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Economic commentaries

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Residential construction has shown a marked increase in recent years. Population growth has also been high. In the following, we take a closer look at residential construction relative to the demand for new dwellings in the context of demographic developments in recent years. Both the supply of and demand for new dwellings are affected by general economic conditions, although this is not discussed in any detail in this article. Our findings show that:

• Given strong population growth, it appears that residential construction has on the whole been lower than growth in demand in recent years.

• The number of households increased by almost 40 000 in 2007, while just over 30 000 new dwellings were built. The stock of unoccupied dwellings fell by almost 8 000 in the course of 2007. It was particularly the case in very central areas that the number of new dwellings was lower than the increase in the number of households.

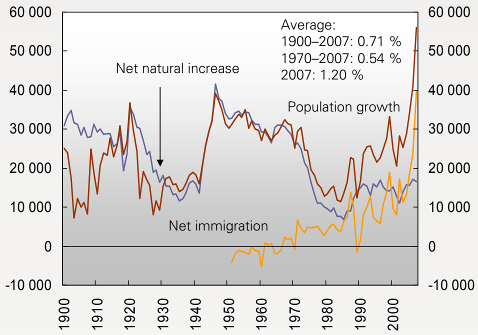
• Construction of blocks of flats has risen sharply in the past few years while overall population growth in the age groups that typically seek flats (20–35 and 60–79 years) has been low. Flats have increased as a share of the total housing stock, while the share of the population in the age groups that typically seek flats has declined. In the years ahead, however, the share of the population in these age groups will increase.

[1] Thanks to colleagues at Norges Bank for useful comments. Special thanks to Solveig Erlandsen who co-wrote a previous internal paper on the same subject.

Strong population growth

Norway's population increased by approximately 56 000 in 2007. Measured by number of persons, this is the highest population increase ever recorded (see Chart 1). The increase is mainly due to record-high net immigration. The net natural increase in the total population has been stable in recent years. Population growth in 2007 was 1.2 per cent, the highest percentage growth since 1946. Strong population growth has continued. In the first quarter of 2008, the population increased by more than 16 000, almost 6 000 more than the increase in the first quarter of 2007. Net immigration accounted for just over 75 per cent of the population increase in the first quarter of 2008.

Chart 1 Population growth in numbers of persons, net immigration and net natural increase. Annual figures. 1900–2007



Source: Statistics Norway

At the end of 2007, there were over 2.1 million households in Norway (see Table 1). The number of households rose by close to 40 000 in 2007 and 28 000 in 2006. The average household size measured by number of persons per household is declining (see Table 1). Assuming that the number of persons per private household is the same in the first quarter of 2008 as in 2007, the number of households increased by more than 8 000 in the first quarter of 2008.

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Table 1 Population, number of households and average household size[1] at end-year

	1960	1980	2001	2004	2005	2006	2007	2008 Q1[2]
Population	3 594 771	4 092 340	4 524 066	4 606 363	4 640 219	4 681 134	4 737 171	4 753 373
Households	1 077 168	1 523 508	1 961 548	2 010 994	2 036 890	2 064 841	2 104 531	2 112 610
Household size	3.34	2.69	2.31	2.29	2.28	2.27	2.25	2.25

Source: Statistics Norway

1) Number of persons per household

2) The estimates of the number of households is based on population and the assumption that household size has not changed since 2007

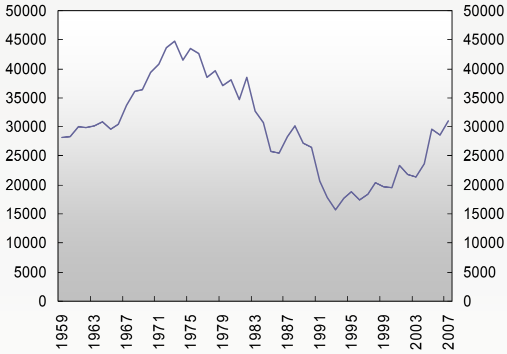
Residential construction is slowing

In the past few years, residential construction has increased from low levels in the 1990s and has been at the highest level since the 1980s (see Chart 2). In 2007, almost 31 000 new dwellings were completed, an increase of nearly 2 500 compared with 2006. However, the supply of new dwellings has fallen so far in 2008 compared with the same period in 2007. In the first four months of 2008, 8 850 new dwellings were completed, 1 350 fewer than in the same period last year. Housing starts fell sharply in the same period and have fallen by 30 per cent so far this year. Housing starts in April numbered 1 600, almost 50 per cent fewer than in the same month in 2007. There has thus been a marked decline in residential construction in recent months, while population growth has picked up.

