Commentary: Housing *is* the Business Cycle

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Prof. Leamer's paper is witty, provocative and very timely. It is also written with a certain passion. Now, passion and central banking do not necessarily go well together. Boredom is an attribute more often associated with central banking. So, unfortunately part of my task will be to try to take out some of the passion, in particular when it comes to drawing the implications of Prof. Leamer's findings for the design of monetary policy.

Prof. Leamer's claim is "Housing *is* the business cycle." I will basically make three main comments. First, in view of the high interest rate sensitivity of residential investment compared to other gross domestic product (GDP) components, a crucial factor for understanding the relationship between the housing cycle and the business cycle are interest rates. It would therefore be useful to assess whether the leading indicator properties of housing starts continue to hold once interest rates and, in particular, the term spread are taken into account. If most of the leading indicator properties of housing come from the interest rate cycle, then we need to think about monetary policy and not the housing market as a source of business cycle movements. Second, the paper contains no discussion of how problems in the housing market may spill over to other components of GDP. This should be an important element of the analysis, as residential

investment can not explain recessions by itself given its small share in GDP. I will argue that the crucial channels are likely to be financial, which are very much ignored or downplayed in Prof. Leamer's paper. Third, Prof. Leamer argues in favour of a housing target for the Fed. I will argue that the evidence in his paper suggests there is no significant trade-off between stable and low inflation and a stable housing market. If anything, the two are complementary.

The main point of the paper is that most recessions in the US since the WWII have been preceded by a slowdown in housing or residential investment with an average cumulative negative contribution to GDP of about 0.6 percent the year before the peak of the cycle and a negative contribution of about 0.4 percent two quarters into the recession. Charts 6 and 8 of the paper are quite striking in this respect. Given the relatively small share of residential investment in real GDP (on average since 1985, residential investment contributes only 4.2 percent to overall growth in the US), this contribution is surprisingly large, but it is not the largest: Durables contribute almost 1.4 percent, inventories almost 1.2 percent, and also equipment and software contribute almost 1 percent. As a result, as indicated in Table 3 of Prof. Leamer's paper, when you are concerned with the total loss of GDP during recessions, residential investment is an important component, but it is not the only one you should worry about: On average it contributed about 15 percent, with inventories, consumer durables, equipment and software, consumer nondurables, and exports contributing about the same, given a plus/minus 4 percentage point confidence set.

The point I want to make is that if we are particularly concerned with developments in the housing market, it is not because residential investment contributes the most to recessions. It must be for either or both of two reasons: because residential investment is a robust signal for an upcoming recession and, hence, it is a useful leading indicator for recessions and a more general slowdown of the economy, and/or because developments in residential investment have particularly strong multiplier/spillover effects on other sectors and GDP components. While the paper provides suggestive and reduced-form

evidence in Section 3 for both phenomena, these two points could have been elaborated a bit more.

So, my first question is: Do housing starts continue to be a strong leading indicator once other factors such as the term spread are taken into account? My tentative answer based on the literature is probably much less than could be implied by the timing analysis of Prof. Leamer in Section 3. For example, Estrella and Mishkin (1999) find that housing starts is one of the few leading indicators that do provide additional information content for the probability of a recession compared to the term spread. However, while the term spread provides strong leading information four and more quarters ahead, the additional information provided by housing starts is limited and at a shorter horizon (two to three quarters). These findings are likely to be due to the high interest rate sensitivity of residential investment as also shown in Section 6 of the paper. Indeed, recent research by Erceg and Levin (2003) suggests that over the period 1966 till 2000, an unexpected change in the federal funds rate has an impact on residential investment that is about twice as large as on consumer durables, three times as large as on business equipment, four times as large as on business structures and 10 times as large as on other GDP components.[1] This is important because if the reason for why residential investment is the first to go down before a recession is its high interest rate sensitivity compared to other components, then we need to think about monetary policy as a source of business cycle movements, and the housing market may just be a part of the transmission mechanism. Below I will highlight some suggestive evidence (from the paper) that indeed some of the boom-bust nature of the housing market in the 1970s and early 1980s could be associated with unstable monetary policy and high and variable inflation. In contrast, when inflation was low and stable and monetary policy systematic and predictable as in the second half of the 1980s and the 1990s, also the boom-bust nature of the housing market was reduced.

Second, there is very little or no analysis in the paper about why problems in the housing market would spill over in the other GDP components. The paper often gives the impression that recessions are all due to the residential construction sector, but that can not be true

given its small share. Understanding the reasons behind a possible multiplier effect from the housing market into other GDP components is obviously crucial in assessing the risks that the current turmoil leads to a recession. In this respect, Prof. Leamer appears to downplay the role and the importance of financial channels such as the wealth/collateral effect from housing valuations. In contrast, in my view, the two main channels are financial. The first one is the wealth/collateral channel, which is akin to a broad balance sheet channel as it works through the balance sheet of the borrowers.[2] The paper by John Muellbauer in this conference volume reviews the literature on this channel and finds that it is generally quite strong in countries like the United States and the United Kingdom with quite flexible and developed mortgage markets. These findings are also confirmed in research by European Central Bank (ECB) colleagues using cross-country evidence (e.g., Slacalek, 2006, and Calza, Monacelli and Stracca, 2006). The very interesting evidence in Section 5 of Prof. Leamer's paper that during the most recent boom the appreciation of house prices was the largest for cheaper properties could also be consistent with an important collateral channel. To the extent that poor, low-income households are also the households that are more likely to be credit constrained and that buy cheaper properties, one would indeed expect that the relaxation and tightening of credit constraints with rising and falling house prices lead to a more pronounced cycle in cheaper properties. The role of widespread negative housing equity amongst many households and its impact on consumption in the deep UK recession of the early 1990s is a particularly sharp historical example. The second channel is more akin to the traditional bank lending channel. It works through the balance sheet of the lenders, i.e., banks and other financial intermediaries. The interaction between booms and busts in the residential housing and associated credit market, and the resulting financial fragility and weak balance sheets of the financial sector in causing deep recessions, has been highlighted in the literature on asset price booms and busts (e.g., Borio, 2002; Detken and Smets, 2004; and Adalid and Detken, 2007). These episodes point to the possibility that initial defaults in the mortgage market may undermine the financial strength of the banking sector and lead to a

general tightening of credit standards, which may affect all domestic demand components that depend on external financing.

