

# NOT ENOUGH BRICKS: MONETARY MISPERCEPTIONS AND THE UK HOUSING BOOM

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*ABSTRACT:* This article analyzes the housing boom witnessed in the UK economy from 1994–2007 in light of the Austrian theory of the business cycle (ABC). Ludwig von Mises’s parable of the “bricks” is utilized to provide empirical grounding for the theory, and the television series “Property Ladder” is used to illustrate the key aspects of the Austrian narrative. In particular attention is drawn to the role of marginal borrowers, regeneration projects, and forced savings.

*KEYWORDS:* Austrian business cycle theory, housing, housing boom, forced savings, Ricardo effect

*JEL CLASSIFICATION:* B53, E32, R31

The whole entrepreneurial class is, as it were, in the position of a master builder whose task is to construct a building out of a limited supply of building materials. If this man overestimates the quantity of the available supply, he drafts a plan for the execution of which the means

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at his disposal are not sufficient. He overbuilds the groundwork and the foundations and discovers only later, in the progress of the construction, that he lacks the material needed for the completion of the structure.

Mises (1949, p. 560)

## INTRODUCTION

The opening quote of this paper is a parable utilized by Ludwig von Mises in relation to the Austrian theory of the business cycle (ABC). Developed by Mises in the early twentieth century, ABC has taken up an unusual position in the history of economic thought. The themes that it draws upon—such as the knowledge problem (Hayek, 1945), the heterogeneity of capital (Lachmann, 1956), the dynamic nature of time (O'Driscoll and Rizzo, 1985), and the institutions of the banking system (Rothbard, 1963; White, 1984; Selgin, 1988)—fall outside the mainstream of the economics profession. However these insights exhibit a practical relevance that is widely drawn upon when events seem to exhibit the characteristics of an Austrian cycle (Evans and Baxendale 2008b). This paper will argue that the housing boom witnessed in the UK from 1994–2007 is a manifestation of the ABC, and can thus partly explain the resulting financial crisis and recession. While Mises's quote is a parable, we use it as a device that provides a loose empirical grounding for the theory.<sup>1</sup> We shall look at the UK construction sector and the housing market more generally, and draw upon the television series "Property Ladder" to illustrate some of the key aspects of the Austrian narrative.

The paper will proceed as follows. Section 1 will provide a methodological discussion of why Austrian-style questions do not lend themselves to typical empirical techniques. A brief introduction to analytic narratives will demonstrate our justification for elevating the key insights of a parable to become an object of study. Section 2 will overview the UK housing market in the build up to the financial crisis. It will focus on the effects of expansionary monetary policy to outline the broad contours of the boom and the importance of

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<sup>1</sup> Roger Garrison utilized the parable in a witty and insightful PowerPoint presentation, which is now available as a video: [http://www.youtube.com/watch?v=-yI\\_RuweYT4](http://www.youtube.com/watch?v=-yI_RuweYT4).

marginal borrowers. Section 3 looks at policy errors that compounded the problem, with particular attention to regeneration projects that attempted to influence home ownership. Section 4 will utilize the “not enough bricks” parable and draw empirical support for the various stages of an Austrian boom. In particular the concept of forced savings is illustrated with appeals to anecdotal evidence and wider economic aggregates. Section 5 concludes.

## 1. PARABLES AND EMPIRICAL INQUIRY

Macroeconomic variables tend to be proxies for what economists wish to measure. For example, although economic theory predicts that minimum wages reduce the demand for low-skilled labor, a resulting decrease in hours worked (but stable number of people employed) is perfectly consistent. In some cases this might be corrected by measuring hours worked instead of the number of jobs. But even still, hours worked may conceal the productivity of labor (and underlying efforts being expended). Evidence in 2010 suggested that the US recession led to workers having to do a third more work as part of their job, and survey data suggests that two-thirds of UK workers were putting in unpaid overtime.<sup>2</sup>

This implies that we must be selective about the use of aggregates when trying to understand what is happening in the economy. Indeed this is a common source of confusion about the Austrian theory of the trade cycle—an appeal to aggregates masks the underlying change in relative prices. As Garrison (2001) says,

...identifying the relative-price effects (and the corresponding quantity adjustments) of a monetary disturbance, as compared to tracking the movement in monetary aggregates that conceal those relative-price effects, gives us a superior understanding of the nature of cyclical variation in the economy and points the way to a more thoroughgoing capital-based macroeconomics. (p. 5)

A qualitative approach is necessary because the Austrian theory focuses on structural changes rather than aggregate changes,

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<sup>2</sup> See “Overstretched,” *The Economist*, May 22, 2010.

