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### Editor's Note

This issue marks the departure of Tito Cordella from his service as Editor, and of David Einhorn as Assistant Editor. With their energy and dedication, they have contributed to the success of the *Bulletin*. As the new Editor, I am looking forward to maintaining continuity and building on my predecessors' excellent work. I welcome any suggestions or other feedback from readers (which may be e-mailed to [resbulletin@imf.org](mailto:resbulletin@imf.org)).

—Antonio Spilimbergo

### Research Summaries

## Housing Prices and Macroeconomics

Marco Terrones



*Housing prices in industrial countries have increased unusually rapidly in recent years. In some cases—notably Australia, Ireland, the Netherlands, Spain, Sweden, and the United Kingdom—housing prices adjusted for inflation have risen by 60 percent or more since 1997, increases that are difficult to explain in terms of economic fundamentals alone. In addition, a number of housing indicators—including the housing affordability ratio, and the ratios of housing prices to rent and mortgage debt—have reached record high levels in several countries. This has led many observers to suggest that a housing price correction is imminent, with potentially adverse effects on the economy. What is the relationship between housing prices and the economy on the whole? What are the implications of a bust in the price of housing? To address these questions, this article surveys recent IMF research on housing prices and their interlinkages with the economy in industrial countries.*

By affecting households' net wealth and capacity to borrow and spend, large housing price movements can influence aggregate demand and output.

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## Workers' Remittances

Nikola Spatafora



*Workers' remittances, which broadly include all unrequited transfers from migrant workers to family or friends in their country of origin, have grown steadily over the past 30 years. In 2005, recorded remittances to developing countries are likely to reach \$160 billion. Until very recently, there was remarkably little awareness of the magnitude of remittance flows; as a consequence, research interest was also extremely limited. Three key questions currently stand out. First, how large are unrecorded remittances, and how can their measurement and regulation be improved? Second, what are the determinants of remittances, and in particular what are the key obstacles to further increases in such flows? Third, do remittances have an important development impact, and how can it be maximized? This article provides an overview of recent IMF research on these issues.*

Workers' remittances to developing countries have been growing rapidly, and their rising trend is likely to persist as populations continue to age, and as pressures mount for migration from developing to advanced economies. For many developing economies, remittances constitute the single largest source of foreign exchange, exceeding export revenues, foreign direct investment, and other private capital inflows. Moreover, remittances have proved

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## Housing Prices and Macroeconomics

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Edison (2002) and Bayoumi and Edison (2003) report that household consumption in industrial countries is directly related to housing wealth. For every dollar increase in housing wealth in those countries, consumption increases by 5 cents. In addition, changes in housing wealth have a higher effect on consumption in countries with a market-based financial system than those with a bank-based financial system, and the wealth effects on consumption have increased over time. Ludwig and Sløk (2002) found broadly similar results. The housing price effects on consumption are also a function of the age of the population and home ownership rates. Campbell and Cocco (2004), using micro data for the United Kingdom, find that as the population becomes older and home ownership more concentrated in the older age group, changes in housing prices have a stronger effect on consumption. Movements in housing prices also affect residential investment by altering the ratio between house prices and costs (Tobin's  $q$ ). The strength of this relation, however, has been difficult to assess (Girouard and Blöndal, 2001). Faulkner-MacDonagh and Mühleisen (2004) argue that recent strong consumer spending in the United States in part reflects increases in (housing) wealth and mortgage refinancing.

Similarly, housing prices can be affected by changes in macroeconomic conditions (i.e., disposable income) and financial conditions (i.e., credit and interest rates). There is evidence that the growth rate of housing prices in industrial countries is positively affected by real income growth and credit availability and negatively affected by interest rates (Milesi-Ferretti and Kodres, 2004; and Terrones, 2004). In addition, housing prices show a long-run reversion to fundamentals, as prices tend to fall when they are out of line with income levels. Housing prices also depend on the structure of mortgage markets and other structural factors—evidence suggests that countries with predominantly adjustable-rate mortgage contracts have had greater housing price growth and volatility than countries with predominantly fixed-rate mortgages (Kodres, 2004). Innovations in mortgage markets can also affect house prices—Schnure (2005) reports evidence suggesting that the process of securitization of the U.S. mortgage market may have contributed to dampening of the country's house price fluctuations.