The increase in number of households is higher than the level of residential construction

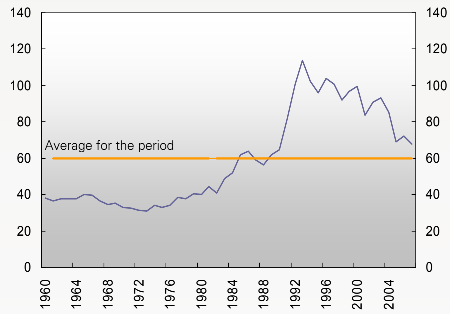
Chart 3 shows the number of households[2] per completed dwelling per year from 1960 to 2007. A low ratio indicates that housing starts are high relative to developments in the number of households and, conversely, a high ratio indicates housing starts are low. The horizontal line shows average ratios between the two variables in the period 1960–2007. From 1960 up to the beginning of the 1980s, housing starts were high relative to the number of households, while relatively few new dwellings were built in the 1990s. Residential construction picked up in the late 1990s and the 2000s. The number of households per completed dwelling is nonetheless still higher than the average for the period.

Chart 2 Number of housing completions. Annual figures. 1959–2007



Source: Statistics Norway

Chart 3 Number of households[1)]/Number of housing completions. Annual figures. 1960–2007



1) Estimates for 1961–1969, 1971–1979, 1981–1989, 1991–2000, 2002–2003

Sources: Statistics Norway and Norges Bank

2) Estimates for 1961–1969, 1971–1979, 1981–1989, 1991–2000 and 2002–2003. The estimates are based on figures for the number of households from the Population and Housing Census for 1960, 1970, 1980, 1990 and 2001 and register-based household statistics for 2005. It has been assumed that the ratio of population growth to growth in the number of households is the same within each time period.

Factors influencing demand for new dwellings

Housing requirements, or the demand for new dwellings, in a period can be estimated as follows:

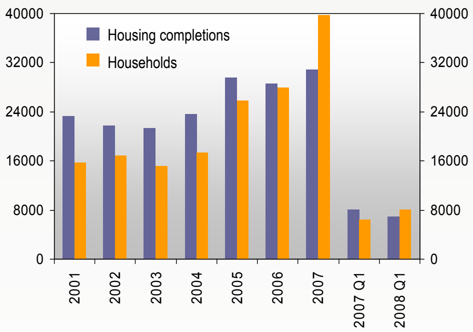
Change in number of households since previous period (depends on population growth and household size)
+ Change in number of unoccupied dwellings since previous period (internal migration/centralisation, second home, etc.)
+ Housing losses in the period (condemned dwellings, conversion of dwellings to commercial buildings, combining dwellings)

If the housing market is in balance at the beginning of a period, the housing surplus or deficit in the period can be estimated as the supply of new dwellings (residential construction + sectioning of other buildings into dwellings) minus housing requirements. Factors influencing both housing demand and the supply of new dwellings are affected by business cycles.

Changes in the stock of unoccupied dwellings can in the short term be used to regulate any housing surplus or deficit in a period. If, for example, the increase in the number of households in a period is higher than the supply of new dwellings, the deficit can be covered by reducing the number of unoccupied dwellings. There is not, however, an unlimited stock of unoccupied dwellings. Consequently, residential construction must over time be at least sufficiently high to meet higher demand for new dwellings resulting from the rise in the number of households. In addition, there will be housing losses in each period. There are no statistics or adequate information on the scale of housing losses per year.

In 2007 the number of households increased by close to 40 000 (see Chart 4), while only 31 000 new dwellings were built. Based on developments in the number of households and in residential construction, there was thus a deficit of 9 000 new dwellings in 2007. Assuming that the average household was the same size as in 2007, the number of households increased by more than 8 000 in the first quarter of 2008. At the same time, housing completions came to just under 7 000, more than 1 000 fewer than in the same period in 2007. Housing starts also slowed markedly in the first quarter of 2008.

Chart 4 Number of housing completions and rise in number of households[1]. 1990–2007, 07 Q1 and 08 Q1



[1] Estimates for 1990-2004, 2007 Q1 and 2008 Q1.

Sources: Statistics Norway and Norges Bank

A combination of Statistics Norway's dwelling stock statistics[3] and register-based household statistics can give an indication of developments in unoccupied dwellings in recent years. By the end of 2007, dwellings totalled close to 2.3 million, with more than 2.1 million occupied dwellings (based on figures from register-based household statistics). In combination, the two sets of statistics indicate that there were approximately 170 000 unoccupied dwellings at the end of 2007, almost 8 000 fewer than at the end of 2006. However, these two sets of statistics are not directly comparable. The reduction in the number of unoccupied dwellings nonetheless suggests that most of the housing deficit, based on the difference between new dwellings and the increase in the number of households, was met in 2007 by a reduction in the number of unoccupied dwellings.

The number of households is rising more rapidly than the housing stock in central areas

Residential location preferences also have an impact on the demand for new dwellings. A trend in internal migration patterns in one particular direction will result in an increase in the total demand for new dwellings. Throughout the post-war period, internal migration patterns have led to centralisation (Østby 2005). The trend has been strong during upturns and less pronounced in downturns due to lower mobility. Centralisation occurs both at national level (high in-migration to the Oslofjord area) and within regions (to the largest regional centres).

