

Real estate wealth by institutional sector

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Introduction

Often, when economists analyse a country's economic situation, journalists report on a country's situation, or politicians seek to manage a country's situation, they refer to the gross domestic product, government deficit or even the trade balance, all of which are flow variables. Stock variables, with the exception of the public debt, are cited less often; admittedly, they inherently fluctuate less rapidly than flows and so do not lend themselves as well to debate. Wealth comprises the stock of accumulated assets. For the man in the street, this idea is certainly easier to grasp than that of GDP. It is also a topic of renewed interest of late in areas such as taxation, disclosure or the distribution of wealth.

Wealth is accumulated in two principal forms: financial assets and other assets. Without going into too much detail about the ESA 95 classification of these other assets, by far the largest category is real estate assets. Data on financial assets are well known because they are published every quarter in the financial section of the national accounts. Breakdowns by type of financial instrument, by sector of ownership and by debtor sector are available. However, the same is not true of real estate assets, which are still often ignored statistically.

The primary goal of this article is to provide estimates of the value of these assets. It describes the data sources and methodology used, before presenting the current state of the stock of real estate and estimating wealth using a variety of breakdowns, including a breakdown of ownership by institutional sector. One section is devoted to a more detailed review of individuals' real estate holdings, notably the relationship of these assets to total wealth, and the distribution of assets among individuals. There is a discussion of trends, but in the form of

commentary rather than an in-depth analysis, which remains to be done.

1. Data sources

With no way to directly observe the value of each asset, two types of data were needed to estimate real estate wealth: volume data and price data.

The "volume" of assets is drawn from the files of FPS Finance, and more specifically from the General Administration of the Patrimonial Documentation, or GAPD (*Administration générale de la Documentation patrimoniale*), which was created by the merger of the former cadastral and registry departments. It is this service that updates the database daily, on an ongoing basis, to reflect any changes to the cadastral map of Belgium or changes in the ownership of individual parcels. At the end of each year, the database is frozen and determines the tax situation of each of the parcels. Thanks to the goodwill of the FPS and the collaboration with the GAPD, the Bank's General Statistics Department obtained two cadastral files extracted from this year-end situation: an aggregate file of the characteristics of assets held by all individuals and a detailed file of the assets owned by each legal entity. This detail is absolutely necessary to categorise these legal entities according to the ESA 95 sector classification, which makes it possible to link the results directly or indirectly to the national accounts.

The asset price data come from the FPS Economy. The Directorate General for Statistics and Economic Information (DGSEI), using data supplied by the FPS

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Finance registry departments, compiles statistics on the selling prices of real estate assets.

1.1 Cadastral data

The aggregate file compiles the characteristics of assets held by individuals divided into several categories: resident individuals, non-resident individuals, and individuals who are undivided co-owners with legal entities. The detailed file lists the characteristics of all the assets held by each legal entity. Each of the legal entities is identified by its registry number if it is a resident entity or by a code including the ISO code for the country of residence if it is a foreign entity.

Real estate assets are broken down by the Region where they are located and by the nature of asset (house, flat, plant, land, etc.). The regional breakdown only deals with the geographic location of the assets. As for the nature of asset, it must be pointed out that the cadastral classification is only updated sporadically when there is a duly reported sale or change in ownership. It includes 415 different types of assets, around 60 of which pertain to land and the rest of which refer to buildings. This historical classification system is in some cases obsolete, as it includes codes for kiosques, chapels, windmills, etc. The cadastral data are exhaustive but do not always match reality. For example, a flat constitutes a separate parcel when it has been involved in a distinct transaction, but a flat in a house that has always exchanged hands as a house is not recognised by the cadastral service and thus is not shown separately in the file.

Three variables are provided for each category of region/type: the number of parcels noted, the corresponding surface area in square metres, and the cadastral income (CI). The surface area is that of the parcels of land with or without buildings. A 200 m² plot of land may have a villa (detached house) with 400 m² of living space or a 50 m² house. Apartments and car parks do not have a surface area, as they are attributed to “building common areas”, which constitutes another type of asset. The CI is the non-indexed cadastral income for the reference year 1975.

The cadastral files are yearly files that show the state of assets at 1 January every year. To align these data with the other statistics, the data at 1 January in year (n) are considered in the results (and again later in this article) as being at 31 December in year (n-1).

The files used show the situation at year-end 2005 to 2011. Owing to a change in the FPS Finance computer system in 2005, earlier data are not available.

1.2 Price data

The DGSEI compiles statistics on the prices of real estate transactions in Belgium by type of asset and by Region using files that notaries provide to registry services.

An average price, prices by quartile (the prices that demarcate the 25 % 50 % and 75 % least expensive assets; the price that separates the 50 % least expensive from the 50 % most expensive is called the median price), and prices by the top and bottom decile (the 10 % most expensive and the 10 % least expensive) are calculated for each type of asset and region. We note that the unit price is used for buildings, whereas for land, the price per square metre is used. These prices are published for the four most common types of property (houses, villas, flats and construction land) and are a topic of discussion in the press. Prices also exist for 21 other types of property: 12 types of buildings and 9 types of land.

Prices are available by town, province, Region and for the entire country. Because the 21 other types of asset are less common, only prices by Region are frequent enough to be representative. It is these regional prices that are used for wealth estimates.

2. Methodology

Real estate wealth by sector is estimated in two stages: first an estimate of total real estate wealth, and then a breakdown of total wealth by sector.

