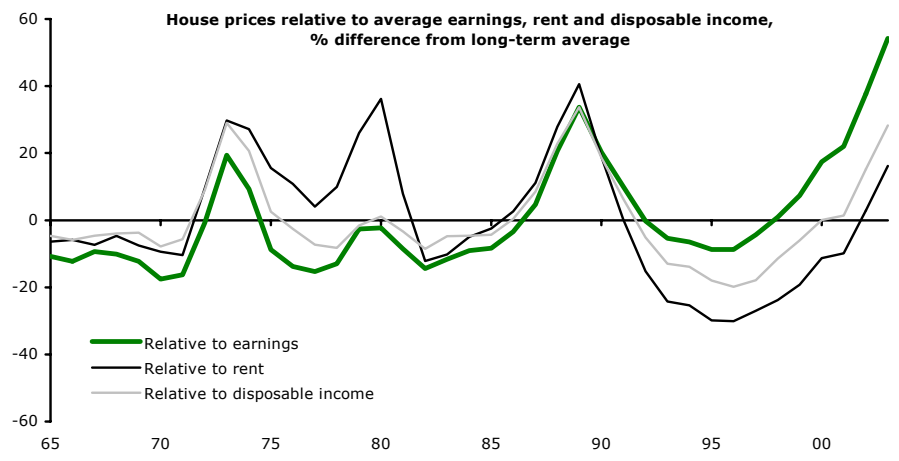


Euro Vision

The bends

Low inflation means the UK's MPC should find it difficult to justify further rate hikes. The housing market bubble should get bigger, increasing the risk of a painful hard landing in the medium term. Low ECB rates support house prices in the euro area.

Chart 1 : Key valuation ratios for the UK housing market



Source: ABN AMRO estimates

Nice dream

Recent economic data support our view that the UK's MPC will not raise rates as much as markets expect. Inflation is under control and GDP growth has slowed towards trend. Hawks argue the MPC needs to prick the housing market bubble. However, that is not its job, and with CPI inflation still low, we believe the MPC cannot risk pricking the bubble.

Bulletproof... I wish I was

This poses long-term risks for the housing market and consumption. There are worrying signs of a speculative bubble. Fundamentals have deteriorated. Households' finances are stretched and rental yields are falling. If the buoyancy of the housing market was driven purely by fundamentals, rental yields should have risen.

Street spirit (fade out)

The housing market has been supported by 'buy-to-speculate' investors. Given that there is little correlation between regional rental yields and house prices, investors seem to be focusing entirely upon expected capital gains. Low interest rates should cause the housing bubble to get bigger. However, in the medium term, a hard landing is likely, in our view.

Planet Telex

We also examined the euro area housing market. Low interest rates should continue to boost house prices in Italy and France. High inflation and rapid GDP growth means the increase in Spanish house prices appears more sustainable than the increase in Dutch house prices. The German housing market remains terminally depressed.

Disclosures and analyst certifications are at the end of the body of this research.

250 Bishopsgate, London, EC2M 4AA, United Kingdom

Europe

Analysts

James Carrick
 ABN AMRO Equities (UK) Limited
 United Kingdom
 +44 20 7678 8199
 james.carrick@uk.abnamro.com

Robert Lind
 +44 20 7678 7175
 robert.lind@uk.abnamro.com

www.abnamroresearch.com

Contents

ECONOMIC ANALYSIS

The bends	3
Low inflation means the MPC will find it hard to justify further rate hikes. This means the housing market bubble will get bigger, increasing the risk of a painful hard landing in the medium term.	
Creep	3
Nice dream	5
Bulletproof... I wish I was	6
Street spirit (fade out)	8
Planet Telex	14

The bends

Low inflation means the MPC will find it hard to justify further rate hikes. This means the housing market bubble will get bigger, increasing the risk of a painful hard landing in the medium term.

Recent economic data support our view the Bank of England will not hike rates as much as the market expects. Inflation is under control and GDP growth has slowed towards trend because of weak exports. Hawks argue the MPC needs to hike rates aggressively to prick the housing market bubble. The housing market looks worryingly like a speculative bubble because house prices are accelerating despite a deterioration in fundamentals. Households' finances are looking increasingly stretched and rental yields are low. If the buoyancy of the housing market was driven by fundamentals, rental yields would have risen.

But it is not the MPC's job to prick the housing bubble. Its remit is to keep inflation close to target. With CPI inflation set to remain below target, it is probably best for the MPC to let the housing market bubble deflate of its own accord in future years, when inflation is higher, rather than attempt to prick it now when exports are weak and inflation low. But this strategy poses significant risks for the economy. The longer the housing market bubble continues, the more painful the landing will be.

In the euro area, house prices are rising outside of Germany. Continued low interest rates will support house prices in Italy and France. House prices look stretched in Spain and the Netherlands. Low real interest rates and productivity catch up suggest Spanish house prices are more sustainable than those in the Netherlands.

Hawks argue the Bank of England should prick the housing bubble...

... but this is not the Bank of England's job

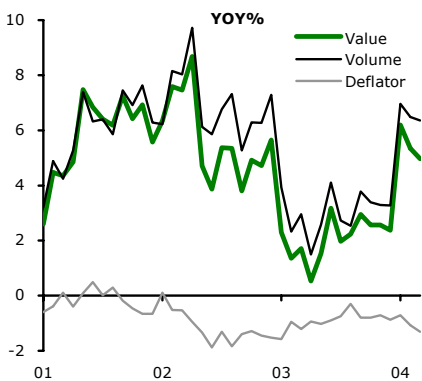
Low ECB rates are supporting euro-area house prices

Creep

We have long argued the Bank of England would not hike rates as much as the market expects. We believe a weak euro-area economy will undermine exports and depress inflation, meaning the Bank of England will refrain from acting too aggressively on the consumer. The latest economic data support our view. Although real consumer demand remains buoyant (Chart 2), exports have failed to recover (Chart 3), in contrast to the last tightening cycle in 1999/2000.

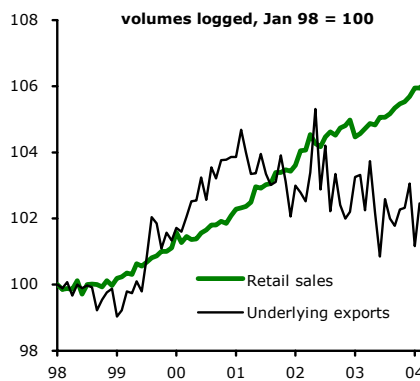
We do not believe the UK's MPC will hike rates as much as the market expects

Chart 2 : Retail sales



Source: National Statistics

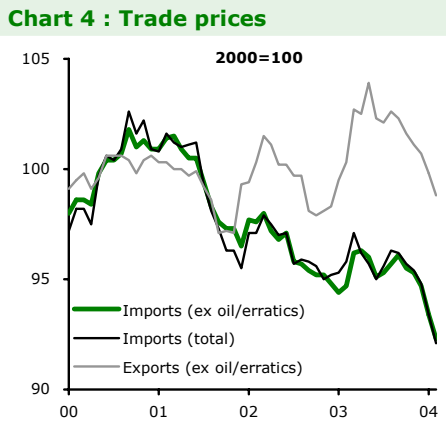
Chart 3 : Exports and retail sales



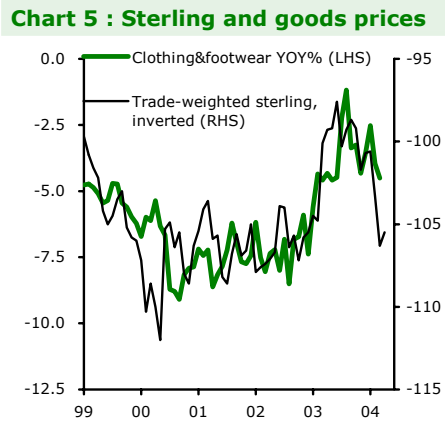
Source: National Statistics

Alongside weak euro-area growth, sterling strength is hurting exports. The strong pound is also depressing inflation. The retail sales deflator has fallen back in line with lower import prices (Chart 4).