“trucks that had been hauling sawhorses and lawn furniture may start hauling more sawhorses and less lawn furniture” (Garrison, 2001, p. 65). Empirical inquiry therefore relies upon detailed forays into what might be contextual knowledge. To this end, our primary data source will be the television series, “Property Ladder,” (aired in the UK on Channel 4 and in the US on TLC). The 60-minute program is hosted by entrepreneur Sarah Beeny (in the UK version) and began airing in 2001. It follows inexperienced property developers as they buy, renovate, and attempt to sell on houses. Since Beeny is herself a successful property developer, she provides guidance and advice. Most episodes involve independent estate agents that value the property after the renovations have taken place, providing an estimate of the profit generated by the developer. In 2005 the format changed slightly and looked at two different houses per episode. In 2009 the show was renamed “Property Snakes and Ladders” to reflect that house prices had begun to fall, thus increasing the propensity for developers to lose money.

We are not the first to find academic merit in this program (Smith, 2010) but do not intend to overstate our methods. Indeed there are several factors that prevent a detailed statistical analysis. Firstly, raw data that documents the purchase price and subsequent valuation of each property is not available. Secondly, there is some ambiguity as to whether estate agents provide a house valuation or a suggested list price. Thirdly, since the houses are not always sold, we do not have a market price from which to make a comparison.

However, despite these drawbacks, the series provides an excellent insight into the UK housing market. It provides a large sample of budding entrepreneurs and interviews them to provide interpretive access to their expectations and rationale. Episodes span a period of rising house prices, a peak, and subsequent fall. They also provide indications of the types of regeneration projects being undertaken, how they were funded, and the consequences. Most importantly, it gets to the heart of the manifestation of the housing boom—the buy-to-let market and the influx of new entrepreneurs. So although it does not lend itself to systematic analysis, it does provide evidence to make illustrative applications of economic theory.

In this regard we can build a tentative “analytic narrative” (Bates et al 1998), where rich historical cases are used to undercover causality:

We call our approach analytic narratives because it combines analytic tools that are commonly employed in economics and political science with the narrative form, which is more commonly employed in history. Our approach is narrative; it pays close attention to stories, accounts, and context. It is analytic in that it extracts explicit and formal lines of reasoning, which facilitates both exposition and explanations. (Bates et al., 1998, p. 10)

According to Aligica and Evans (2009),

The analytic narrative method approaches the particularism that pervades records that are specific in time and place, and although cautious claims toward generalization pay respect (as they must) to the institutional peculiarities of each case, the overt rational choice assumptions of human behaviour provide a universal theory that underpins the entire perspective.

## 2. THE UK HOUSING MARKET 1994–2007

House prices are of particular interest to economists for several reasons. Firstly, they are simultaneously a commodity (since they provide shelter) and an asset (since their value can appreciate), and are therefore bought for functional *and* speculative reasons. House prices also have a tendency to reveal information about the economy as a whole, since aspects of the housing market lead the business cycle. Although spending on housing is not a large fraction of GDP, residential construction consistently leads the business cycle by 3–4 quarters, and consumer electricals by about 2.<sup>3</sup> This implies that the housing market is a useful predictor of wider economic activity, and house price crashes tend to be followed by recessions. Indeed, a failure to foresee the effects of the liberalization in the mortgage market in the 1980s meant that economic models underestimated the wealth effect generated

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<sup>3</sup> Remarks made by Finn Kydland, November 15, 2006, “The Dynamics of Business Cycles and Monetary Policy—Links and Drivers,” NBCC Centenary Lecture. The Norwegian-British Chamber of Commerce.

by changing house prices, and the consequential impact on the consumption function (Muellbauer and Murphy, 1997).

The problems of the US subprime market have been given significant attention elsewhere (Horwitz and Boettke, 2009; Norberg, 2010), but it is important to stress the extent to which that particular market was distorted by government policy. The presence of Fannie Mae and Freddie Mac as “government-sponsored enterprises” was a deliberate policy to provide liquidity into the secondary mortgage market, and enact reforms that sought to expand home ownership amongst low-income voters. Government targets sought to increase the proportion of mortgages granted to low-income earners from 42 percent in 2004 to 50 percent in 2006 and 56 percent in 2008. The proportion going to “very” low incomes was to rise from 20 percent in 2006 to 28 percent in 2008 (Norberg, 2001, p. 41). Consequently, the subprime market became increasingly influential—between 2000 and 2006 the proportion of interest-only mortgages rose from 0 percent to 22 percent, of secondary mortgages (to exploit price rises) from 1 percent to 31 percent and of lacking documentation from 25 percent to 44 percent (Norberg, 2010, p. 66).

While it is true that in the UK, lending criteria become so loose that mortgages were offered at six times income without credit checks being run, we are not arguing that the UK had its own “subprime” boom. Indeed, it was mainly the exposure to the US market through short term financing than the actual deposit base turning bad that caused the UK banking problems (Shin, 2009).