2.1 Total real estate wealth

The methodology used to estimate total real estate wealth is simple: first calculate the value by category of assets by multiplying the volume of assets by their average price, and then add together all of the category values. To keep them consistent with prices, volumes are expressed in units for buildings and in square metres for land.

Given that price statistics are available for only 25 types of assets, estimates are made based on 75 categories (25 asset types and three Regions). Prior to the calculation, with the help of a concordance table matching “nature” codes and “type” codes, the assets in the cadastral files are aggregated according to the 25 types used by the DGSEI (see box 1). For information, the picturesque properties cited in the previous section are classified under “Other buildings and buildings not yet classified”.

Box 1 – Asset types

Residential buildings

- ordinary houses
- rental houses
- villas, bungalows, country houses
- apartments, flats, studios
- unit in a residential building

Non-residential buildings

- commercial space
- hotels, hostels
- commercial unit (part of a building)
- office buildings
- other commercial buildings
- industrial buildings
- other buildings and buildings not yet classified
- farmhouses
- farm properties
- horticultural properties

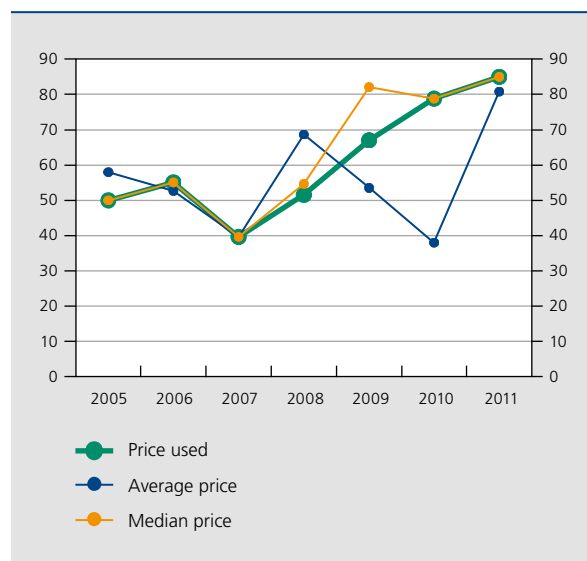
Land

- construction land
- farm land
- pasture
- orchards
- mixed-use farm land
- industrial land
- forest
- non-arable land
- small parcels
- unclassified and other land

This article is generally limited to three groups of assets: residential buildings, non-residential buildings and land, the sub-categories of which are also in the above box.

Despite the aggregation, and owing to the small number of transactions and heterogeneity of assets, average prices for certain categories can fluctuate significantly from one year to the next. Two steps have been taken to reduce the volatility of our wealth estimates: the median price, which is statistically more stable than the average price, is used and, where necessary, the annual change capped at 30% (to the upside or downside). Chart 1 illustrates this process as applied to industrial land in Flanders.

CHART 1 INDUSTRIAL LAND PRICES IN FLANDERS
(euros/m²)



Source: FPS Economy.

Furthermore, in certain categories, there may not have been any transactions in a given year, or they may have been so rare that they became for all intents and purposes confidential, and the prices were not published. This is mainly true of some types of land in the Brussels area. In these cases, it is necessary to fill in the missing prices by basing an estimate on the price trends of similar assets. Fortunately, this is rare, with such cases representing less than 1% of estimated wealth.

2.2 Sector breakdown

The detailed file compiles assets held by legal entities identified by the company number, which is assigned a sector code in accordance with ESA 95 methodology. This makes it possible to pool assets by ownership sector and by category for the three variables used (number of assets, surface area and CI). Box 2 lists the ESA 95 classification of institutional sectors, the sector codes and the composition of the main sectors cited in this article.

This pooling by category is also done for the aggregate file for individuals: residents are classified as households (S14) and non-residents are in the foreign sector (S2), whereas properties held by individuals in undivided co-ownership with a legal entity are counted half in S14 or S2, depending on whether or not the individuals are residents.

Box 2 – ESA 95 institutional sectors

Total economy	S1		
Non-financial corporations	S11		} Corporations
Financial corporations	S12		
Central bank		S121	
Other monetary financial institutions		S122	
Other financial intermediaries		S123	
Financial auxiliaries		S124	
Insurers and pension funds		S125	
General government	S13		} Government
Central government		S1311	
State government		S1312	
Local government		S1313	
Social security funds		S1314	
Households	S14		} Individuals
Non-profit institutions serving households	S15		
Rest of the world	S2		} Foreign
European Union	S21		
Other countries and international organisations	S22		

In so doing, we arrive at the sector breakdown for the three variables and for all asset categories. The estimated value of wealth by category is split among the sectors, not on the basis of the volume data (number of assets or surface area), but of the CI of assets held by sector.

This choice stems from the following observation: given that there is only one price per category, calculating a breakdown by volumes is tantamount to assuming that all of the assets in a category are valued at this same price. For example, all of the office buildings in Brussels would have the same value, from a small two-storey building owned by a self-employed person to a 20-storey office complex belonging to an insurance company. A breakdown proportional to CI helps to remedy this oversimplification. We work from the assumption that the CI contains information about the asset's value. Obviously, this assumption is not without its drawbacks, as CIs were created in 1975 in order to estimate properties' rental

income and not their value. However, there is evidence that within a category of assets, there is sufficient positive correlation between an asset's value and its CI.

3. Real estate wealth

Before we present our estimates of the value of real estate wealth, it may be helpful to point out some basic information that makes it easier to define the stock of Belgian real estate and how it has changed in recent years.