Inflation is low



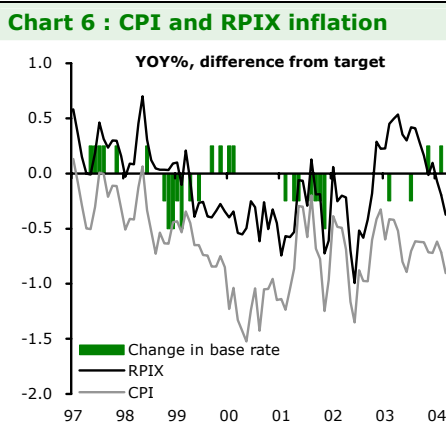
Source: National Statistics



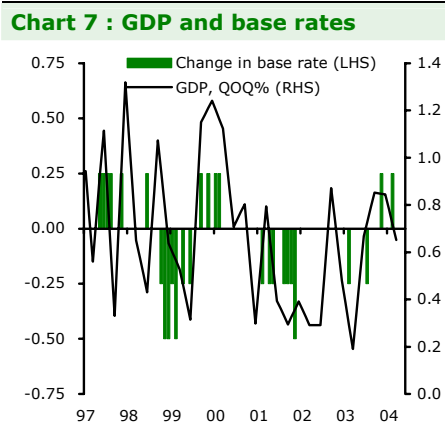
Source: National Statistics, Bank of England

Low current inflation does not mean the MPC will not raise interest rates (Chart 6). The MPC cares more about the outlook for future inflation. In 1999/2000, the MPC raised interest rates even though RPIX was below target. Similarly, the MPC cut interest rates in 2001 when RPIX was on target and it loosened policy in March 2003 when RPIX was above target. The key variable for the Bank of England is the strength of economic growth (Chart 7). The inflation outlook remains benign and so the MPC will find it hard to justify further rate hikes to cool the housing market. It will have to put up with an imbalanced economy for longer.

It will have to put up with an imbalanced economy



Source: National Statistics



Source: National Statistics, Bank of England

But this poses longer-term risks for the economy. It means the housing market boom will get worse and increases the risk of a hard landing in future years. But if the housing bubble is to burst, it is probably better to let it happen automatically in future years, when inflation is close to target, than to deliberately prick it now when exports are weak and inflation is close to the 1% lower limit.

The housing bubble will get worse

MPC member Kate Barker summed this up recently by arguing "It is generally better to respond to changes in asset prices as they occur, rather than seek to impose our views of what price level is right". This argument is similar to the one the Fed faced when technology stocks boomed in the late 1990s. Alan Greenspan wasn't sure it was a bubble and given inflation was low, he thought the best response was to let it be but be prepared to deal with the consequences afterwards. By contrast, the ECB's Otmar Issing believes central banks can tell when changes in asset prices are bubbles by looking at money supply growth and it is better to prick them sooner rather than

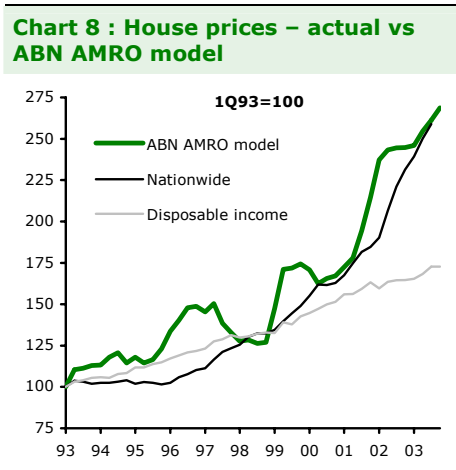
But it is better the bubble bursts when inflation is higher

later. As the Bank of England no longer targets money supply, but instead targets consumer prices, we believe it will take a Fed-type approach to the housing market.

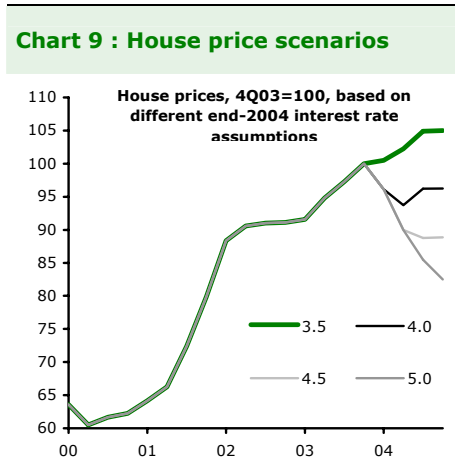
Nice dream

In previous research we argued modest rate hikes would cause a gentle slowdown in the housing market. We developed a model of house prices based on disposable incomes and interest rates (see 'Haunted house', *Euro Vision*, 26 November 2003). We argued that only half of the increase in house prices over the past decade could be explained by higher incomes (Chart 9). The rest was the result of lower interest rates. As interest rates were returned to more 'normal' levels, house prices were likely to fall back from their current highs (Chart 10)

We previously argued the housing market would soft land



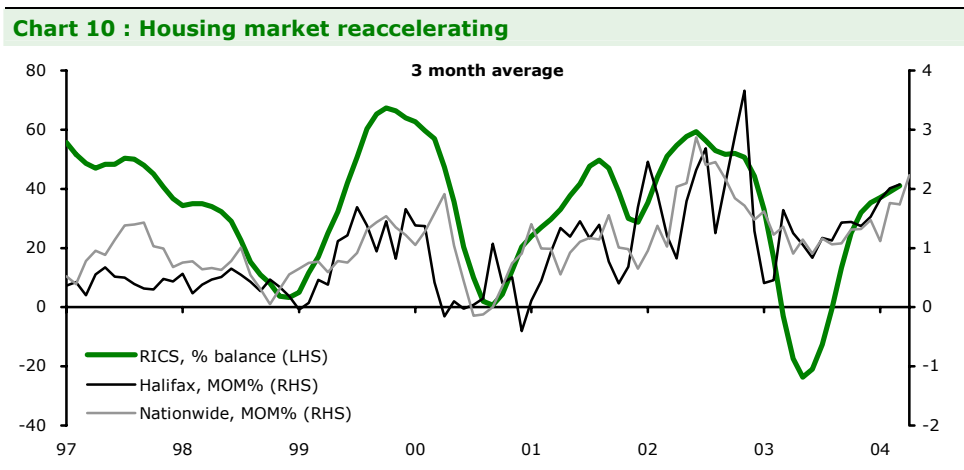
Source: ABN AMRO estimates, Nationwide, National Statistics



Source: ABN AMRO estimates

Contrary to our analysis, the latest data suggest the opposite is occurring. Rather than slowing, house prices have reaccelerated (Chart 10) as both secured and unsecured lending remain robust.

But prices are reaccelerating...



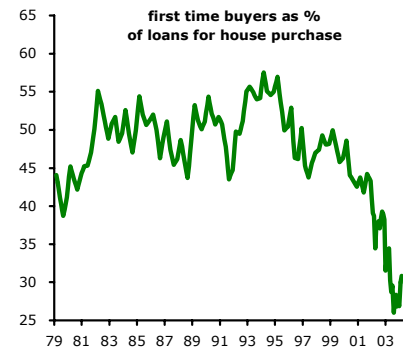
Source: RICS, HBOS, Nationwide

This looks worryingly like a bubble. Fundamentals have deteriorated but prices are still rising. Anecdotal evidence suggests house prices are accelerating because people expect them to keep going up, just as people bought tech stocks because they didn't want to miss out on further capital gains. The Council of Mortgage Lenders (CML) highlighted in April that first-time buyers are slowly returning to the market (Chart 11). The CML noted: "Buyers who could not decide whether to enter the market last year may now be deciding to buy because they think they may be priced out of the market if they postpone their decision any further".

... despite deteriorating fundamentals

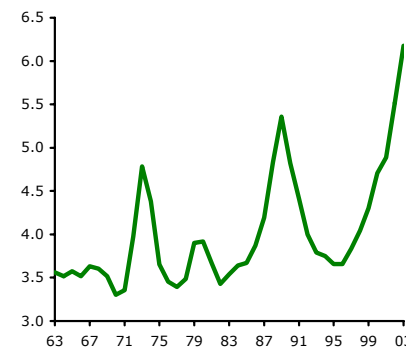
As well as expecting a capital gain, households may be rushing into the market because they believe they will not be able to afford a sufficient deposit in future months as the house price to earnings ratio rises further (Chart 12).

Chart 11 : Are first-time buyers coming back?



