the following data to be compiled for each holding sector<sup>3</sup> on a “who to whom” approach for all issuance sectors:

- Amount outstanding at the end of reporting period (valued both at nominal value and at market price)
- Transactions during the reporting period, (both at nominal value and valued at market price)
- Other changes in volume, split into exchange rate changes, price changes and other adjustments (like reclassification).

Additionally, accrued interest based on the debtor approach is compiled for securities other than shares.

The security-by-security collection system is one of the key pillars of Austria’s financial accounts compilation system. It is worth noting that the securities reported under this system accounted for as much as 40% of the total value of financial assets and liabilities of the Austrian economy. This gives an illustration of the high importance in economic as well as in compilation terms.

Turning to the international level, the ECB has established a statistical database for a security-by-security collection system on a European-wide level, called Centralised Securities Data Base (CSDB).

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<sup>2</sup> With the beginning of 2006 the central bank has implemented a modified version of the compilation of securities. This version is based on an amended version of the reporting regulations. The major amendments are a further split of resident customers into 16 different classes (eg households, own-account workers, private foundations, non-profit organisations serving households), the inclusion of flow data and a separate report on cross-border repurchase and security lending activities.

<sup>3</sup> Central bank, other monetary financial institutions, other financial institutions including insurance corporations and pensions funds, general government, households, NPISH and the rest of the world sector.

## Portfolio shifts of households' holdings between 1995 and 2005

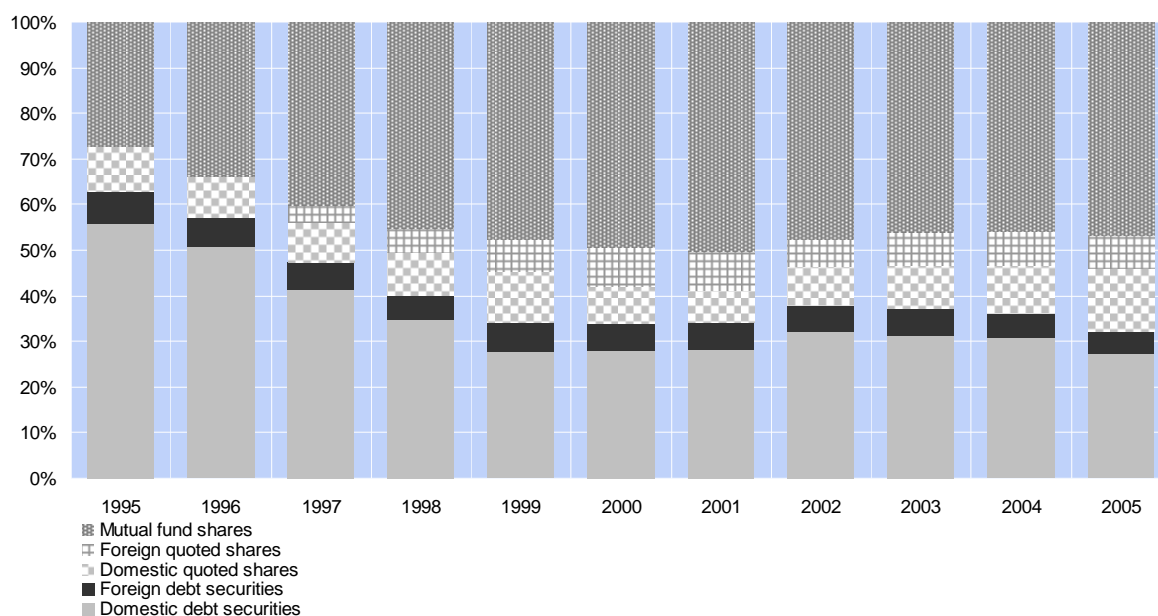
The market value of Austrian households' securities portfolios stood at EUR 87.8 billion as at December 31, 2005. Every fourth euro of private investors' financial assets (EUR 356.2 billion) was invested in bonds, listed stocks and mutual fund shares, whereas EUR 4 out of EUR 10 were held in saving deposits. Of their total securities holdings, Austrian households had invested EUR 74.6 billion (85%) in domestic instruments, thus holding some 12% of the total amount outstanding of domestic tradable securities, which came to EUR 611 billion<sup>4</sup>.