The housing market is also unusual since purchasers are typically part of a chain, and therefore the buying habits of people are closely interrelated. A chain is susceptible to a domino effect, since it links many participants together. And first time buyers are especially important because they hold up the bottom of the chain, *and* they are the marginal buyers. According to Andrew Benito, “If the marginal buyer is a young first-time buyer then this suggests that the prices should be more sensitive to the incomes of the young than to average income.” (Benito, 2006)

Our particular emphasis is on the role of subprime *and* first-time mortgages because they are the marginal borrowers (Evans and Baxendale, 2008a). There is a systematic tendency for credit

expansion to find its way into less feasible projects because the “best” loans have already been made. Prior to government intervention, banks have decided which consumers are most credit worthy. Expanding loans to those who are not able to find loans on the open market suggests that the new entrants (the marginal customers) will be systematically less able to keep up with payments.<sup>4</sup> Indeed, in 2007 the Royal Society of Chartered Surveyors warned that first-time buyers are most at risk from interest rate rises.<sup>5</sup>

When discussing systematic tendencies, we are not relying on psychological explanations, but institutional ones. Consider Howden (2010), who applies the concept of information cascades to Austrian business cycle theory, arguing that second-order users of knowledge have less direct knowledge of credit conditions, so that as booms develop they become more fragile. The argument is not that early adopters are “smarter” or “more rational” than those that follow, but they are systemically closer to the source of monetary disturbances. If subjectivism simply implies that knowledge is dispersed, it does not seem controversial to suspect that as a boom progresses, the knowledge possessed by the marginal trader becomes increasingly unreliable.

## Was There a Boom?

According to the Department of Communities and Local Government, the average price of the house in the UK boomed during the beginning and end of the 1980s and exhibited mild negative growth in 1990–1993, before embarking on a lengthy upward march from 1994 to 2007. Indeed, following 10 percent

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<sup>4</sup> Horwitz (2000, p. 87) explains how Keynesian and classical narratives differ in this respect: “in the Keynesian model it is money holders who, through their portfolio adjustments, cause the fall in rates. In the monetary equilibrium approach, it is the banking system that drives rates downward. The excess supply of money is presumed to enter the market through bank reserves. With excess reserves, banks lower their market rates of interest in order to attract marginal borrowers. The loans now made filter their way through the economy, driving up aggregate spending and the price level.”

<sup>5</sup> See “Rate Rises to Hit First Time Buyers,” *Finance News Online*, Jan. 25, 2007, at <http://financenewsonline.co.uk/articles/Rate-rises-to-hit-first-time-buyers-18042357.html>.

annual growth in 2007, 2008 saw a fall of 0.8 percent and 2009 saw a fall of 7.6 percent.<sup>6</sup> Figure 1 shows the Nationwide Building Society measure of house prices from 1994–2010.<sup>7</sup>

**Figure 1. Nationwide Building Society House Price Measure**



That house prices increase dramatically is beyond question; the issue is whether this constitutes a bubble.

In May 2006, the Governor of the Bank of England, Mervyn King, said, “relative to average earnings or incomes, or anything else you could look at, house prices do seem high.”<sup>8</sup> Simple supply and demand analysis shows why house prices have risen so much in the UK. Several factors influence the demand for housing, but two stand out in particular. Firstly, there has been an increase in the number of households. Between 1971 and 2002, the UK population

<sup>6</sup> See Table 502, “House Prices from 1930, Annual House Price Inflation, United Kingdom, from 1970,” at <http://www.communities.gov.uk/housing/housing-research/housingstatistics/housingstatisticsby/housingmarket/livetables/housepricestables/simpleaverageables/>

<sup>7</sup> [http://www.nationwide.co.uk/hpi/downloads/UK\\_house\\_price\\_since\\_1952.xls](http://www.nationwide.co.uk/hpi/downloads/UK_house_price_since_1952.xls).

<sup>8</sup> Edmund Conway, “Overvalued House Prices Threaten Crash,” *The Daily Telegraph*, Jan. 2, 2007.

grew by 6 percent, while the number of households increased by 31 percent.<sup>9</sup> This reflects a tendency toward smaller household sizes due to single parenting, younger independence and growing wealth. Secondly, there has been a net influx in migration, further contributing to the demand for housing, bidding up prices. This upward pressure on prices is reinforced by the constraints facing property developers. Space is at a premium—especially in larger cities—with high density housing in place. Consequently, it becomes increasingly costly to convert land space into new housing, restricting the supply.

But do these high prices necessarily imply a bubble? According to a 2006 Morgan Stanley report, between one third and a half of the increase in real house prices was being driven by expected house price inflation. As they say, “this is a speculative element of demand” (p.1).<sup>10</sup> It is notoriously difficult to spot a bubble *ex ante*, but we can determine whether “easy money” is available. When interest rates are artificially low, we can determine that inflationary pressures must exist. There is nothing inherent in the housing market that suggests it was a bubble, however if we view it in the context of loose monetary policy, it seems to exhibit the hallmarks. There are two main ratios to look at when judging house prices. The first is the relationship between house prices and income. The second is the relationship between house prices and rents.