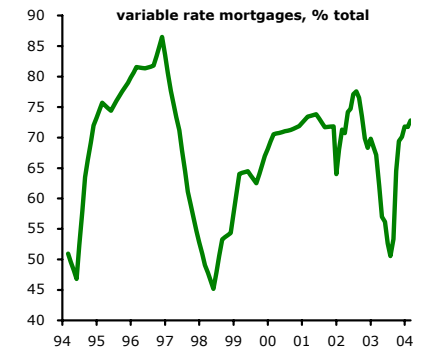
Source: CML

Chart 12 : House prices to earnings ratio



Source: ABN AMRO estimates

Chart 13 : Variable rates back in fashion

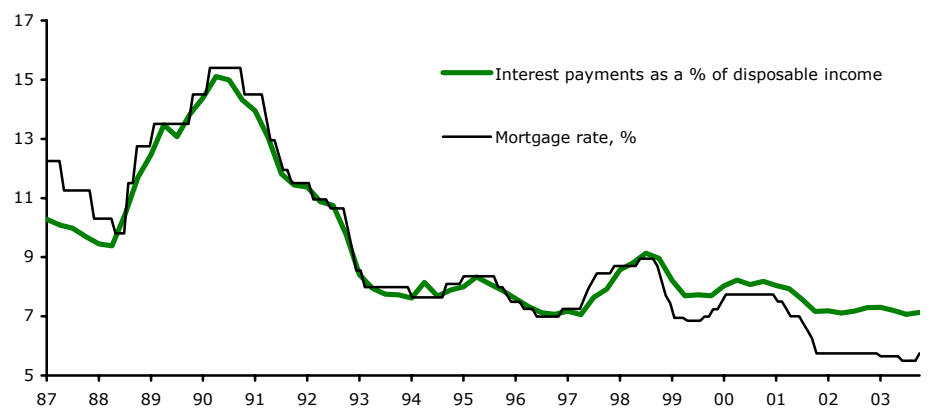


Source: CML

Alternatively, households might be anticipating the Bank of England raising interest rates further and fear that if they do not act now, mortgage lenders will refuse to lend them sufficient money to buy their desired property. Fixed rate mortgages have increased by more than variable rate mortgages as the bond market has already priced in further rate hikes from the Bank of England. At the same time, variable rate mortgages have come back into fashion (Chart 13). We have noted before that households seem to be setting aside a set proportion of their income to pay their mortgage. Although interest rates fell to historical lows in 2003, interest payments remained in line with the average of the 1990s (Chart 14). The renewed popularity of variable rates may be because they currently allow households to gear up more than fixed rate mortgages. But if mortgage rates rise in line with the bond market's expectations, the household sector will be squeezed.

First-time buyers are scared of further price increases

Chart 14 : Interest gearing and rates



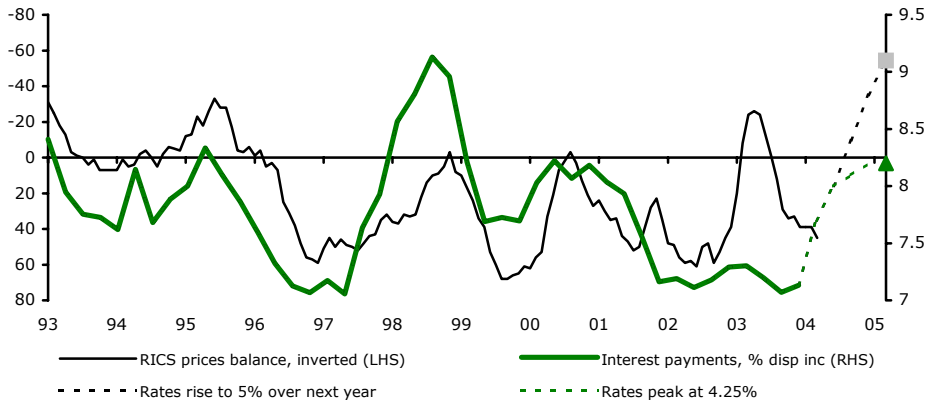
Source: HBOS, National Statistics

Bulletproof... I wish I was

Even excluding the reacceleration of consumer borrowing, households are likely to be squeezed more by higher interest rates than we previously estimated. In our previous research, we looked at the relationship between household interest gearing and house prices. As interest payments as a share of disposable income rise (because of higher interest rates, lower incomes or excessive debt), the housing market typically suffers (Charts 15 and 16). But this excludes repayment of debt principal, which becomes increasingly important as interest rates head lower.

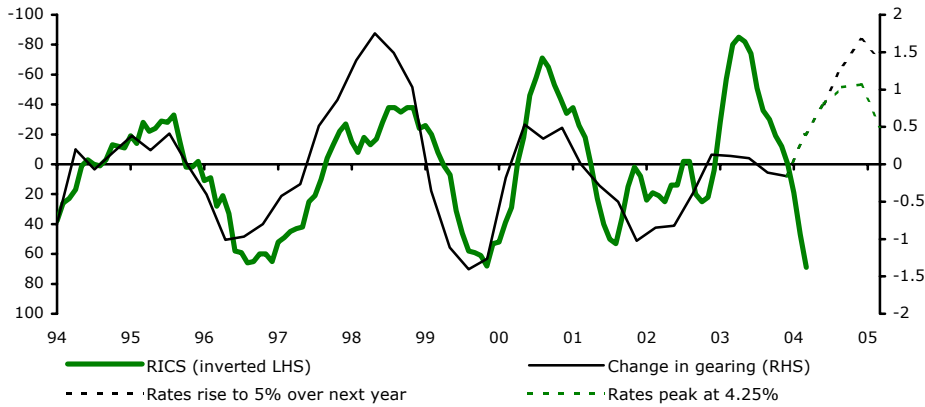
Modest rate hikes will squeeze households' finances

Chart 15 : Household interest gearing simulations



Source: ABN AMRO estimates, RICS

Chart 16 : Household interest gearing simulations – change in variables

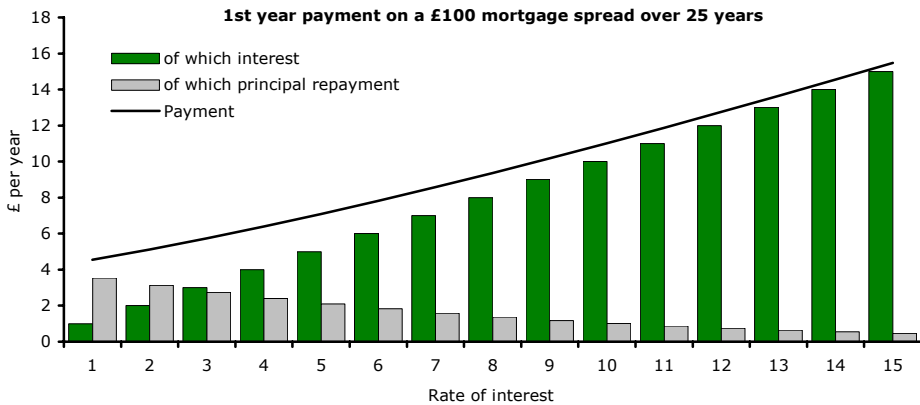


Source: ABN AMRO estimates, RICS

Chart 17 plots the typical first year payment on a £100 mortgage spread over 25 years. As interest rates fall towards zero, the repayment of debt principal becomes more important. Given interest rates are at historical lows, we need to look at repayment of debt principal when looking at household gearing rather than just interest payments.

We need to look at principal repayments

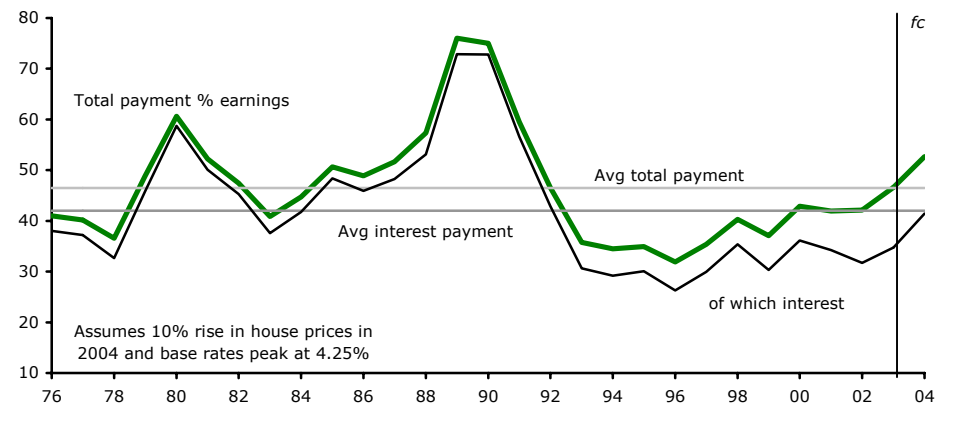
Chart 17 : Importance of principal repayments



Source: ABN AMRO estimates

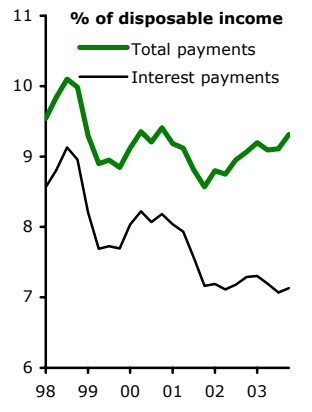
Unfortunately the Bank of England's data on regular repayments of mortgage principal only runs back to 1998 (Chart 18). But we have estimated the mortgage burden of a stylised first-time buyer (FTB) over the past 30 years (Chart 19). The FTB is assumed to earn average earnings and takes out a 100% mortgage on an average house. We have split the repayment burden into interest payments and repayment of principal. Although interest gearing remained below its long-term average in 2003, the total repayment burden was in line with its long-term average, even though interest rates were historically low. Even under cautious assumptions of base rates peaking at 4.25% and house prices rising by just 10% in 2004, the total repayment burden will move above its long-term average in 2004, squeezing households' finances. We continue to expect an endogenous slowdown in consumer spending through 2004.