3.1 Real estate stock

Land in Belgium is divided into cadastral parcels. Each represents a distinct property asset, whether built or not. Table 1 shows the number of cadastral parcels in Belgium, broken down by type of asset and by Region.

TABLE 1 NUMBER OF PARCELS
(in thousands)

	By type of asset			
	Residential	Non-residential	Land	Total
2005	4 283.2	933.7	4 428.3	9 645.2
2006	4 404.8	933.3	4 415.6	9 753.8
2007	4 513.0	932.8	4 399.0	9 844.8
2008	4 612.9	932.9	4 382.7	9 928.5
2009	4 703.0	933.3	4 370.9	10 007.3
2010	4 800.2	933.3	4 358.1	10 091.6
2011	4 895.8	932.7	4 351.6	10 180.1

	By Region			
	Flanders	Wallonia	Brussels	Total
2005	5 232.1	3 965.8	447.3	9 645.2
2006	5 301.2	3 989.9	462.6	9 753.8
2007	5 355.5	4 010.3	478.9	9 844.8
2008	5 406.9	4 028.8	492.8	9 928.5
2009	5 454.8	4 045.6	506.8	10 007.3
2010	5 514.7	4 059.2	517.7	10 091.6
2011	5 570.7	4 078.4	531.0	10 180.1

Source: FPS Finance.

The number of parcels rose steadily over the period, from 9.65 million in 1995 to 10.2 million in 2011, an increase of 535 000 units in six years, or 1.2 % annually.

This increase is entirely attributable to residential buildings, the number of which grew by more than 613 000, whereas the number of parcels with non-residential buildings was stable. Land parcels decreased by 77 000 units and are now less numerous than residential buildings.

Sub-divisions of property and new construction were responsible for the trend. Building a 10-unit block of flats on one parcel of land reduces the number of land parcels by 1 and increases the number of building plots by 10.

The second part of the table shows that the number of parcels increased in every Region to different extents: +1.1 % in Flanders, +0.5 % in Wallonia and +2.9 % in Brussels. As we note at the national level, in each Region, the decline in the number of land parcels is biggest where the increase in the number of residential parcels is strongest. The dividing of houses into flats is another

phenomenon that explains the substantial increase in Brussels.

The explosion in the residential sector in recent years is reflected in the distribution of residential units by year of construction (see chart 2).

The housing stock in Wallonia is much older than in the other two regions: 48 % of homes there were built before 1945, compared with 24 % in Flanders and 36 % in Brussels. The immediate post-war period saw a lot of residential construction and rebuilding in all the Regions. The expansion in Brussels took place in the 1950s and 1960s, with the construction of numerous blocks of flats, which went hand in hand with the demolition of older houses. Traditional single-family homes, as well as the introduction of blocks of flats, have supported construction in Flanders since the mid-1970s. These trends are attributable to demographics and, above all, to the more independent lifestyles that shrank the size of households. The crisis of the 1980s is evident in the data for each Region: it was over fairly quickly in Flanders, but it took

CHART 2 DISTRIBUTION OF RESIDENTIAL BUILDINGS BY YEAR OF CONSTRUCTION



Source : FPS Finance.

until recently (from 2004) for residential construction to get its spark back in the Brussels and Wallonia Regions. The improvement proved short-lived, as the financial crisis

took the steam out of construction in all three Regions. The division and renovation of older buildings into flats is a recent phenomenon in Brussels, which explains why the

TABLE 2 RESIDENTIAL BUILDINGS BY SECTOR OF OWNERSHIP
(in thousands)

	Corporations	Government	Individuals	Foreign	Total
2005	383.9	19.1	3 858.2	22.1	4 283.2
2006	419.0	22.6	3 941.7	21.6	4 404.8
2007	447.8	22.6	4 021.2	21.4	4 513.0
2008	470.3	22.9	4 099.9	19.9	4 612.9
2009	490.2	23.2	4 170.4	19.3	4 703.0
2010	506.5	23.1	4 253.5	17.2	4 800.2
2011	529.6	23.6	4 325.2	17.4	4 895.8

Source : FPS Finance.

sharp increase in residential units has not translated into a commensurate increase in new construction.

The breakdown of residential properties by sector of ownership (see table 2) shows that individuals (sectors S14 + S15) own the vast majority (4.3 million out of 4.9 million at end-2011). What is surprising is that their share is only 88 %, and that other sectors' ownership of dwellings is not negligible (600 000 units at end-2011, or 12 % of the total). It is mostly corporations that own residences (530 000, or 11 %), whereas the government (S13) and foreign (S2) sectors together only own 1 % of the total.

It should be noted that the number of residential buildings owned by corporations is rising steadily. Over the period reviewed, corporations' share increased from 9 % to 11 %. Conversely, that of individuals fell from 90 % to 88 %. Of the 100 000 residential properties built each year, around one-quarter are bought by corporations.

3.2 Estimates of real estate wealth

The value of real estate wealth in Belgium at end-2011 is estimated at € 1,384 billion, or 374 % of GDP (see table 3). The value was only € 950 billion in 2005 (313 % of GDP). Real estate wealth thus grew by 46 % of the period, easily outpacing GDP growth in value terms (+22 %). Wealth grew in every year except 2009, when it declined slightly (–€ 7 billion, or –0.6 %) as a result of non-residential assets.