Whether problems in the housing sector will spill over to other sectors will therefore very much depend on factors such as the financial position of households, the financial position of banks, and more generally the robustness and stability of the financial system. This is not the place and the time to make such an assessment, but if we take the experience of the last two recessions as a guide, there may be some reason for optimism. Table 1 of Prof. Leamer's paper clearly confirms the so-called Great Moderation, i.e., the fact that the standard deviation of GDP growth has fallen by more than a half since 1984-85. In relation to this, there are two observations that are interesting for our purposes. First, while the contributions of all GDP components in Table 1 show a fall in volatility, it is interesting to note that the largest relative drop is in residential investment.[3] As a result, the volatility of the contribution of residential investment to GDP growth is one of the lowest in the 1985-2006 period and similar to that of nondurables. Only the contributions of government spending and structures show a smaller volatility. Secondly, a less known fact, which was recently highlighted by Mojon (2007), is that one of the biggest contributions to the overall fall in the variability of GDP growth since 1984 is the fall in the covariance of consumer investment (which includes residential investment and durables) with other components of GDP such as nondurable consumption or corporate investment.[4] This correlation dropped from 0.63 in the earlier period to 0.20 in the 1984-2005 period. What can explain this? Mojon (2007) shows that monetary policy itself may be an important factor. In the earlier period of the great inflation, instability in monetary policy as captured by a large variance of unsystematic monetary policy changes contributed to a larger correlation between consumer investment and other components in demand. To the extent that inflation is much more stable and monetary policy more systematic in the second period, the correlation could be expected to stay low. Second, several authors (e.g., Campbell and Hercowitz, 2004; Dynan et al., 2006; and others) have argued that with financial deepening, consumer and investment spending can decouple from the housing cycle. Both arguments

should be relevant for assessing whether the current turmoil in the housing market is likely to spill over in a more general slowdown.

Finally, let me comment on some of the implications and lessons Prof. Leamer draws for the design of monetary policy. He argues that the importance of the housing cycle in recessions and "the differences in the dynamics of inflation and housing create a problem for the conduct of monetary policy that is aimed at both inflation and housing-related employment." Here I am much less convinced by the arguments and the analysis. One of the things we have learned from Bob Lucas is that we should not take reduced-form relationships as structural when performing policy analysis. There is a large literature that shows that as central banks around the world have managed to stabilise inflation and maintain price stability, the persistence of inflation has dropped (e.g., Benati, 2007) or, alternatively, the persistent component has become much less important and almost negligible (e.g., Stock and Watson, 2007). The reason is clear: The combination of the improvement of the institutional framework (with central bank independence, accountability for a well-specified goal of price stability and transparency) and the actual performance of low and stable inflation has contributed to an anchoring of inflation expectations to the inflation objective. As a result, shocks to inflation are no longer as persistent as they used to be. A similar reasoning can be followed for the boom-bust nature of the housing market. When inflation is high and variable, interest rates including bond and mortgage yields will be high and variable and contribute to a variable housing market. In contrast, if the central bank focuses on keeping inflation in check, bond and mortgage yields will be much more stable as inflation expectations are well anchored, and this will contribute to a stable housing market. The evidence presented in Prof. Leamer's paper points in this direction. I have already referred to the fact that the variability of the contribution of residential investment has fallen as inflation has come down in the most recent period. Prof. Leamer's own report card for the Fed also points in that direction. When inflation was high and variable, also called the great inflation period (1966-1982), the central bank got mostly F's and an occasional D. When inflation was brought down and stable, the central bank got

a B+ and an A-. Indeed, Chart 30 clearly shows that the boom-bust behaviour of housing starts was highest during the great inflation period. The F for the last cycle is a matter of debate, as the boom in house prices may also be related to other, non-monetary policy factors such as the savings glut and its impact on lower worldwide long-term interest rates. So, my take on this is that there is no serious conflict between inflation stabilisation and stabilising the housing market. Low and stable inflation will contribute to low and stable nominal and real mortgage interest rates, which will in turn lead to a stable housing market. The two objectives are complementary, and there is no need to have a specific target for the housing market. In fact, this would be counterproductive if it leads to situations in which shocks originating from the housing market would undermine the central bank's credibility and reputation to maintain price stability. It also has the risk of interfering with a proper risk assessment by borrowers and lenders in the mortgage market.

Author's Note: The views expressed are my own and do not necessarily reflect those of the European Central Bank.

Endnotes

[1]As argued in Dynan et al. (2006), the interest rate sensitivity may have fallen somewhat in the most recent period due to the deregulation of the mortgage market.

[2]See Bernanke and Gertler (1995).

[3]A recent study by Fed economists Dynan, Elmendorf and Sichel (2006) shows that residential investment has become much less sensitive to changes in interest rates (including mortage rates) since the early 1980s.

[4]See Benoit Mojon (2007).

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