



Betting the house [☆]

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ABSTRACT

Is there a link between loose monetary conditions, credit growth, house price booms, and financial instability? This paper analyzes the role of interest rates and credit in driving house price booms and busts with data spanning 140 years of modern economic history in the advanced economies. We exploit the implications of the macroeconomic policy trilemma to identify exogenous variation in monetary conditions: countries with fixed exchange regimes often see fluctuations in short-term interest rates unrelated to home economic conditions. We use novel instrumental variable local projection methods to demonstrate that loose monetary conditions lead to booms in real estate lending and house prices' bubbles; these, in turn, materially heighten the risk of financial crises. Both effects have become stronger in the postwar era.

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1. Introduction

How do monetary and credit conditions affect housing booms and busts? Do low interest rates cause households to lever up on mortgages and bid up house prices, thus increasing the risk of financial crisis? And what, if anything, should central banks do about it? Can policy directed at housing and credit conditions, with monetary or macroprudential tools, lead a central bank astray and dangerously deflect it from single- or dual-mandate goals? Such questions suffuse the debate on the causes of and responses to the global financial crisis.

Yet while the crisis has passed, finding the answers to these questions still looms large in the policy challenges facing policymakers and, especially, central banks. In an effort to de-froth the housing

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Table 1

Data sources, period, and coverage details of the credit and house price data series. For each country, we show the period covered by the mortgage lending data, the period covered by the house price index, and the method of index construction.

Country	Mortgage lending	House prices	Type of house price index
Australia	1870–2011	1870–2012	Median price; partly mix-adjusted
Belgium	1885–2011	1878–2012	Median price; partly mix-adj.
Canada	1874–2010	1921–2012	Avg. prices
Switzerland	1870–2011	1900–2012	Avg. prices; partly mix-adj.
Germany	1883–2011	1870–2012	Avg. prices; partly mix-adj.
Denmark	1875–2010	1875–2012	Avg. prices; SPAR
Spain	1904–2012	1970–2012	OECD after 1970 only
Finland	1927–2011	1905–2012	Av. sq. m. price; partly mix-adj. hedonic
France	1870–2010	1870–2012	Repeat sales; partly mix-adj. hedonic
U.K.	1880–2011	1899–2012	Avg. prices; partly mix-adj.
Italy	1870–2012	1970–2012	OECD after 1970 only
Japan	1893–2011	1913–2012	Avg. prices; partly mix-adj.
Netherlands	1900–2011	1870–2012	Repeat sales; partly SPAR
Norway	1870–2010	1870–2012	Repeat sales; hedonic
Portugal	1920–2012	–	No data
Sweden	1871–2011	1870–2012	Mix-adj; SPAR
U.S.	1896–2011	1890–2012	Repeat sales; partly mix-adj.

Notes: For mortgage lending, the financial institutions covered include commercial banks (CB) and other financial institutions (OFI) such as savings banks, credit unions, and building societies. Data generally cover all monetary financial institutions. The following exceptions apply. Australia: pre-WW2 mortgage loans are from savings banks only; Belgium: pre-WW2 mortgage loans are OFIs only; Canada: mortgage loans before 1954 are OFIs only; Germany: pre-1920 mortgage loans are OFIs only; Denmark: pre-WW2 mortgage loans are OFIs only; Japan: pre-WW2 mortgage loans are CBs only; Norway: pre-1900 mortgage loans are mortgage banks only; USA: pre-1896 real estate loans are savings banks only.

Sources: Jordà et al. (2014) and Knoll et al. (2014).

market, the Swedish Riksbank opted for tighter monetary policy. The Bank of England pondered when to raise rates from current record-low levels against the backdrop of a booming housing market, especially in London and the South East, where surges in prices and mortgage lending had in part been fueled by the government's Help to Buy scheme. Meanwhile the Norges Bank earned a reprieve by using new macroprudential tools to cool off a housing boom without cratering the economy. Canada and Australia survived the 2008 crisis largely unscathed, but so did their housing booms.