In Belgium, real estate wealth is concentrated in residential buildings, which represented € 1 025 billion at end-2011, or 74 % of the total value (this estimate includes the value of land on which residential buildings are built and which covers around 8 % of all land in the country). This share increased marginally over the period studied, from 72 % to 74 %. Apart from 2009, when a drop in prices resulted in a minor fall of 0.1 %, the value of residential property rose every year. At end-2011, the value of non-residential buildings was € 178 billion. Their share of

TABLE 3 ESTIMATES FOR REAL ESTATE WEALTH
(in € billion)

	By type of asset				
	Residential	Non-residential	Land	Total	Total (in % GDP)
2005	684.1	138.4	126.9	949.4	312.9
2006	777.0	151.8	138.8	1 067.6	334.8
2007	862.3	178.2	151.9	1 192.3	355.1
2008	911.7	174.7	152.3	1 238.6	357.6
2009	911.0	167.1	153.3	1 231.5	361.4
2010	977.5	174.2	170.9	1 322.6	371.4
2011	1 025.8	178.3	179.7	1 383.8	374.2
	By Region				
	Flanders	Wallonia	Brussels	Total	
2005	628.5	224.6	96.3	949.4	
2006	708.7	250.7	108.2	1 067.6	
2007	791.0	277.6	123.7	1 192.3	
2008	817.0	295.5	126.2	1 238.6	
2009	813.1	296.1	122.3	1 231.4	
2010	876.0	312.2	134.3	1 322.6	
2011	917.5	323.2	143.0	1 383.8	

Sources: FPS Finance, FPS Economy, NBB calculations.

the total fell from 14.5 % in 2005 to 13 % in 2011. This relative decline was accompanied by a decline in absolute terms in 2008 and 2009 (–€ 11 billion, or –6 %) because the prices of these assets are more sensitive to economic trends, which weakened considerably in 2008 as a result of the financial crisis. The value of vacant land at the end of the period was similar to that of non-residential buildings (€ 180 billion). The estimated value of land rose each year, even during the crisis years. Even though their number (see table 1) and surface area fell steadily, land parcels' share of real estate wealth was stable at around 13 %, which implies a more favourable price trend than that of building assets.

Looking at the location of property assets, the value of real estate wealth can be estimated for each of the three Regions. At the end of 2011, wealth in Flanders was estimated at € 917 billion, that of Wallonia at € 323 billion, and that of Brussels at € 143 billion, or respectively 66.3 %, 23.4 % and 10.3 % of national real estate wealth.

The Regions' wealth increased each year with the exception of the crisis year, 2009, when they declined marginally in Flanders (–0.5 %) and a bit more in Brussels (–3.2 %) owing to the large share of wealth linked to non-residential properties in the capital. Despite their different compositions and price trends, the proportions of wealth in the Regions remained quite stable over the period, varying by 0.6 % at most.

Unsurprisingly, individuals are the principal sector for real estate ownership in Belgium, with wealth amounting to € 1 070 billion at end-2011, or more than 77 % of the total (see table 4). Over the period studied, their

wealth increased by 45 %, but this was weaker than the overall increase of 46 %, causing their share to drop somewhat.

At the end of 2011, corporations owned € 272 billion worth of real estate assets in Belgium. The value of these holdings rose 51 % between 2005 and 2011, lifting their share of total real estate wealth from 19 % in 2005 to 20 % at the end of the period.

General government holdings of real estate were worth an estimated € 37 billion at end-2011, or just under 3 % of the total. Estimates for this sector must be taken with a grain of salt, because the government owns many unique buildings for which the average price and CI used are probably not meaningful. Non-residents own only a small share of Belgium's real estate wealth (€ 6 billion in 2011), and their share declined over the period from 0.5 % to 0.4 %. All sectors saw their real estate wealth decline marginally in 2009, except for corporations, whose wealth shrank more notably (–2 %) owing to their holdings of non-residential assets.

Table 5 shows the breakdown of estimated sector wealth by type of asset. Individuals' wealth is discussed in greater detail in the following section.

For corporations, quite naturally, non-residential assets make up the biggest share of their real estate wealth (€ 115 billion in 2011, or 42 % of the total). However, we note that residential assets represent a growing share of corporations' wealth, rising from 32 % (€ 58 billion) in 2005 to 35 % in 2011 (€ 98 billion). Detailed figures show that villas owned by non-financial corporations are on average larger than those owned by individuals. It is likely

TABLE 4 ESTIMATED WEALTH BY SECTOR OF OWNERSHIP
(in € billion)

	Corporations	Government	Individuals	Foreign	Total
2005	180.3	24.6	739.8	4.6	949.4
2006	202.0	30.7	829.7	5.2	1 067.6
2007	237.6	33.6	915.2	5.9	1 192.3
2008	237.0	34.1	961.6	5.9	1 238.6
2009	231.8	33.2	961.0	5.4	1 231.4
2010	252.9	36.8	1 027.4	5.4	1 322.6
2011	271.9	36.7	1 069.7	5.5	1 383.8

Sources: FPS Finance, FPS Economy, NBB calculations.