Reflecting these interlinkages, housing prices in industrial countries are procyclical—rising in a boom and falling in a recession—and, more surprisingly, synchronized across countries, as these prices tend to move in tandem. Analyses

suggest that the synchronization of housing prices reflects the key role played by global factors, primarily through interest rates and global economic activity (Terrones and Otrok, 2004; and Otrok and Terrones, forthcoming). Indeed, global developments explain a large share of housing price movements. Across individual countries, the effects of global factors on these prices vary significantly and are especially important in the United Kingdom and the United States. Not surprisingly, in the countries where housing prices are less synchronized, country-specific forces affecting housing market developments play a significant role. This seems particularly true in Australia, Italy, New Zealand, and Switzerland. An important implication of these findings is that, just as the current upswing in housing prices has largely been a global phenomenon, any downturn is also likely to be highly synchronized across countries, with corresponding implications for the world economy.

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***“Just as the current upswing in housing prices has largely been a global phenomenon, any downturn is also likely to be highly synchronized across countries, with corresponding implications for the world economy.”***

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But what are economic implications of a bust in housing prices? Helbling and Terrones (2003a and b) and Helbling (2004) have studied booms and busts in residential housing in industrial countries. To qualify as a bust, a house price contraction had to exceed 14 percent; and using this measure, there were 20 housing price busts between the first quarter of 1971 and the third quarter of 2002. Analysis of these events suggests that price busts were associated with substantial negative output gaps, as output growth decreased noticeably. As a result, the output level three years after the beginning of a bust in housing prices was about 8 percent below the level that would have prevailed during the three years up to the bust. Hunt (2005), using simulation analysis for the United Kingdom, finds smaller output losses. The beginning of the output slowdown after a housing price bust coincided roughly with the beginning of the bust itself, which is consistent with the finding that all but one of the housing price busts were associated with recessions. The slowdown and fall in output growth mainly reflected the sharp effects of a bust in housing prices on consumption and residential investment. Interestingly, in most cases, short-term interest rates rose prior to the bust

and remained about constant thereafter, which is consistent with the notion that the bust may reflect a tightening of monetary policy. Housing price busts also were associated with important adverse effects on the banking sector, as banks faced deterioration in the quality of their portfolios, a decline in profits, and solvency problems. Indeed, there is evidence that all major banking crises in industrial countries during the postwar period coincided with housing price busts. Not surprisingly, bank-based financial systems tended to suffer larger output losses than market-based financial systems during housing price busts, given the high exposure of banks to real estate lending.

Should policymakers react to large housing (or, more generally, asset) price movements to control the damaging effects associated with price busts? This is an area hotly debated. Some researchers argue that the monetary authority should not pay attention to the movements of asset prices per se, except if these prices contain information on future inflation (Bernanke and Gertler, 2001). Others argue in favor of a more proactive policy stance to changes in asset prices—for instance, Bordo and Jeanne (2002) make the case that monetary policy should react to large changes in asset prices as insurance against the risk of an economic dislocation associated with an asset price bust, which is a low-probability event. Although this approach has some appeal, one important problem is how to make it operational. Hunt (2005) suggests that in the event of sharp reduction in housing prices (i.e., by 30 percent), strong policy action—preferably through a large reduction in interest rates—helps mitigate the negative effects on the economy. While the balance of opinion has been tilting in favor of a monetary policy geared only toward controlling inflation, it may not be sensible to overlook sharp movements in housing prices. This is certainly an area for further research.

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John Odling-Smee

#### Workers' Remittances *(continued from page 1)*

remarkably resilient in the face of economic downturns and crises. As a result, interest in remittances and their impact is rapidly growing in policy circles, including the Group of Eight, in the research community, and among potential remittance service providers. Remittances are increasingly viewed as a relatively attractive source of external finance for developing countries that can help foster development and smooth crises.

Unfortunately, much is still unknown about remittances. For instance, some remittances are channeled through the informal sector and are not captured in official balance of payments statistics. These include cash transfers based on personal relationships between businesspeople, or carried out by courier companies, friends, relatives, or by oneself. Using balance of payments data as well as household surveys, Freund and Spatafora (2005) estimate that, overall, these informal remittances may amount to about 35 to 75 percent of official remittances. El Qorchi, Maimbo, and Wilson (2003) provide a comprehensive review of the historical development of these informal fund transfer systems, the operational characteristics that favor their use, and the national and international economic and regulatory challenges they pose. Reinke and Patterson (2005) summarize other issues and problems that data users may experience with the balance of payments framework. Looking ahead, they review the methodological improvements currently under consideration for measuring remittances in the future. The Statistics Department of the IMF (see IMF, 2005) reviews the progress made recently in these areas, and outlines current plans for further work.