Central banks face difficult challenges as they try to address multiple goals with few instruments, as shown by current and past collisions between inflation–output targets and housing bubble concerns. This paper provides greater empirical detail from the front lines of these

policy conflicts which may guide the new monetary and macro prudential policy regimes being designed after the recent crisis.

In this current environment, to say that the recent crisis and its aftermath have led to a reassessment of the importance of housing finance for the macroeconomy would be a distinct understatement. Dissecting the sources of house price fluctuations and their effect on household spending, residential investment, the health of financial intermediaries, and ultimately on real economic outcomes, has become a top research priority. In addition to Mian and Sufi's (2014) influential book, a rapidly growing literature investigates the nexus between monetary policy and house prices as well as the implications of house price fluctuations for monetary policy (Adam and Woodford, 2013; Allen and Rogoff, 2011; Del Negro and Otrok, 2007; Glaeser et al., 2010; Goodhart and Hofmann, 2008; Jarocinski and Smets, 2008; Kuttner, 2012; Williams, 2011). The link between monetary conditions, mortgage borrowing, and house price appreciation has attracted considerable attention in some quarters (e.g., Bernanke, 2010; Leamer, 2007; Taylor, 2007). Many have wondered whether the low interest rate environment that prevailed in the years before the 2008 crisis contributed to the house price booms experienced in many Western economies before the recent crash.

House price data are easily available from institutions such as the OECD or the Federal Reserve Bank of Dallas for about 20 advanced economies starting in the mid-1970s, but are much more scattered for earlier times. The same can be said of mortgage credit data. As a result, previous research has, with few exceptions such as Bordo and Landon-Lane (2013) or Reinhart and Reinhart (2011), focused on the decades of the so-called Great Moderation. But such a limited sample, focused on a historically atypical era of peculiar macroeconomic and financial tranquility, calls into question the robustness of the research and the conclusions currently being used as a guide to policy. Housing booms and busts, just like financial crises, are rare events. In order to gain statistical power one needs much longer samples, but these data are very difficult to obtain. Our work fills this void.

This paper analyzes the link between monetary conditions, credit growth, and house prices using data spanning 140 years of modern economic history across 14 advanced economies. Such a long and broad historical analysis has become possible by compiling two datasets, both the result of an extensive multi-year data collection effort. The first dataset covers disaggregated bank credit data, including real estate lending to households and non-financial businesses for 17 countries (Jordà et al., 2014). The second dataset, compiled for a study by Knoll et al. (2014), presents newly unearthed data covering long-run house prices for 14 out of the 17 economies in the first dataset, from 1870 to 2012. This is the first time both datasets have been combined.

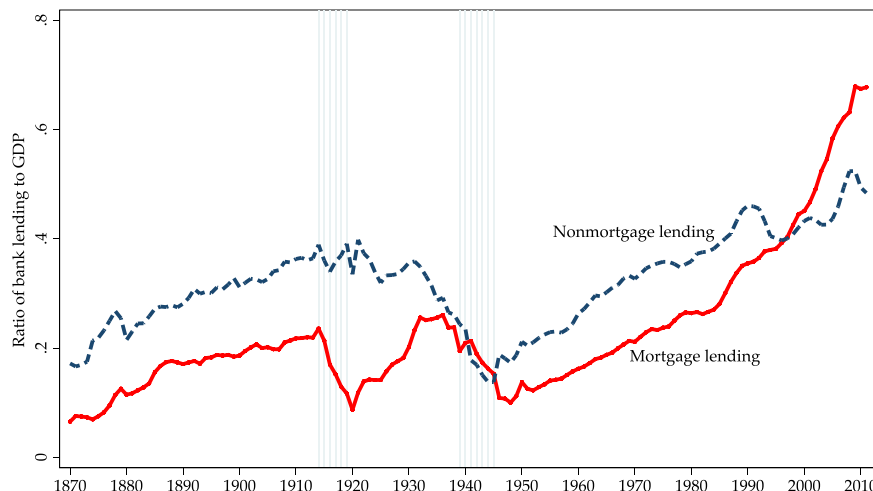


Fig. 1. Bank mortgage and non-mortgage lending to GDP, 1870–2011, average for 17 countries.

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