Chart 19 : First-time buyer's initial mortgage payments



Source: ABN AMRO estimates

Chart 18 : Bank of England data on total household mortgage payments



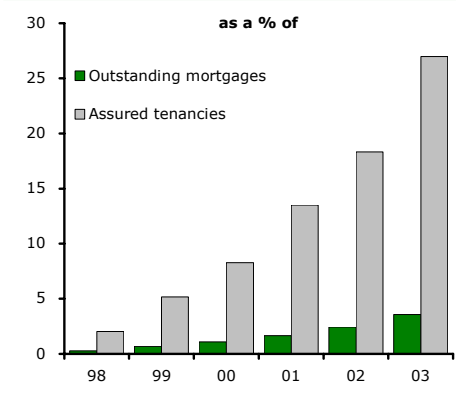
Source: Bank of England

Street spirit (fade out)

Although we believe households' finances will suffer from modest rate hikes, which does not mean the housing bubble will burst. We are worried about the buy-to-speculate (BTS) market. We call it buy-to-speculate rather than buy-to-let because we believe investors care little for rental yields but have bought for capital gain.

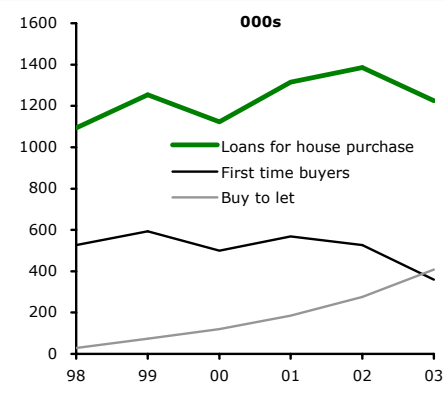
The buy-to-speculate market has exploded

Chart 20 : Rise of buy-to-speculate



Source: ABN AMRO estimates

Chart 21 : Number of new mortgages for house purchase



Source: CML

The BTS market has exploded in recent years. Chart 20 shows that BTS investors now account for over a quarter of all assured tenancy rental properties. The traditional landlord who held many properties has sold up to BTS investors. The CML noted in a recent report ('Buy-to-let: Long term stability, or short term volatility?', May 2004) that the average number of properties held by landlords had fallen from

The average number of properties owned by each landlord has fallen

nine in 1994 to four in 2001. As the number of rental properties has been broadly constant, "this implies an increase in the number of landlords, each with fewer properties". Given the doubling of BTS mortgages since 2001, the average number of properties per investor is likely to have fallen further.

Table 1 : Number of property holdings by landlords

% of total	1994	1998	2001
1	24	27	30
2-4	13	16	23
5-9	14	13	13
10-24	8	15	11
25-49	7	5	5
50-99	6	5	5
100-249	8	7	7
250+	19	12	6

Source: CML

Housing market bulls argue that BTS investors only account for a small proportion of total mortgages (around 3% in 2003). But this ignores the fact that the BTS market has accounted for all of the growth in loans for house purchase in recent years as FTB have been squeezed out of the market by excessive prices.

Buy-to-speculate has accounted for all of the growth in loans for house purchase

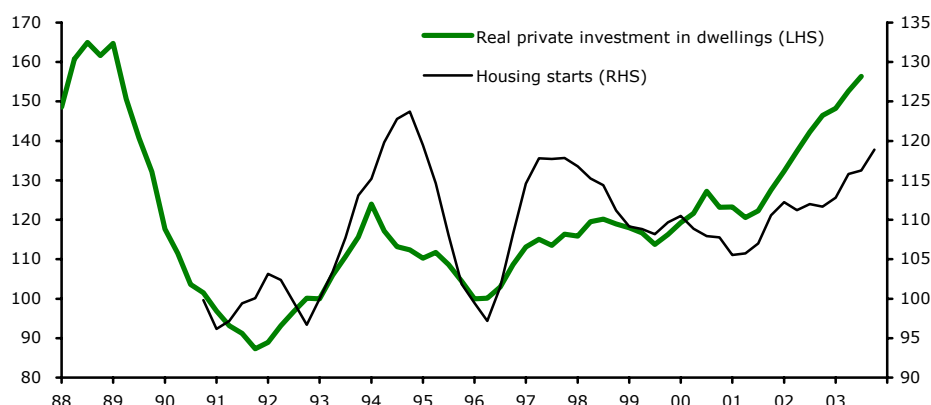
Bulls retort that house prices are high because of strong demographic trends and a lack of supply. If a FTB cannot afford to buy a property that does not affect house prices because the FTB still needs somewhere to live and they can rent a property from a landlord instead. For this reason, the growth in BTS properties is rational not speculative.

Bulls argue the rise in buy-to-let is rational

To analyse this we need to look at what returns BTS investors are getting. If demographics are favourable and supply limited (the latest data suggest supply is creeping higher, although perhaps not as much as the government believes is necessary to meet demand – Chart 22) then rental yields will have increased in tandem with house prices.

We need to look at rental yields

Chart 22 : Supply coming onstream?



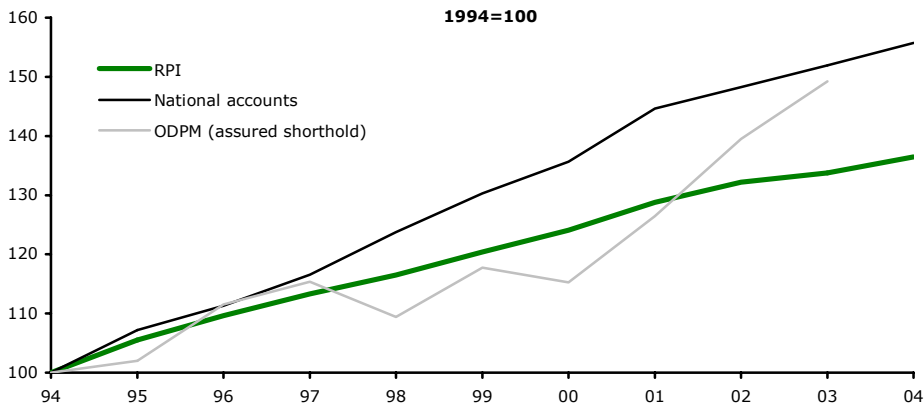
Source: National Statistics

Unfortunately, decent data on private sector rents is less readily available than data for house prices. The best data are from the Office for the Deputy Prime Minister (ODPM) on assured tenancy rents. This is the best proxy for the rents that BTS investors will get. Other measures (such as from the RPI or the National Accounts) will include subsidised local authority rents and regulated social housing rents. Unfortunately, the ODPM series only goes back to 1994. The RPI and National Accounts data runs back to the 1960s. Chart 23 suggests over the past decade, the ODPM series has tracked the National Accounts data better than the RPI. So we will

Data on private sector rents are hard to find

use the National Accounts data for our long-term analysis. The difference between the RPI and National Accounts series is significant (growth in the two series has differed by 20% over the past decade). Using the National Accounts data suggests house prices are less overvalued than when using the RPI data.