One-third of Austrian households' securities investments are debt securities, one-fifth listed stocks, and mutual fund shares account for slightly below 50%.

Graph 1

### Structure of tradeable securities in the portfolio investment position of households in Austria

Percentage of total portfolio assets



Source: OeNB.

Between 1995 and 2005, Austrian households' total financial assets increased by some 68%. Over the same period, the market value of tradable securities held by households doubled. Hence, this growth rate was more than twice as high as the growth rate recorded for total deposits. The share of securities holdings in total financial assets edged up to almost 24% over the past ten years. The current composition of securities holdings reflects, on the one hand, the still dominant role of debt securities issued by the domestic financial sector and, on the other hand, a structural shift that has taken place in the course of the past ten years. At the end of 1995, debt securities accounted for 63% of households' securities portfolios, whereas stocks and mutual fund shares made up only 10% and 27%, respectively. The

<sup>4</sup> Debt securities, quoted shares and mutual fund shares valued at market price. Holdings of domestic mutual funds in domestic mutual funds shares (funds in funds) are excluded.

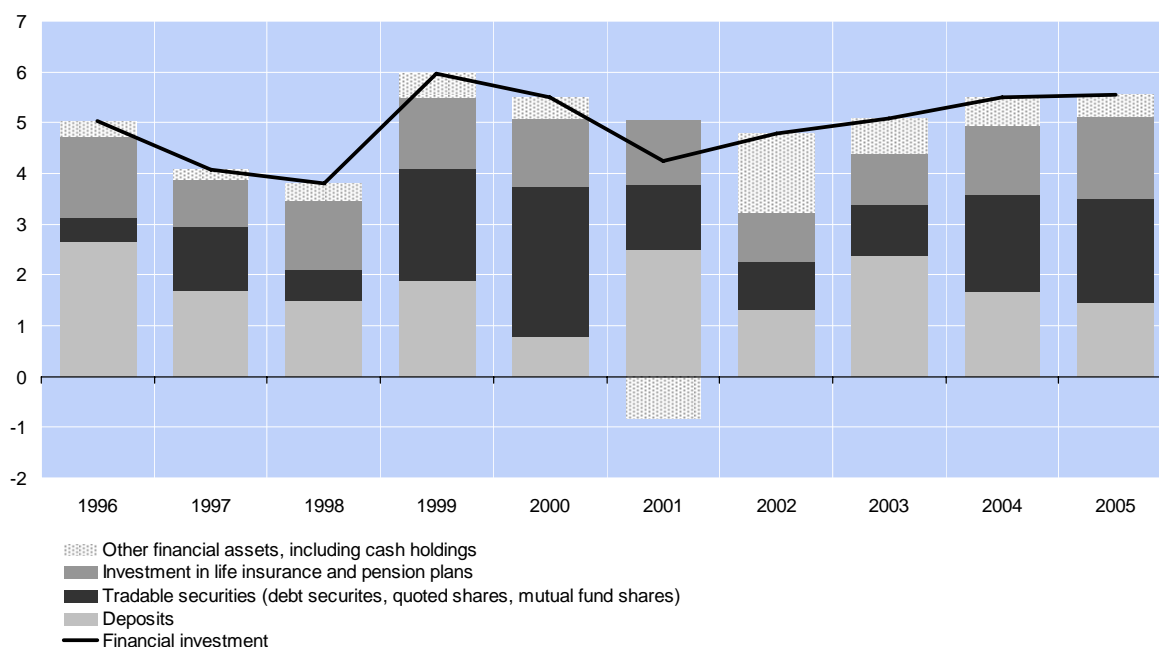
portfolio shifts seen afterwards were mainly triggered by a sharp decline in domestic bank bonds held by households, which showed a growing interest in domestic mutual fund shares between 1995 and 1999.