TABLE 5 DETAILED ESTIMATES OF WEALTH BY SECTOR OF OWNERSHIP
(in € billion)

	Corporations	Government	Individuals	Foreign	Total
Residential assets					
2005	58.1	3.7	619.1	3.2	684.1
2006	67.3	4.9	701.3	3.5	777.0
2007	76.4	5.4	776.7	3.8	862.3
2008	80.9	5.6	821.3	3.9	911.7
2009	81.5	5.7	820.1	3.8	911.0
2010	89.7	6.1	878.1	3.6	977.5
2011	96.3	6.4	919.4	3.8	1 025.8
Non-residential buildings					
2005	85.0	8.0	44.6	0.7	138.4
2006	93.3	9.5	48.1	1.0	151.8
2007	112.5	10.5	54.0	1.3	178.2
2008	109.5	10.9	53.1	1.2	174.7
2009	104.2	10.3	51.7	0.9	167.1
2010	109.0	11.9	52.2	1.1	174.2
2011	114.6	10.7	52.1	1.0	178.3
Land					
2005	37.2	12.9	76.1	0.7	126.9
2006	41.4	16.4	80.3	0.7	138.8
2007	48.8	17.8	84.6	0.8	151.9
2008	46.6	17.7	87.2	0.8	152.3
2009	46.1	17.3	89.3	0.7	153.3
2010	54.2	18.8	97.2	0.7	170.9
2011	61.1	19.6	98.3	0.8	179.7

Sources: FPS Finance, FPS Economy, NBB calculations.

that more and more sole proprietors and managers live in a home purchased by a corporation under their control in order to take advantage of certain tax benefits.

The real estate wealth in the government sector is principally in the hands of local authorities. Their holdings consist mostly of land (€ 20 billion at end-2011) and non-residential buildings (€ 11 billion).

Foreigners' real estate holdings consist nearly 70 % of residential assets, which is due to the fact that the vast majority of non-resident owners are individuals.

4. Individuals' real estate wealth

Table 6 shows more comprehensive detailed information on the real estate assets owned by the biggest sector of owners, individuals.

Residential assets are the largest component: € 920 billion in 2011. Their share of the total increased steadily over the period, from 84 % to 86 %. Houses were the biggest source of residential real estate wealth (€ 400 billion in 2011), followed by villas (€ 330 billion) and other dwellings (€ 190 billion), which comprise chiefly flats, but also rental

TABLE 6 INDIVIDUALS' REAL ESTATE WEALTH
(in € billion)

	By type of asset							Total (in % GDP)
	Residential			Non-residential	Land		Total	
	Houses	Villas	Other dwellings		Construction land	Other		
2005	273.9	242.2	102.9	44.6	30.1	46.0	739.8	243.8
2006	310.7	265.9	124.7	48.1	33.0	47.3	829.7	260.2
2007	342.3	292.2	142.2	54.0	36.4	48.2	915.2	272.5
2008	362.2	304.1	155.0	53.1	38.2	49.0	961.6	277.6
2009	363.9	293.4	162.8	51.7	42.0	47.3	961.0	282.0
2010	382.0	314.5	181.5	52.1	45.4	51.8	1 027.4	288.5
2011	397.6	328.0	193.8	52.1	45.3	53.0	1 069.7	289.1

	By Region where asset is located								
	Flanders			Wallonia			Brussels		
	Residential	Other	Total	Residential	Other	Total	Residential	Other	Total
2005	410.5	85.3	495.7	149.7	30.1	179.8	58.9	5.4	64.3
2006	462.9	91.4	554.3	171.1	31.5	202.7	67.2	5.5	72.7
2007	511.4	98.7	610.1	190.4	33.0	223.4	74.9	6.9	81.8
2008	539.4	99.6	639.1	202.5	34.6	237.1	79.4	6.0	85.4
2009	539.6	99.9	639.5	201.5	34.4	235.9	79.0	6.6	85.6
2010	579.2	106.2	685.4	212.8	36.1	248.8	86.1	7.1	93.2
2011	607.3	106.4	713.7	221.4	36.9	258.4	90.6	7.0	97.6

Sources: FPS Finance, FPS Economy, NBB calculations.

houses. While the share of houses was constant over the period, we note that the share of villas dropped by 2 % and that of other dwellings rose 4 %, reflecting the real estate market trend one could call “fewer villas, more flats”.

The value of individuals' non-residential buildings was € 50 billion on 2011, or 5 % of the total. This share fell by 1 percentage point over the period.

The value of land belonging to individuals was € 100 billion, or 9 % of the total. It was split evenly between construction land and other land. The latter category, which includes mainly farm and forest land, saw its share decline over the period, unlike construction land.

The figures do not take into account the real estate wealth that individuals hold abroad. At this point, there are no reliable figures for those holdings.

Considering where the assets are located, individuals' real estate wealth is concentrated principally in Flanders (€ 714 billion in 2011, or 67 % of the total). Wallonia represents € 258 billion and Brussels, € 98 billion, or respectively 24 % and 9 % of the total. Brussels' share increased marginally (+0.5 %) over the period due to the increase in the number of dwellings resulting from stronger demographic trends in the Region. The share of dwellings is, moreover, preponderant in Brussels (93 % against 85 % in the two other Regions).

4.1 Regional breakdown of owners

The regional breakdown in table 6 is based on the location of assets and not on that of owners. Additional information provided by the GAPD made it possible to identify the Region in which owners of the CI of assets in

each Region are located.⁽¹⁾ Identifying the owner's Region is easy when there is only one owner. Unfortunately for the statistician, numerous assets belong to multiple owners. To simplify matters, assets are assigned to the Region where the principal owner resides. The tax authority has a system for identifying an asset's principal owner. It assigns ownership to the person or married couple that owns the largest share of a property held as an undivided asset. When the rights to a property are divided into bare ownership and usufruct, the principal owner is the one with usufruct. Thus, the regional breakdown of ownership is not perfect, given that it does not take into account all of the ownership stakes in an asset's value. However, the approximation only comes into play when the joint owners live in different Regions. These cases are probably rare and

more or less balance each other out, so there is reason to believe that the exact regional breakdown is not that different from the one in table 7.