Chart 23 : Different measures of rent

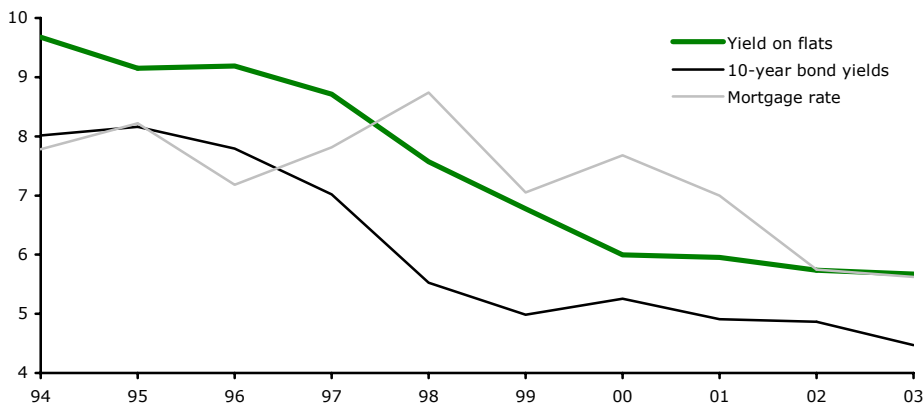


Source: National Statistics, ODPM

One way of assessing whether property prices are overvalued is by looking at rental yields. Using ODPM data, we estimate the gross rental yield on flats to have fallen to 5.7% from 9.7% a decade ago. In 1994, the rental yield was above both the short-term mortgage rate and the 10-year bond yield, suggesting BTS investors got a decent return. But in recent years, strong house price inflation has pushed gross yields below the mortgage rate. After taking into account void periods, estate agency fees, service charges and maintenance costs, the net yield is likely to be even lower. According to IPD (Investment Property Databank Ltd), the gross rental yield was 7% in 2002 but the net rental yield was just 4.4%, significantly below the mortgage rate. This suggests BTS investors were only benefiting from capital gain rather than a positive 'carry' (the income return from borrowing money and investing it in housing).

The best data only goes back to 1994

Chart 24 : ODPM implied gross rental yield



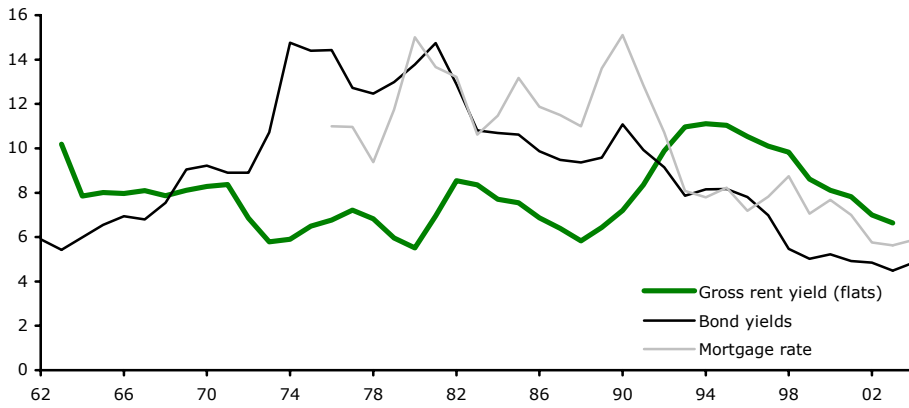
Source: ABN AMRO estimates, Ecowin

Using a similar methodology to the Bank of England ('Asset pricing and the housing market', Quarterly Bulletin, Spring 2004) we have calculated a long-term time series for gross rental yields by combining IPD's estimate for 2002 with the rent index from the National Accounts and ODPM data on flat prices. Historically, the rental yield has been below the mortgage rate and bond yields, implying landlords have always made a negative return. But there are two caveats. The long-term data are based on National Accounts rents, which will include subsidised/regulated rents. Second, the traditional landlord owned lots of properties outright rather than borrowed specifically

We can infer a longer time series

to invest in housing. An indebted landlord is more likely to be concerned about a return relative to the mortgage rate than a net saver.

Chart 25 : Long-term implied gross rental yield



Source: ABN AMRO estimates, Ecowin

We believe that BTS investors are making scant positive carry on their investments. The reliance on capital gains rather than yields can be seen by looking at the relationship between regional yields, house prices and inflation.

BTS investors are making scant positive carry on their investments

Chart 26 shows that the areas where house prices were relatively cheap (compared to regional earnings) in 2002 had the strongest rise in house prices in 2003. If we plot the relationship between regional yields in 2002 and house price inflation in 2003, there is no correlation (Chart 27). House price inflation was almost as strong in Yorkshire as it was in the North East, despite the fact the rental yield in Yorkshire was significantly lower than in the North East. This is probably because speculative investors wanting to take advantage of an expected capital appreciation have bought the cheapest properties they can buy. It costs a lot more to put a deposit down on a 1 bed flat in London yielding 5¾% than it does for a similar flat in Yorkshire yielding 4¼%. Although the rental yield is 1½% lower in Yorkshire, which does not matter if the expected capital appreciation is in double digits.

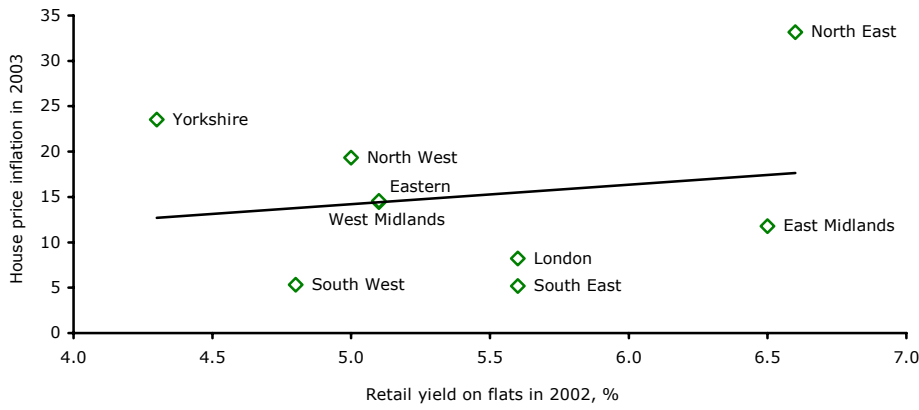
Cheap properties have gone up in price, rather than properties with a high rental yield

Chart 26 : Regional house price inflation



Source: ABN AMRO estimates

Chart 27 : Regional rents and house price inflation

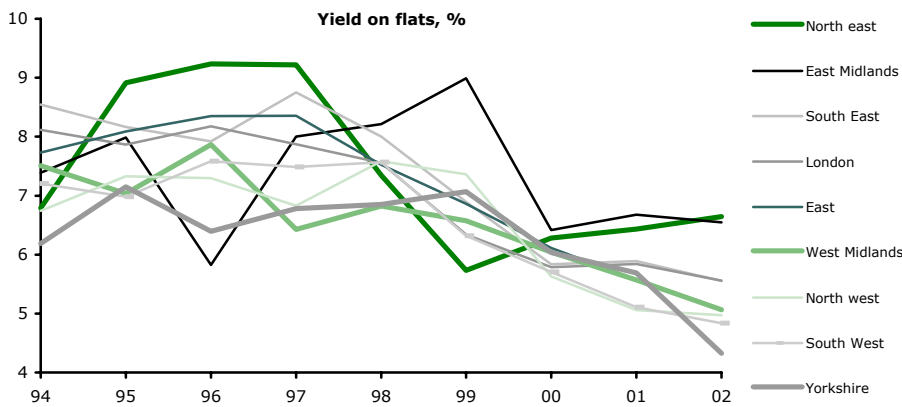


Source: ABN AMRO estimates

If investors were investing rationally, then we would expect the property yields in different regions to be more harmonised. Investors should sell up in low-yielding Yorkshire and invest in high-yielding North East. The fact yields seem unimportant suggests investors have been buying merely for capital gain.