Unfavorable capital market developments, set off by the bursting of the dotcom bubble in the first half of 2000, with a time lag also impacted on households' net purchases, which slumped in 2002 and 2003, accounting for a mere fifth of total financial investment in both years. Between 1996 and 2001 and then again from 2004 onward, the average share of securities investments was higher than 30%. As conditions on the international stock markets started to stabilize in the second quarter of 2004 and interest rates continued at a very low level, investment in stocks and mutual fund shares once again became more attractive to households.

Graph 2

### Financial investment of households

Annual growth rate in %, contributions in percentage points



Source: OeNB.

Furthermore, the rising supply of stocks provided an additional stimulus: privatizations of enterprises that had been majority-owned by the government and the trend toward disentangling, to a considerable extent, the strategic part of equity stakes in industrial corporations held by financial institutions like banks and insurance corporations contributed to an increase in the amount of stocks for sale just as new issues of bank stocks. Also, thanks to the high share of stocks in free float in this segment, newly issued real estate stocks have been playing a crucial role in households' financial investment. As a result, the equity capital placed on Wiener Börse AG came to EUR 2.2 billion in 2004 and to some EUR 5.2 billion in 2005. From the most recent stock market high (1999) to end-2005, Austrian households acquired on average one-sixth of the total net volume of stocks issued on the stock exchange. Also at end-2005, households held 29% of the capital invested in domestic mutual funds. This increased household demand for mutual fund shares to some extent contributed to the huge growth in domestic mutual funds, whose invested capital quadrupled between 1995 and 2005.

The ups and downs of stock prices observed since 1999 also impacted on the market value of households' securities portfolios. While in 2001 and 2002, declining stock prices

diminished the market value of securities investments by 4.5% and 6.4%, respectively, the rise in stock prices seen in 2004 and 2005 increased the respective portfolio values by 5.1% and 9.3%, respectively. Stocks and domestic mutual fund shares posted the sharpest changes.

At end-1995, direct investments in the form of debt securities and stocks accounted for 75% (EUR 33 billion) of Austrian households' portfolios, while mutual fund shares made up 25% (EUR 12.3 billion). The ratio of mutual fund shares to savings deposits was almost 1:10.

By end-2005, households' securities holdings composed of debt securities and stocks had risen by 40% to EUR 46.8 billion, while the mutual fund shares portfolios nearly quadrupled to EUR 40.9 billion. In the course of these ten years, the ratio of mutual fund shares to savings deposits held by households shifted to almost 1:3, which implies that households had invested every ninth euro of their financial assets in mutual fund shares.

As at December 31, 2005, domestic issues (more than 5,000 individual securities) accounted for 77% of the total investment portfolio consisting of debt securities and listed stocks. However, investments were - to a large extent - limited to just a few issuers and product groups:

- Half of overall debt securities holdings, ie EUR 24 billion in total, were attributable to securities issued by Austria's ten largest bond issuers, including nine banks. The most important category within this investment component were housing bonds, the interest on which is exempt from investment income tax up to 4%. The outstanding volume of these bonds owned by private investors came to EUR 7.9 billion as at December 31, 2005.
- As regards domestic stocks, investors focused on equity listed in the ATX prime market segment. At end-2005, the market value of these stocks held by households amounted to EUR 9.1 billion and accounted for three-fourths of total domestic holdings of stocks. Hence, private investors owned slightly less than one-tenth of the total stock market capitalization in this segment, which came to EUR 99 billion. The most important category of stocks within this sector held by households were domestic real estate stocks with a market value of EUR 3 billion; though the index of these stocks posted an increase below that of the entire ATX, it was still higher than the rise in real estate prices in Austria.

Of the more than 5,700 foreign debt securities with a market value of EUR 4.2 billion, 80% of household holdings were euro-denominated bonds. In terms of target regions, Austrian households most often opted for Europe, and in particular for securities issued in Germany and the Netherlands. A breakdown by sector shows that apart from government bonds, securities issued by banks or international corporations enjoyed the greatest popularity.