[3] Statistics Norway's dwelling stock statistics were published for the first time in 2006, providing figures for the number of dwellings as of 1 January 2006. These statistics do not distinguish between occupied and unoccupied dwellings.

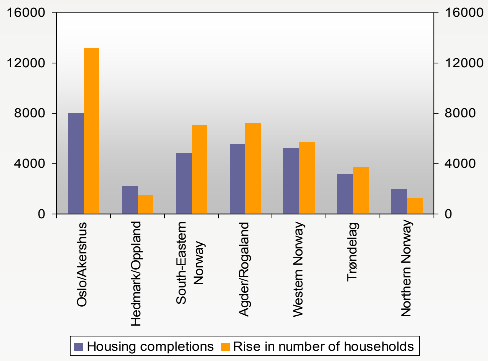
Internal migration will influence where population growth will be strongest and thereby also where demand for new dwellings will be highest. Population growth is strongest in the Oslo/Akershus and Agder/Rogaland regions. In 2007 the population in Oslo/Akershus rose by more than 21 000, accounting for almost 40 per cent of the total increase in population in 2007. The population in Agder/Rogaland increased in the same period by close to 12 000. Population growth was lowest in Northern Norway, where the population declined by 200 and Hedmark/Oppland, which recorded a rise of 1 200 in 2007.

The level of demand for new dwellings will be influenced by the increase in the number of households. Regional figures show that the number of households rose by more than 13 000 in Oslo/Akershus in 2007 (see Chart 5). In the same period, 8 000 dwellings were completed in this region. Residential construction was also lower than the rise in the number of households in South-Eastern Norway and Western Norway and in Agder/Rogaland and Trøndelag. In Hedmark/Oppland and Northern Norway, the number of dwellings built exceeded the increase in the number of households in 2007.

Highest rise in the supply of flats

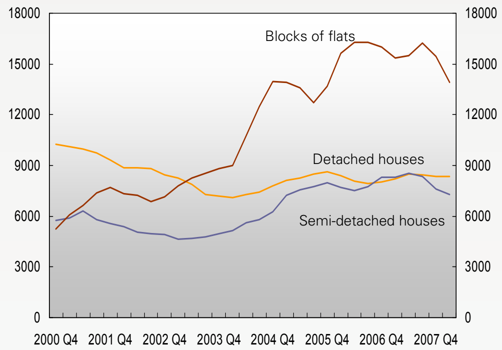
Population trends by age group influence the type of dwelling in demand. In the period 1997–2002, the rise in prices for flats was somewhat sharper than for other types of housing. A higher rise in prices for flats probably indicates that the stock of this type of housing was too low in relation to demand at this time. This may be one reason why flats have accounted for most of the increase in residential construction in recent years. Annual building starts of blocks of flats rose from 5 000 in 2000 to more than 15 000 in 2007 (see Chart 6). In the period 2000–2007, close to 90 000 flats were built, and the share of the total housing stock accounted for by this type of dwelling has increased. It is possible that too many flats were built in this period. Over the past year, flats have shown the weakest price developments across the various types of housing. At the end of June, the price per square metre for flats was 4.5 per cent lower than at the same time in 2007. Building starts of flats have declined in the past six months.

Chart 5 Number of housing completions and rise in number of households by region. 2007



Source: Statistics Norway

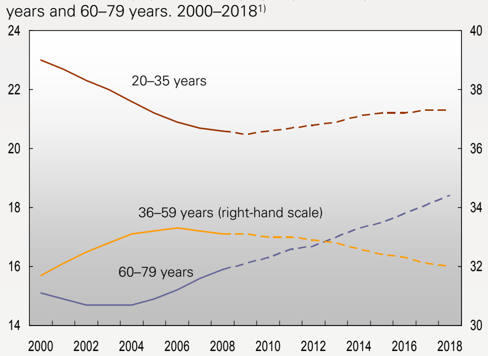
Chart 6 Numbers of housing starts by type of dwelling. Total past four quarters. 2000 Q4–2008 Q1



Source: Statistics Norway

Since 2000, the number of persons in the age groups that typically seek flats (20–35 and 60–79 years) has increased by approximately 20 000. However, total population growth has also been high, with the result that these age groups' share of the population has declined (see Chart 7). The share of the population in age groups that most often seek larger dwellings (36–59 years) has increased. Given Statistics Norway's medium alternative for the factors that determine population development, however, the share of the population in age groups that typically seek flats will increase again over the next ten years. Demand for flats may thus pick up further ahead. The geographical distribution of the population will also influence the types of dwelling that are in demand. Centralisation may also contribute to higher demand for flats than for other types of dwelling.

Chart 7 Share of population in age groups 20–35 years, 36–59 years and 60–79 years. 2000–2018[1)]



1) Projections 2009–2018

Source: Statistics Norway

Sources:

Statistics Norway, population statistics, http://www.ssb.no/english/subjects/02/01/10/

Statistics Norway, dwelling stock statistics, http://www.ssb.no/english/subjects/10/09/boligstat_en/

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