Investors do not seem to care about rental yields

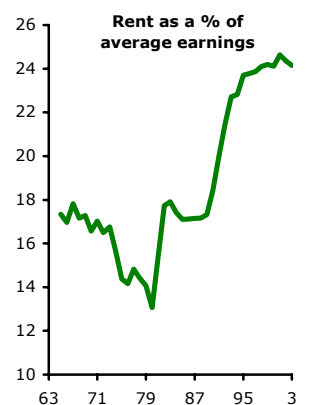
Chart 28 : Regional rents



Source: ABN AMRO estimates

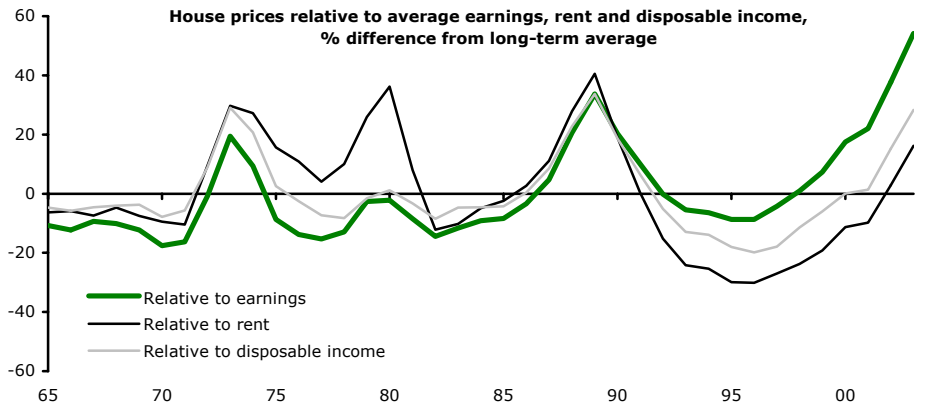
From a macroeconomic perspective, if, as we are led to believe, supply shortages have boosted demand for living space in recent years, why have rents been broadly stable relative to average earnings? The rise in house prices should have been accompanied by a rise in rents. Instead, the ratio of house prices to rents rose to 15% above its long-term average in 2003. This is less extreme than other valuation measures. Relative to average earnings, house prices look 50% overvalued. Relative to total disposable income (so taking into account lower unemployment – another argument used by bulls) house prices appear 30% overvalued.

Chart 29 : Rents relative to earnings



Source: ABN AMRO estimates

Chart 30 : Key valuation ratios



Source: ABN AMRO estimates

The exact degree of overvaluation is impossible to judge. But there is little denying house prices look overvalued. We also believe households' finances are getting increasingly stretched. Yet house prices are accelerating. This seems irrational and inconsistent with our previous view of a soft landing. The most plausible explanation is that people are buying property despite weak fundamentals in the expectation of further capital gains.

House prices are overvalued

Low inflation means the MPC will find it increasingly difficult to raise interest rates further. Indeed, it might be wise for the MPC to wait for the housing bubble to burst of its own accord when the economy is more evenly balanced and consumer price inflation higher than attempt to prick it now when inflation is dangerously low. We maintain our view that interest rates will not go up as much as the bond market expects. But the risks of a hard landing for the housing market and consumer spending in future years are increasing.

The MPC cannot afford to prick the housing bubble yet

The potential trigger for a slowdown in the housing market would be a change in expectations about capital gains. If FTB or BTS investors stop anticipating further capital gains, they will realise how weak fundamentals are. An increase in sales could coincide with a slump in demand, dragging prices lower.

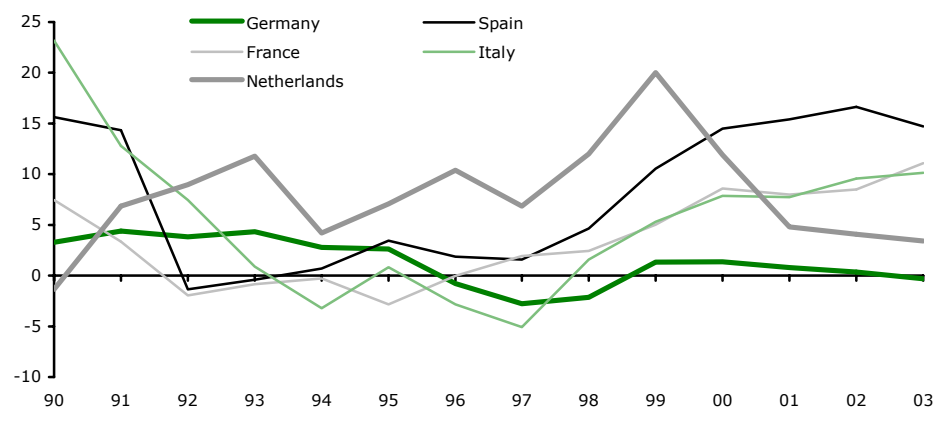
The bubble is likely to painfully burst in the medium term

Planet Telex

Low interest rates have boosted house prices in the euro area as well as the UK. German house prices remain depressed, but we have seen strong growth in Spain, Italy and France. Dutch inflation has moderated after booming in the late 1990s.

Low interest rates are boosting house prices in the euro area

Chart 31 : House prices, YOY%



Source: The Economist

For the UK economy, we have identified three key valuation metrics to assess whether house prices are overvalued. We can apply these metrics to the euro area.

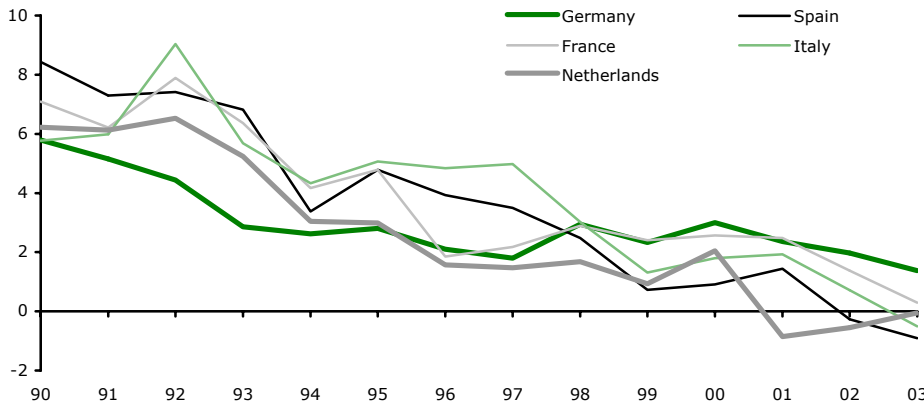
Are euro-area house prices overvalued?

- House prices to average incomes. This is useful to assess the amount of deposit a consumer needs to save before he can get on the property ladder
- House prices to disposable income. This is a broader measure of income that takes into account lower unemployment. If there is more than one wage earner in a household, they can afford a bigger property. Similarly, if youth unemployment falls, more people can afford to leave their parents' home and buy their own property
- House prices relative to rent. This assesses whether buying is a good idea from an investor's point of view. It is also useful for households as they can determine whether it is cheaper to rent or buy.

It is also useful to look at household interest gearing as a share of disposable income to see whether high house prices are affordable in an environment of low interest rates. In contrast to the UK, where interest rates are rising, ECB rates have been on hold for some time and are unlikely to rise over the next eighteen months.

But it is important to note real interest rates vary across the euro area. German real interest rates used to be the lowest in Europe but are now the highest because inflation is so low. Spanish real interest rates used to be the highest but are now the lowest as inflation is relatively high.

Chart 32 : Real short-term interest rates, %



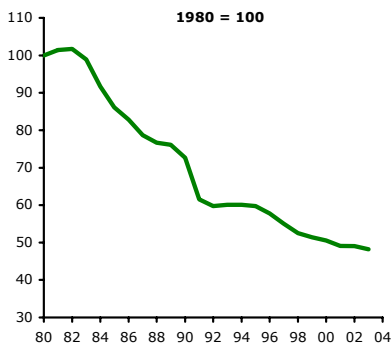
Source: OECD

Germany

The German housing market remains in terminal decline. There is still tremendous overcapacity after reunification. House prices have continued to fall relative to incomes and average earnings in recent years, although they have at least stabilised relative to rents. The weakness of the German labour market (as companies strive to achieve efficiency gains to offset currency strength) and high real interest rates will keep prices depressed.

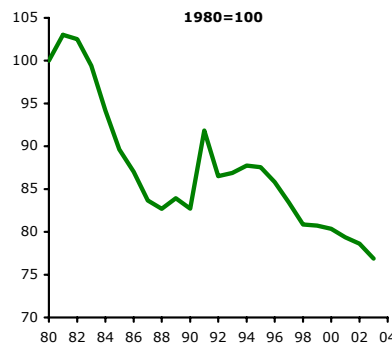
German house prices are terminally declining

Chart 33 : German house prices relative to disposable income



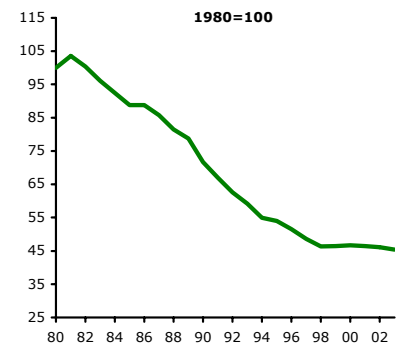
Source: ABN AMRO estimates

Chart 34 : German house prices relative to average earnings



Source: ABN AMRO estimates

Chart 35 : German house prices relative to rents



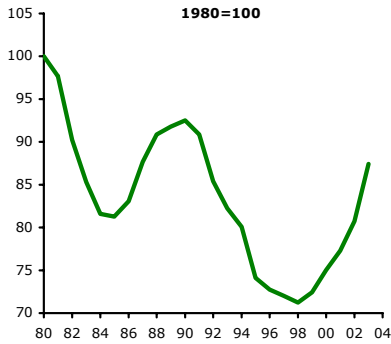
Source: ABN AMRO estimates

France

French house prices have risen sharply relative to average earnings. But relative to disposable incomes, house prices remain in line with their long-term average as unemployment has fallen in recent years. Further euro strength could cause more job losses, undermining the housing market. House prices look stretched relative to rents.