The results show the regional distribution of the value of real estate assets (horizontal line) according to the region where the principal owner lives (column) at the end of 2010. The breakdown does not include non-resident principal owners, but this category represents less than 0.5 % of the total.

Naturally, we see that the highest figures (in bold) form a diagonal, which means that most of the assets in a region are owned by residents of that Region. In the case of residential assets, more than 98 % of homes in Flanders belong to Flemish residents. The proportion is virtually identical in Wallonia (97 %), but lower in Brussels, where only 82 % of homes are owned by Brussels residents. The rental market, which represents a sizeable share of the housing stock in Brussels, has attracted individuals from Flanders (10 %) and Wallonia (7 %). Conversely, Brussels

(1) The allocation method does not distinguish CIs by asset type. To be fully comparable with the estimates (see table 6), one must assume that the breakdown by asset type in each Region is the same regardless of the Region where the owner resides.

TABLE 7 BREAKDOWN OF WEALTH BY REGION OF THE PRINCIPAL OWNER
(in %, end 2010)

Region of the asset	Owner			
	Flanders	Wallonia	Brussels	Total
Residential buildings				
Flanders	98.3	0.8	0.8	100
Wallonia	1.2	97.6	1.1	100
Brussels	10.3	7.2	82.5	100
Total	60.6	28.5	10.8	100
Other assets				
Flanders	97.7	1.0	1.1	100
Wallonia	2.8	94.7	2.5	100
Brussels	18.8	9.5	71.7	100
Total	57.3	34.1	8.6	100
Total				
Flanders	98.3	0.9	0.9	100
Wallonia	1.4	97.3	1.3	100
Brussels	11.0	7.4	81.6	100
Total	60.3	29.1	10.6	100

Sources: FPS Finance, NBB calculations.

residents own only a small proportion of dwellings in Flanders (0.8 %) and Wallonia (1.1 %).

For other assets, local ownership is less prevalent, although still preponderant, at respectively 98 %, 95 % and 72 % for Flanders, Wallonia and Brussels. Holdings in this asset category, which includes non-residential buildings and land, are partly investments. Residents of Flanders, which is home to more entrepreneurs and self-employed persons – especially in the area surrounding Brussels – own (and in some cases use) a significant share of these types of assets located in Brussels (19 %). This is also true of Wallonia, but to a lesser extent (9 %). Residential assets account for almost all of individuals' real estate wealth, so the regional breakdown of the total wealth is very similar to that of residential assets.

Overall, individuals in Flanders own 60 % of the real estate assets owned by individuals in Belgium, those in Wallonia, 29 %, and those in Brussels, 11 %. We note that these figures are in line with the regional distribution of the Belgian population. Real estate wealth per capita is thus equitably spread among the Regions.

4.2 Distribution of real estate wealth

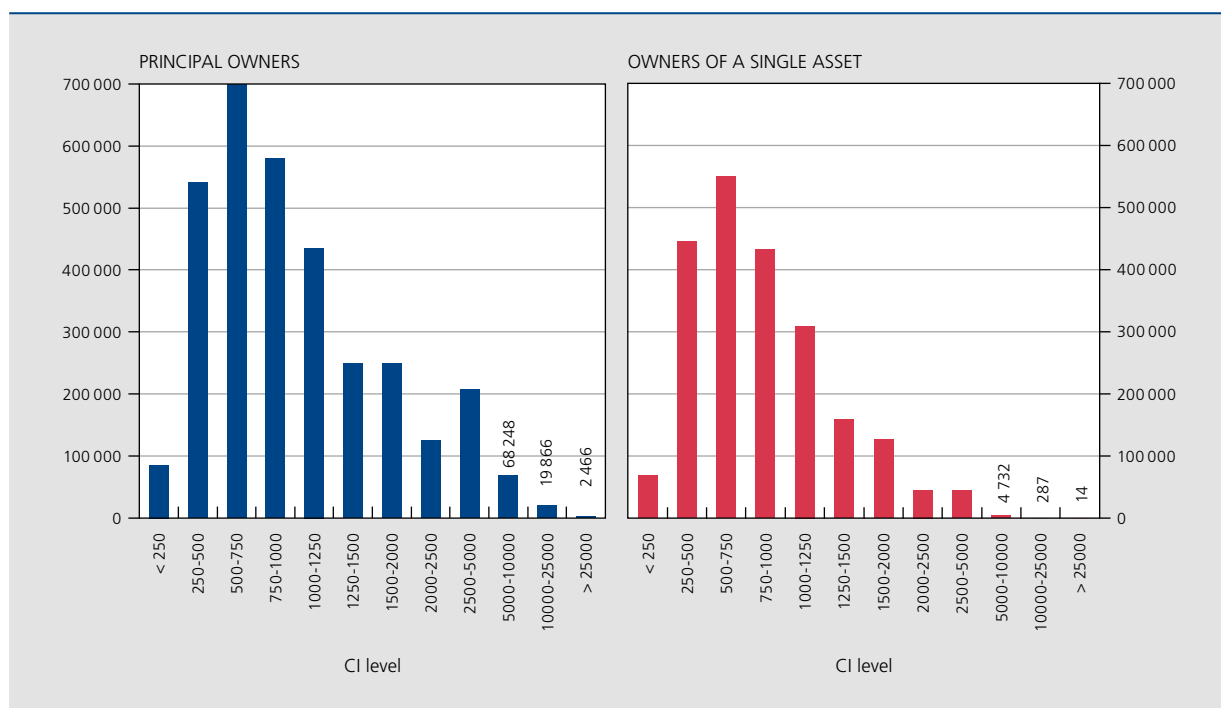
Whereas the distribution of real estate wealth among the Regions is equitable, it is not equitable among individuals. Data on the distribution of wealth, whether real estate or financial, are very sensitive and never fail to spark controversy. In Belgium, there are data on the distribution of income, but not on the distribution of wealth. Work has been done to remedy this shortcoming. However, the results must be interpreted with caution, because this is a complex subject matter and calculations require making a number of assumptions.