Foreign stocks held by private investors totaled EUR 6.6 billion. In this segment, investment in individual securities was similarly high as in the domestic equity segment. Half of the portfolio, which comprised more than 9,000 foreign stocks, was made up of 20 internationally traded stocks, every second of which was issued by a German enterprise. Households preferred in particular stocks issued by banks as well as by enterprises of the utilities and technology sectors.

## **Structure of mutual fund shares held by households: the asset allocation of these funds**

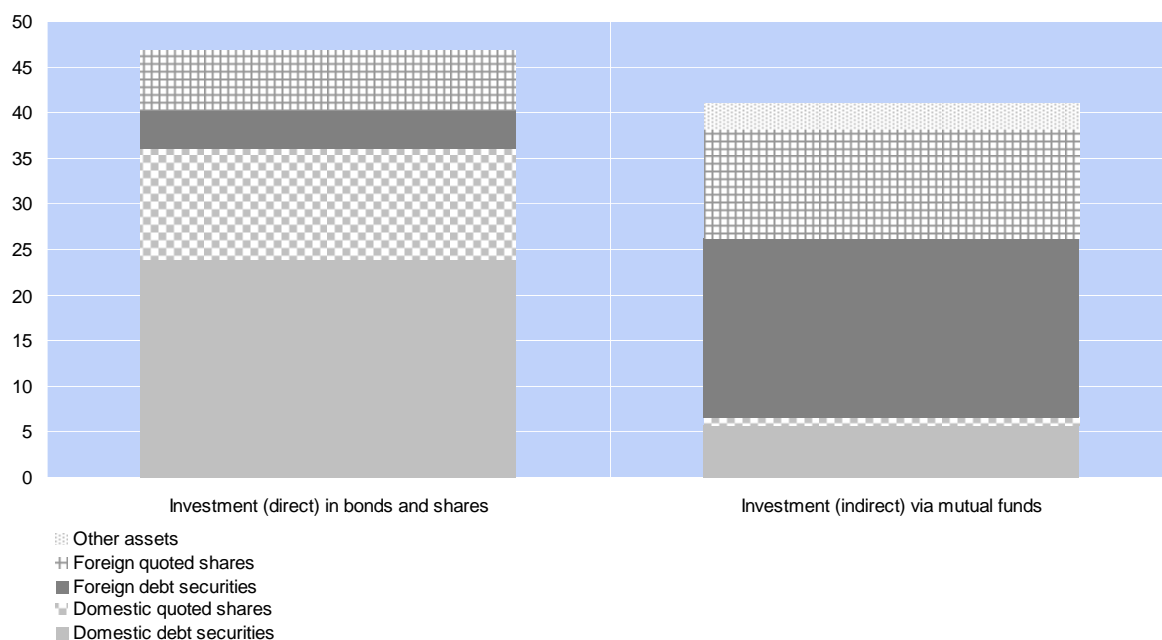
As at December 30, 2005, Austrian households held shares in domestic mutual funds to the amount of EUR 38.5 billion and shares in foreign mutual funds worth EUR 2.4 billion. The asset allocations of the domestic or foreign funds held by households was dominated

primarily by debt securities. At end-2005, 45% of the shares' total market value was invested in fixed-income funds, 21% in equity funds and 32% in balanced funds. All three types of funds have contributed around 30% percentage points to the growth of investment in mutual funds since 1999. In absolute terms, money market funds and real estate funds played a significantly smaller role (accounting for a share of 3%), even though these types of funds posted the highest growth rates in recent years.