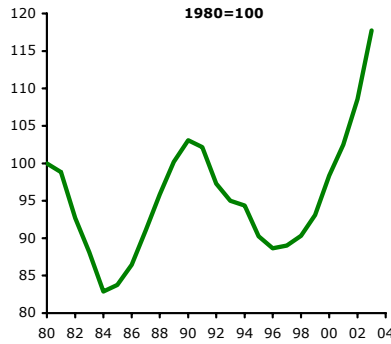
French house prices look stretched if unemployment were to rise

Chart 36 : French house prices relative to disposable income



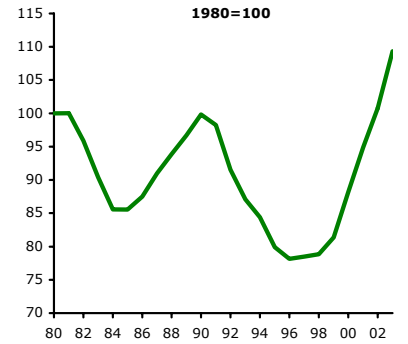
Source: ABN AMRO estimates

Chart 37 : French house prices relative to average earnings



Source: ABN AMRO estimates

Chart 38 : French house prices relative to rents



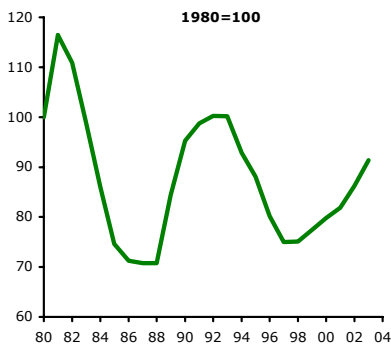
Source: ABN AMRO estimates

Italy

We are very pessimistic on the outlook for the Italian economy, but house prices don't look that stretched in Italy. Italian house prices have not reached previous cyclical highs relative to average earnings and are fairly low relative to disposable incomes. Relative to rents, house prices are extremely low.

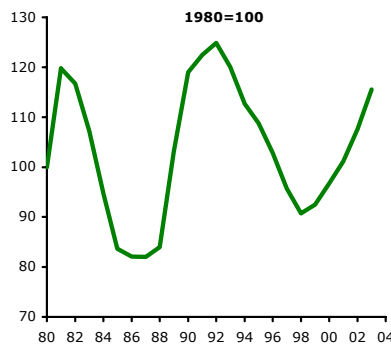
Italian house prices do not look stretched

Chart 39 : Italian house prices relative to disposable income



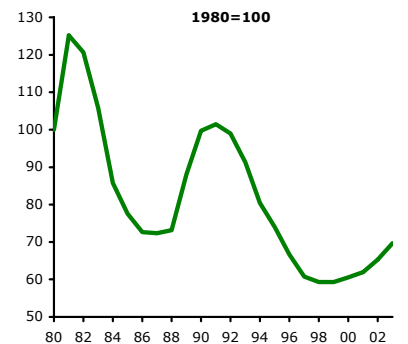
Source: ABN AMRO estimates

Chart 40 : Italian house prices relative to average earnings



Source: ABN AMRO estimates

Chart 41 : Italian house prices relative to rents



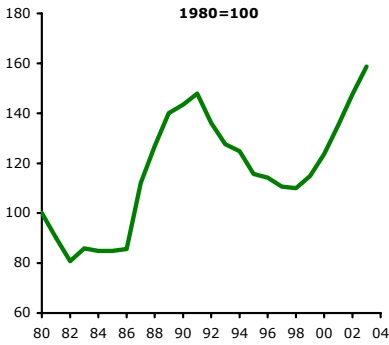
Source: ABN AMRO estimates

Spain

Spanish house prices look stretched on the three main valuation measures. Even if we take into account lower unemployment, house prices are at more extreme valuations than in previous cycles. Unfortunately, the rental series for Spain does not go back that far, but house prices have shot up relative to rents. But there are some positives for Spain. Interest gearing remains low (although this does not include principal repayment). Moreover, real GDP growth and inflation is likely to be above the euro-area average as the economy catches up with the rest of the EU. This means the debt to GDP ratio should fall back later.

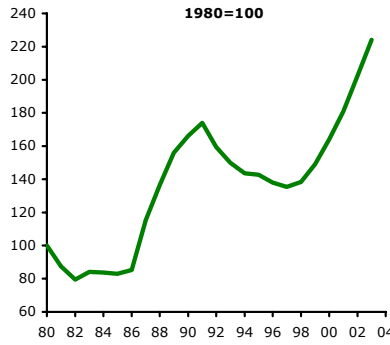
Spanish house prices look stretched but the fundamentals are positive

Chart 42 : Spanish house prices relative to disposable income



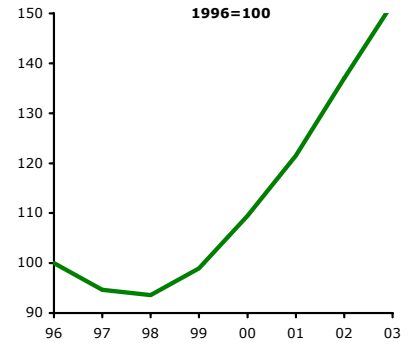
Source: ABN AMRO estimates

Chart 43 : Spanish house prices relative to average earnings



Source: ABN AMRO estimates

Chart 44 : Spanish house prices relative to rents



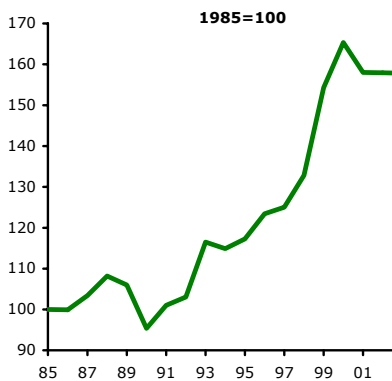
Source: ABN AMRO estimates

Netherlands

In the Netherlands, house prices look stretched. The Dutch housing market boomed in the late 1990s as buoyant global growth and a weak euro boosted the economy. Since then, unemployment has soared as the euro has strengthened and global growth has collapsed. The Dutch government is also committed to meeting the Stability and Growth Pact and has removed some housing market subsidies to help limit the budget deficit. So the rise in Dutch house prices is unlikely to be as sustainable as the rise in Spanish house prices.