In spite of their limitations, existing data reveal strong empirical regularities. For instance, using cross-country data, Aggarwal and Spatafora (2005) find that policies and regulations play an important role in determining remittance inflows. In particular, multiple exchange rates, restrictions on holding foreign exchange deposits, and large black market premium all have sizable and statistically significant negative impacts on remittances. Freund and Spatafora (2005) similarly find that high transaction costs, in the form of money-transfer fees and dual exchange rates, reduce official remittances. Importantly, such transaction costs—which in spite of recent declines still amount in many countries to 10 percent or more of the sum remitted—are systematically related to concentration in the banking sector, lack of financial depth, and exchange rate volatility. The papers cited above also find that remittance inflows are countercyclical, increasing during periods of weak economic growth in the receiving countries. This suggests that remittances can play an important role in maintaining macroeconomic stability and mitigating the impact of adverse shocks. This finding is further confirmed by Bouhga-Hagbe (2004) for Morocco, Chamon (2005) for Samoa, and Gupta (forthcoming) for India. Burgess and Haksar (2005) do not find clear evidence of such a stabilizing effect of remittances in the Philippines.

The countercyclicity of remittances does make it hard to establish what effect, if any, they exert on economic growth. Chami, Fullenkamp, and Jahjah (2003) conclude that remittances have a detectable negative impact, perhaps because remittance recipients can decrease labor force participation or reduce labor effort. Using a different identification strategy, Aggarwal and Spatafora (2005) fail to find any such effect; in contrast, they find that remittances help reduce poverty. Giuliano and Ruiz-Arranz (forthcoming), noting the

constraints on borrowing in many developing countries, hypothesize that remittances may substitute for lack of financial development. Consistent with this, their empirical analysis finds that remittances promote growth in countries with shallow financial systems, but have no impact in financially developed economies.

The increasing amount of remittances by workers is just one of the many channels through which rising global migration flows affect developing-country welfare. Migrants may learn skills that will prove valuable if they repatriate; further, emigration may encourage the development of commercial networks, and promote trade and investment flows. Set against this, “brain drain” and the loss of specialized human capital may hamper the development prospects of those left behind, for instance by affecting the tax base. Mishra (forthcoming) examines these issues in the context of the Caribbean, which has extremely high migration rates, especially among the highly skilled. Many Caribbean countries have lost more than 70 percent of their labor force with more than 12 years of completed schooling. In this context, Mishra’s welfare calculations suggest that losses due to emigration of highly skilled workers outweigh the benefits of remittances. More research on such issues is clearly important.

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## Visiting Scholars, July–September 2005

**Joshua Aizenman**; University of California, Santa Cruz; 8/15/05–8/19/05, 9/12/05–9/16/05

**Olumide Steven Ayodele**; University of Calabar, Nigeria; 8/15/05–9/23/05

**Ralph Bryant**; Brookings Institution; 6/20/05–7/1/05

**Irina Bunda**; University of Orleans, France; 8/8/05–9/2/05

**Jeffrey Chwioroth**; Syracuse University; 5/16/05–7/15/05

**Matteo Ciccarelli**; European Central Bank; 7/18/05–7/22/05

**Stephen Haber**; Stanford University; 6/27/05–7/1/05

**Kenneth Kuttner**; Oberlin College; 6/13/05–7/29/05

**Philip Lane**; Trinity College Dublin; 7/25/05–7/29/05

**Paul Levine**; United Kingdom; 9/12/05–9/23/05

**Chia-Hui Lu**; Academia Sinica, Taiwan Province of China; 4/15/05–7/15/05

**Douglas Russell Nelson**; Tulane University; 9/28/05–12/16/05

**Enrico Perotti**; Universiteit van Amsterdam, the Netherlands; 7/18/05–7/29/05

**Assaf Razin**; Tel Aviv University, Israel; 8/30/05–8/31/05

**James Robinson**; University of California, Berkeley; 5/23/05–7/14/05

**Andrew Rose**; University of California; 7/25/05–8/19/05

**Federico Sturzenegger**; Universidad Torcuato Di Tella, Argentina; 8/25/05–9/2/05

**Allan Timmermann**; University of California, San Diego; 7/5/05–8/26/05

**Vadym Volosovych**; University of Houston; 8/15/05–9/2/05