Both domestic and foreign mutual funds diversified the capital invested by households in fixed-income funds, focusing on investment in the euro area. About one-third of the total capital (EUR 6 billion) was invested in securities of domestic issuers, whereas two-thirds were used to purchase securities by issuers from other euro area countries, especially German and French government bonds. Investment in foreign stocks, totaling EUR 11.8 billion, focused on companies outside the euro area (two-thirds), with U.S. stocks accounting for more than one-fourth of assets. The most important individual investment positions were stocks of banks, insurance companies, utilities and chemical corporations as well as enterprises in the technology sectors. The portfolio position combining the holdings of debt securities and shares held directly and through mutual funds showed at end-2005, that almost 50% of the financial assets (totaling EUR 87.8 billion) were domestic securities. An analysis by financing instrument shows a preference for debt securities, which accounts for 61% of households' assets, while domestic and foreign stocks contributed 36%. A mere 3% were attributable to other assets, including real estate.

Graph 3  
**Different composition of the portfolios by households**

Billions EUR



Source: OeNB.

## Conclusion

The analysis both of portfolio shifts and direct versus indirect investment in securities benefits from the use of security by security data enabling the investigation of detail aggregates on securities without any change in the reporting requirements. Tradable

securities in various types and changing composition held in the portfolio of households raised their importance due to the facts that the contribution to the growth rate of financial assets have increased and that the price changes of the securities will affect both the financial and consumption behaviour of the private households. These developments underpin the use of security by security information. The in-depth structural information provided for monetary policy and financial market stability analysis benefits from the existence of this approach.

## Statistical annex

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<b>Financial assets of households</b>											
EUR million											
Domestic debt securities	25,203	23,716	20,339	17,794	15,491	17,346	17,069	19,003	20,082	22,706	23,975
Foreign debt securities	3,225	2,933	2,935	2,807	3,717	3,700	3,685	3,453	3,778	3,968	4,217
<b>Debt securities</b>	<b>28,428</b>	<b>26,650</b>	<b>23,274</b>	<b>20,601</b>	<b>19,208</b>	<b>21,046</b>	<b>20,754</b>	<b>22,456</b>	<b>23,860</b>	<b>26,674</b>	<b>28,192</b>
Domestic quoted shares	4,511	4,154	4,337	4,767	6,410	5,145	4,460	5,067	6,224	7,904	12,046
Foreign quoted shares	0	0	1,808	2,658	3,918	5,237	5,102	3,462	4,458	5,288	6,585
<b>Quoted shares</b>	<b>4,511</b>	<b>4,154</b>	<b>6,145</b>	<b>7,425</b>	<b>10,328</b>	<b>10,382</b>	<b>9,562</b>	<b>8,530</b>	<b>10,681</b>	<b>13,192</b>	<b>18,631</b>
Domestic mutual fund shares	11,854	15,136	18,698	22,040	25,154	27,712	28,772	26,904	28,539	32,556	38,518
Foreign mutual fund shares	454	702	1,150	1,183	1,687	3,087	1,844	1,224	1,216	1,446	2,423
<b>Mutual fund shares</b>	<b>12,308</b>	<b>15,838</b>	<b>19,848</b>	<b>23,223</b>	<b>26,841</b>	<b>30,799</b>	<b>30,616</b>	<b>28,128</b>	<b>29,755</b>	<b>34,002</b>	<b>40,941</b>
<b>Tradable securities</b>	<b>45,247</b>	<b>46,641</b>	<b>49,266</b>	<b>51,249</b>	<b>56,376</b>	<b>62,227</b>	<b>60,932</b>	<b>59,114</b>	<b>64,296</b>	<b>73,868</b>	<b>87,764</b>
Deposits	121,218	126,817	130,615	134,104	138,723	140,763	147,698	151,401	158,339	163,501	168,262
Other financial assets	45,644	50,390	55,569	60,592	67,155	73,780	74,406	81,045	86,325	92,526	100,246
<b>Financial assets</b>	<b>212,109</b>	<b>223,849</b>	<b>235,450</b>	<b>245,944</b>	<b>262,255</b>	<b>276,771</b>	<b>283,036</b>	<b>291,560</b>	<b>308,960</b>	<b>329,895</b>	<b>356,272</b>

Memo items:

<b>Tradable securities</b> (in % GDP)	25%	25%	27%	28%	31%	34%	33%	32%	35%	40%	48%
<b>Financial assets</b> (in % GDP)	116%	122%	129%	134%	143%	151%	154%	159%	169%	180%	194%