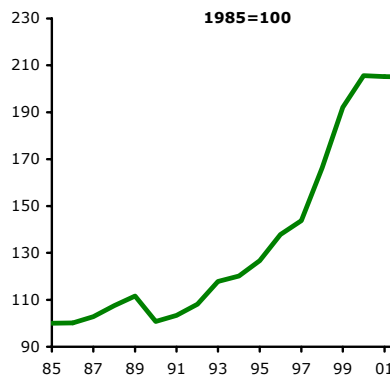
Dutch house prices look stretched and unemployment is rising

Chart 45 : Dutch house prices relative to disposable income



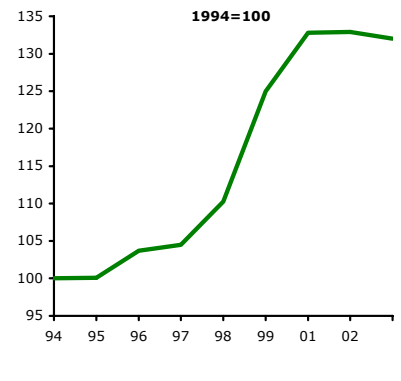
Source: ABN AMRO estimates

Chart 46 : Dutch house prices relative to average earnings



Source: ABN AMRO estimates

Chart 47 : Dutch house prices relative to rents



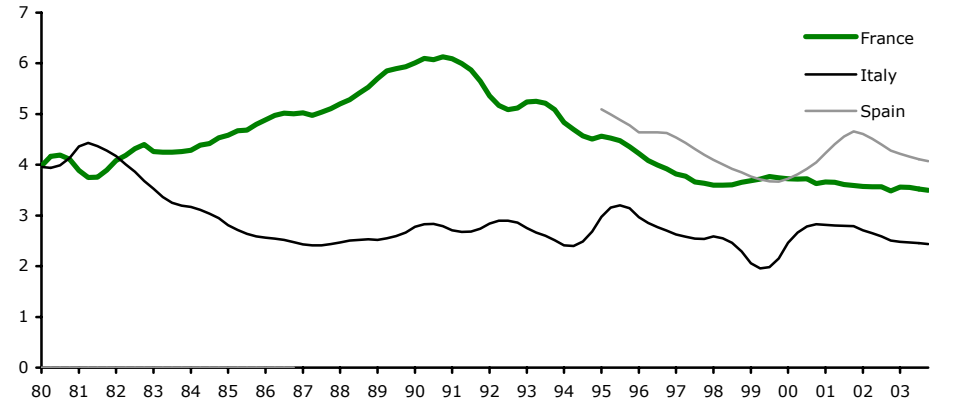
Source: ABN AMRO estimates

Interest gearing

As a final guide to house price valuations, we have looked at interest gearing using data on household interest payments from the OECD. Unfortunately, there is no data available for Germany or the Netherlands. The data suggest Spanish interest gearing remains low despite extreme house price valuations. French interest gearing has fallen consistently over the past decade, reflecting its high saving ratio. Italian interest gearing has shown a bit more volatility but remains in line with its long-term average. Assuming the ECB does not raise rates over the next 18 months, low interest gearing should continue to support house prices in these economies.

Interest gearing has fallen back in Spain

Chart 48 : Household interest payments, % disposable income



Source: OECD

DISCLAIMER

© Copyright 2004 ABN AMRO Bank N.V. and affiliated companies ("ABN AMRO"). All rights reserved.

This material was prepared by the ABN AMRO affiliate named on the cover or inside cover page. It is provided for informational purposes only and does not constitute an offer to sell or a solicitation to buy any security or other financial instrument. While based on information believed to be reliable, no guarantee is given that it is accurate or complete. While we endeavour to update on a reasonable basis the information and opinions contained herein, there may be regulatory, compliance or other reasons that prevent us from doing so. The opinions, forecasts, assumptions, estimates, derived valuations and target price(s) contained in this material are as of the date indicated and are subject to change at any time without prior notice. The investments referred to may not be suitable for the specific investment objectives, financial situation or individual needs of recipients and should not be relied upon in substitution for the exercise of independent judgement. ABN AMRO may from time to time act as market maker, where permissible under applicable laws, or, as an agent or principal, buy or sell securities, warrants, futures, options, derivatives or other financial instruments referred to herein. ABN AMRO or its officers, directors, employee benefit programmes or employees, including persons involved in the preparation or issuance of this material, may from time to time have long or short positions in securities, warrants, futures, options, derivatives or other financial instruments referred to in this material. ABN AMRO may at any time solicit or provide investment banking, commercial banking, credit, advisory or other services to the issuer of any security referred to herein. Accordingly, information may be available to ABN AMRO, which is not reflected in this material, and ABN AMRO may have acted upon or used the information prior to or immediately following its publication. Within the last three years, ABN AMRO may also have acted as manager or co-manager for a public offering of securities of issuers referred to herein. The stated price of any securities mentioned herein is as of the date indicated and is not a representation that any transaction can be effected at this price. Neither ABN AMRO nor other persons shall be liable for any direct, indirect, special, incidental, consequential, punitive or exemplary damages, including lost profits arising in any way from the information contained in this material. This material is for the use of intended recipients only and the contents may not be reproduced, redistributed, or copied in whole or in part for any purpose without ABN AMRO's prior express consent. In any jurisdiction in which distribution to private/retail customers would require registration or licensing of the distributor which the distributor does not currently have, this document is intended solely for distribution to professional and institutional investors.

Should you require additional information please contact your local ABN AMRO account representative, unless governing laws dictate otherwise.

Australia: Any report referring to equity securities is distributed in Australia by ABN AMRO Equities Australia Ltd (ABN 84 002 768 701), a participating organisation of the Australian Stock Exchange Ltd. Any report referring to fixed income securities is distributed in Australia by ABN AMRO Bank NV (Australia Branch) (ARBN 079 478 612). Australian investors should note that this document was prepared for wholesale investors only.

Canada: The securities mentioned in this material are available only in accordance with applicable securities laws and may not be eligible for sale in all jurisdictions. Persons in Canada requiring further information should contact ABN AMRO Incorporated.

Hong Kong: This document is being distributed in Hong Kong by, and is attributable to, ABN AMRO Asia Limited which is regulated by the Securities and Futures Commission of Hong Kong.

India: Shares traded on stock exchanges within the Republic of India may only be purchased by different categories of resident Indian investors, Foreign Institutional Investors registered with The Securities and Exchange Board of India ("SEBI") or individuals of Indian national origin resident outside India called Non Resident Indians ("NRIs") and Overseas Corporate Bodies ("OCBs"), predominantly owned by such persons or Persons of Indian Origin (PIO). Any recipient of this document wanting additional information or to effect any transaction in Indian securities or financial instrument mentioned herein must do so by contacting a representative of ABN AMRO Asia Equities (India) limited.

Italy: Persons in Italy requiring further information should contact ABN AMRO Bank N.V. Milan Branch.

Japan: This report is being distributed in Japan by ABN AMRO Securities Japan Ltd to institutional investors only.

New Zealand: This document is distributed in New Zealand by ABN AMRO NZ Limited an accredited NZX Firm.

Russia: The Russian securities market is associated with several substantial risks, legal, economic and political, and high volatility. There is a relatively high measure of legal uncertainty concerning rights, duties and legal remedies in the Russian Federation. Russian laws and regulations governing investments in securities markets may not be sufficiently developed or may be subject to inconsistent or arbitrary interpretation or application. Russian securities are often not issued in physical form and registration of ownership may not be subject to a centralised system. Registration of ownership of certain types of securities may not be subject to standardised procedures and may even be effected on an ad hoc basis. The value of investments in Russian securities may be affected by fluctuations in available currency rates and exchange control regulations.

Singapore: This document is distributed in Singapore by ABN AMRO Asia Securities (Singapore) Private Limited to clients who fall within the description of persons in Regulation 49(5) of the Securities and Futures (Licensing and Conduct of Business) Regulations 2002. Investors should note that this material was prepared for professional investors only.

United Kingdom: Equity research is distributed in the United Kingdom by ABN AMRO Equities (UK) Limited, which is registered in England (No 2475694), and is authorised and regulated by the Financial Services Authority. All other research is distributed in the United Kingdom by ABN AMRO Bank NV, London Branch, which is authorised by the Dutch Central Bank and by the Financial Services Authority; and regulated by the Financial Services Authority for the conduct of UK business. The investments and services contained herein are not available to private customers in the United Kingdom.

United States: Distribution of this document in the United States or to US persons is intended to be solely to major institutional investors as defined in Rule 15a-6(a)(2) under the US Securities Act of 1934. All US persons that receive this document by their acceptance thereof represent and agree that they are a major institutional investor and understand the risks involved in executing transactions in securities. Any US recipient of this document wanting additional information or to effect any transaction in any security or financial instrument mentioned herein, must do so by contacting a registered representative of ABN AMRO Incorporated, Park Avenue Plaza, 55 East 52nd Street, New York, N.Y. 10055, US, tel + 1 212 409 1000, fax +1 212 409 5222.

- Material means all research information contained in any form including but not limited to hard copy, electronic form, presentations, e-mail, SMS or WAP.

Regulatory disclosures

The research analyst or analysts responsible for the content of this research report certify that: (1) the views expressed and attributed to the research analyst or analysts in the research report accurately reflect their personal opinion(s) about the subject securities and issuers and/or other subject matter as appropriate; and, (2) no part of his or her compensation was, is or will be directly or indirectly related to the specific recommendations or views contained in this research report. On a general basis, the efficacy of recommendations is a factor in the performance appraisals of analysts.

Disclosures regarding companies covered by ABN AMRO Group can be found on ABN AMRO's Research Website at www.abnamroresearch.com