Determining a distribution requires detailed processing of all of the individual data. For reasons of confidentiality and practicability, the processing and calculations in this section were performed entirely by FPS Finance staff.

We run into several sticking points when we talk about the distribution of real estate wealth:

- Detailed data are descriptive but not well suited to the task because it involves comparing apples and oranges: for example, is a real estate portfolio that includes two car parks in Brussels and a studio in Leuven worth more than a portfolio comprising a villa in Ghent?

CHART 3 DISTRIBUTION OF RESIDENTIAL PROPERTY OWNERS AT END-2010



Source : FPS Finance.

- A single asset may be owned by multiple individuals, in equal parts or not, as undivided co-owners or separated into usufruct and bare ownership.

To determine a precise distribution, it is necessary to estimate each asset separately. But we only have the average or median price by town and by asset type (the price of a flat in a coastal town takes into account both the penthouse on the sea front and the studio at the back of a building three blocks back from the shore). In addition, the value must be allocated in accordance with the share that each individual possesses in the asset, and then each individual's holdings in Belgium must be added together. That kind of work cannot be done in a reasonable amount of time with limited resources. Thus, approximations have been made to arrive at a workable solution.

One option consists of limiting the calculation to residential property assets that make up a major share of individuals' wealth, calculating a distribution of CIs rather than asset values (see discussion at the end of section 2), and, lastly, considering only the asset's principal owner by assigning him or her the entire CI. The left-hand side of chart 3 shows the distribution calculated using the CI category of residential property owners at end-2010.

The characteristics of ownership of residential real estate assets, which covers some 3 260 000 individuals, are as follows:

- the distribution is asymmetrical on the left (the lowest CIs are more concentrated and the highest CIs are spread out);
- the modal category (the most numerous) is that of CIs between € 500 and € 750⁽¹⁾;
- the median CI is € 880 and the average CI is € 1 310;
- 10 % of owners have residential assets with a total CI of over € 2 390 and 1 % have assets with a total CI of over € 9 250;
- half of residential asset CIs are held by 18 % of owners;
- 1 % of owners possess 11 % of residential asset CIs.

To correctly interpret the results, it must be kept in mind that the decision to assign the entire CI to the principal owner artificially concentrates wealth in the hands of the principal owners and under-estimates that of the other undivided co-owners. This choice intuitively seems to increase the inequality⁽²⁾.

(1) In reality, the most numerous category, which does not appear on the chart, is that of non-owners.

(2) In theory, it is hard to know how this option affects the distribution of all owners. Imagine there are three assets, each with a CI of 100. Let us assume that owner A owns 40 % of the first, second and third asset; owner B owns 60 % of the first asset; owner C owns 60 % of the second; and owner D owns 60 % of the third. The decision to attribute wealth of 100 to owners B, C and D does not take into account owner A, who is actually the wealthiest, with 120. In this particular case, the inequality is under-estimated.

To avoid this drawback, a second option was chosen, i.e. to limit the exercise to owners possessing a single residential asset. In this case, given that the wealth of owners of multiple properties was excluded, the distribution clearly under-estimates inequalities.

The distribution of owners of a single residential asset covers 2 190 000 individuals and presents the following characteristics (right-hand side of chart 3):

- the distribution is asymmetrical on the left. It is less unequal than the previous one (the highest CIs are less spread out) because it only looks at owners of a single home. Because there is only one owner per asset, it also shows the distribution of CIs of owned homes;
- the modal category (the most numerous) is that of CIs between € 500 and € 750;
- the median CI is € 770 and the average CI is € 900;
- 10 % of owners possess a residential asset with an CI of over € 1 516 and 1 %, an asset with an CI of over € 4 054;
- half of residential asset CIs are held by 29 % of owners;
- 1 % of owners possess 4.5 % of residential asset CIs.

All of these figures are lower than in the previous distribution because the owners of the assets with the highest CIs often own multiple properties and are not included here. This distribution also fails to accurately measure inequality.

4.3 Individuals' total wealth

Adding real estate wealth to net financial wealth gives us a figure for individuals' total wealth (see table 8). This figure increased from € 1 442 billion at end-2005 to € 1 819 billion at end-2011, representing growth of 26 % over the period. Real estate wealth increased faster (+46 %) than financial wealth (+7 %), causing its share of the total to climb from 51 % at the start of the period to 59 % at the end of the period.

Expressed as a percentage of GDP, individuals' wealth represented 492 % at end-2011, or nearly five times GDP, of which 202 % for financial wealth and 290 % for real estate wealth. We note that, according to this measurement, net financial wealth declined relative to its 2005 level and has only partly recovered the ground lost in the financial crisis, whereas growth in real estate wealth has easily outpaced GDP growth year after year. Overall, despite the sense of crisis, individuals' wealth grew by 3.5 % more than GDP over the period.