### Financial investment of households

EUR million

Domestic debt securities		-1,655	-2,973	-2,167	31	1,846	-304	1,828	1,140	2,427	1,421
Foreign debt securities		0	319	-308	420	-17	-23	-221	309	63	128
<b>Debt securities</b>		<b>-1,655</b>	<b>-2,654</b>	<b>-2,475</b>	<b>451</b>	<b>1,829</b>	<b>-327</b>	<b>1,607</b>	<b>1,449</b>	<b>2,490</b>	<b>1,549</b>
Domestic quoted shares		0	0	1,063	1,612	360	-862	304	165	-174	1,389
Foreign quoted shares		0	0	336	94	1,582	1,837	287	175	730	251
<b>Quoted shares</b>		<b>-394</b>	<b>2,003</b>	<b>1,399</b>	<b>1,706</b>	<b>1,943</b>	<b>976</b>	<b>592</b>	<b>340</b>	<b>555</b>	<b>1,640</b>
Domestic mutual fund shares		2,847	3,101	2,535	2,819	2,558	2,367	765	1,378	2,787	3,160
Foreign mutual fund shares		248	354	-7	504	1,442	527	-282	-259	96	472
<b>Mutual fund shares</b>		<b>3,096</b>	<b>3,455</b>	<b>2,528</b>	<b>3,323</b>	<b>4,000</b>	<b>2,894</b>	<b>483</b>	<b>1,119</b>	<b>2,883</b>	<b>3,632</b>
<b>Tradable securities</b>		<b>1,047</b>	<b>2,805</b>	<b>1,452</b>	<b>5,480</b>	<b>7,772</b>	<b>3,543</b>	<b>2,682</b>	<b>2,908</b>	<b>5,928</b>	<b>6,821</b>
Deposits		5,600	3,798	3,488	4,620	2,040	6,940	3,705	6,937	5,172	4,774
Other financial assets		4,052	2,491	4,007	4,564	4,595	1,247	7,129	4,971	5,914	6,706
<b>Financial investment</b>		<b>10,699</b>	<b>9,094</b>	<b>8,947</b>	<b>14,663</b>	<b>14,407</b>	<b>11,731</b>	<b>13,516</b>	<b>14,816</b>	<b>17,013</b>	<b>18,301</b>

### Domestic securities issues

EUR million

Debt securities	160,470	170,532	184,281	198,191	229,345	259,365	281,015	300,008	313,259	337,407	371,838
Quoted shares	23,795	26,746	34,276	30,470	32,947	31,884	28,307	32,235	44,811	64,577	106,413
Mutual fund shares	24,179	31,359	41,214	54,462	75,341	83,022	86,599	90,135	97,190	109,078	132,326
<b>Total issues</b>	<b>208,444</b>	<b>228,637</b>	<b>259,771</b>	<b>283,123</b>	<b>337,633</b>	<b>374,270</b>	<b>395,921</b>	<b>422,378</b>	<b>455,260</b>	<b>511,062</b>	<b>610,578</b>

Memo items:

<b>Total issues</b> (in % GDP)	114%	123%	141%	148%	169%	178%	183%	191%	201%	217%	249%
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### Holdings of domestic securities by households

Contribution to the total volume of issues

Debt securities	16%	14%	11%	9%	7%	7%	6%	6%	6%	7%	6%
Quoted shares	19%	16%	13%	16%	19%	16%	16%	16%	14%	12%	11%
Mutual fund shares	49%	48%	45%	40%	33%	33%	33%	30%	29%	30%	29%
<b>Total issues</b>	<b>20%</b>	<b>19%</b>	<b>17%</b>	<b>16%</b>	<b>14%</b>	<b>13%</b>	<b>13%</b>	<b>12%</b>	<b>12%</b>	<b>12%</b>	<b>12%</b>

cut-off date: 2006-05-31

Source: Annual financial accounts data compiled by the Austrian National Bank.