Financial wealth is the difference between financial assets and financial liabilities. The principal financial liability among individuals, mortgage debt, is also related to real

TABLE 8 INDIVIDUALS' TOTAL WEALTH

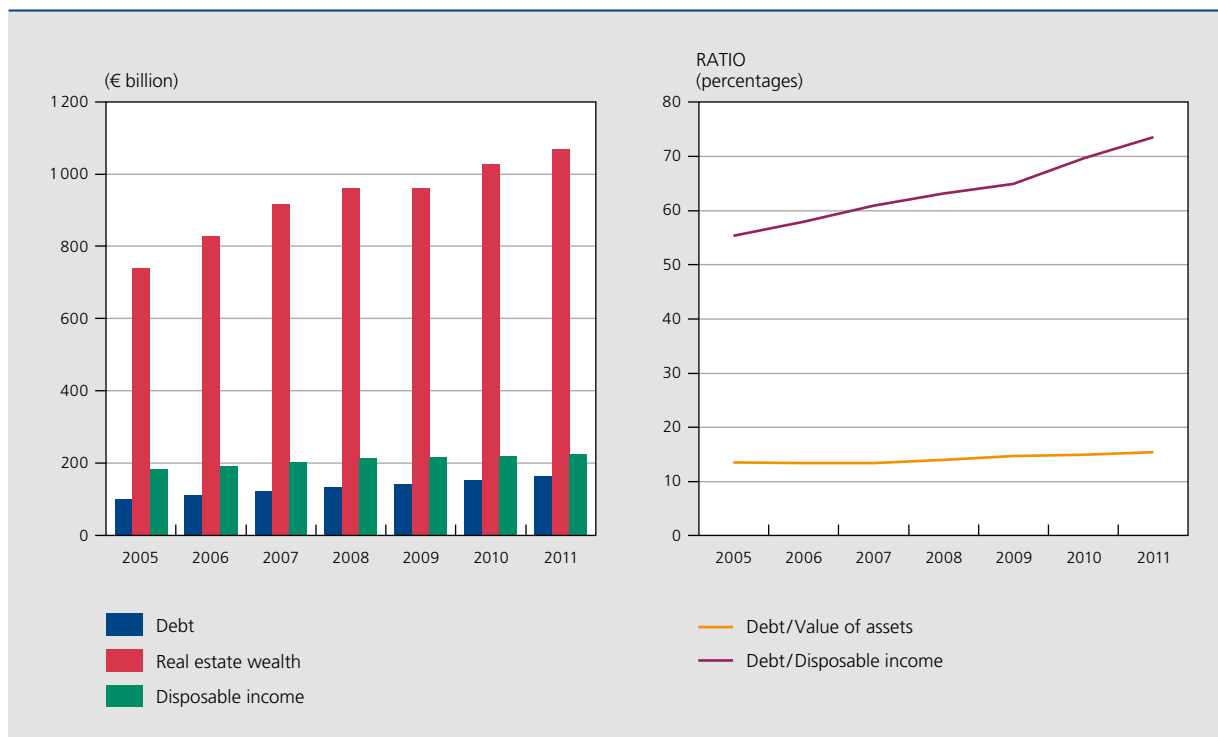
	In € billion			In % GDP		
	Net financial	Real estate	Total	Net financial	Real estate	Total
2005	702.7	739.8	1 442.5	231.6	243.8	475.4
2006	729.0	829.7	1 558.6	228.6	260.2	488.9
2007	726.3	915.2	1 641.6	216.3	272.5	488.8
2008	652.5	961.6	1 614.1	188.4	277.6	466.0
2009	717.1	961.0	1 678.1	210.4	282.0	492.4
2010	729.4	1 027.4	1 756.8	204.8	288.5	493.3
2011	749.0	1 069.7	1 818.7	202.5	289.2	491.8
2012	806.5			214.0		

Sources: NAI, NBB.

estate. Chart 4 shows that debt increased steadily over the course of the period, jumping from € 100 billion to € 165 billion. This 65 % increase was stronger than the growth in individuals' real estate wealth. The ratio of wealth to debt increased during the period, rising from 13 % to 16 %, which remains very reasonable.

Individuals' debt increased substantially more than their gross disposable income did (+24 %). The ratio between the two figures rose from 55 % in 2005 to 74 % at the end of the period. The increase in the ratio is not necessarily a sign of financial difficulty, because lower mortgage interest rates and longer loan terms have limited the debt

CHART 4 MORTGAGE DEBT



Sources: NAI, NBB.

repayment burden, which probably encouraged individuals to take on more debt. From a macroeconomic perspective, these figures indicate that excessive mortgage debt is not a problem in Belgium. However, this overall observation does not mean that certain individual borrowers are not defaulting.

5. Conclusion

The total value of Belgian real estate wealth exceeded € 1 384 billion at end-2011, or 3.7 times GDP. Despite this impressive size, there are few statistics available on the topic. This shortcoming has been partially remedied, but there is still room for additional research.

The breakdown of this estimate by asset type shows that residential real estate assets account for the lion's share. Estimates by sector confirm that Belgian individuals are the principal ownership sector. The results show that home ownership is extremely popular in Belgium, with residential real estate accounting for most of the population's wealth. However, individuals are not the only ones interested in owning these assets, as demonstrated by the meaningful and rising share of houses owned by corporations.

The regional breakdown of both real estate wealth and its individual owners reflects the relative size of the Regions. Real estate wealth is unequally distributed. This article has touched on its distribution among individuals, but more work needs to be done in this area.