One of the most common arguments suggesting that the UK suffered a housing bubble was due to the fact that house prices have become increasingly higher than earnings—real house prices doubled between 1995 and 2005, but real disposable incomes rose by less than a third. Over the same period housing jumped from constituting 39 percent of a household’s total wealth to 53 percent.<sup>11</sup> In 2007, by comparing house prices to earnings, *The Daily Telegraph* and Lombard Street Research found that houses were more overvalued than at any time since 1991.<sup>12</sup> According to the

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<sup>9</sup> Source: Office of National Statistics, Households: by size: Social Trends 34

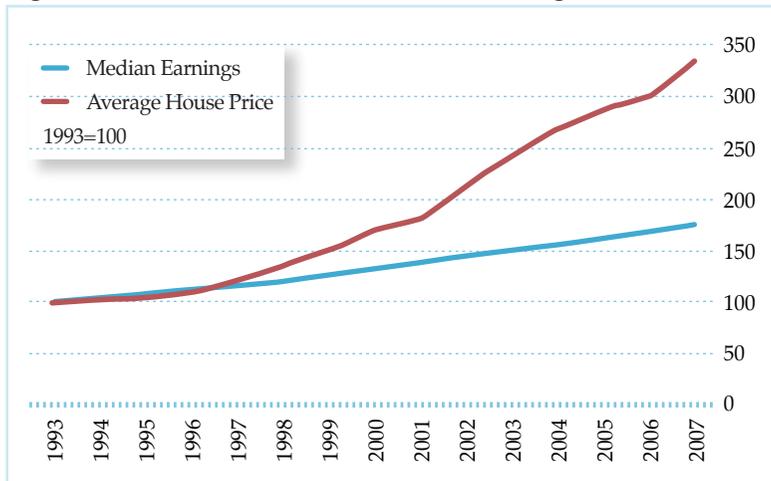
<sup>10</sup> Miles, D.K., and Baker, M., “UK Housing: How did we get here?” Morgan Stanley Research, Nov. 22, 2006.

<sup>11</sup> Brian Durrant, <http://firstrung.co.uk/articles.asp?pageid=NEWS&articlekey=3887&cat=44-0-0>.

<sup>12</sup> Conway, *ibid*.

Nationwide Building Society, the ratio peaked at 5.4 in 2007, fell to 4.1 in Q1 2009, and returned to 4.4 in Q4 2009.<sup>13</sup> The Department for Communities and Local government tracks the ratio of median house price to median earnings, which was 3.54 for England in 1997. This steadily rose until it reached a peak of 7.23 in 2007, falling back to 6.27 in 2009.<sup>14</sup> Figure 2 shows average house prices in relation to median earnings from 1993—2007.

**Figure 2. UK House Prices and Median Earnings**



*The Economist* has a “fair value” measure of housing that is based on the price/earnings ratio used to estimate the value of a company: “...house prices should reflect the expected value of benefits that come from home ownership. These benefits are captured by the rents earned by property investors, which are equivalent to tenancy costs saved by owner-occupiers.”<sup>15</sup> According to this

<sup>13</sup> The long term average since the index began in 1983 is 3.3, while the lowest point was 2.1 in 1995. See “Shaky Foundations,” *The Economist*, Feb. 13, 2010.

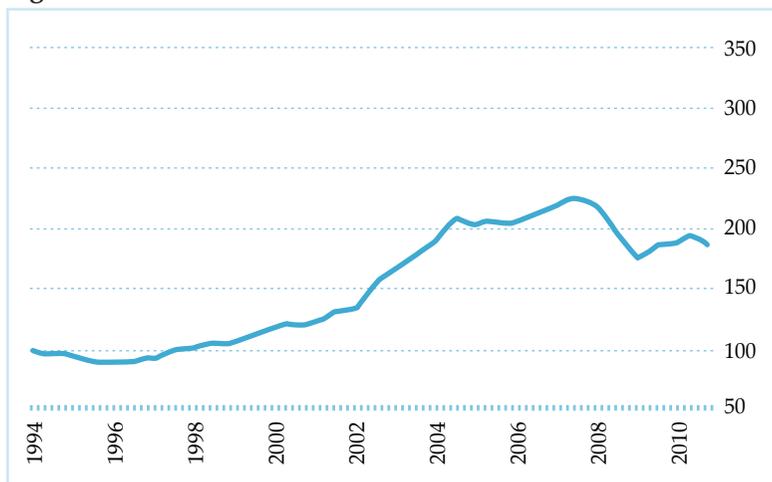
<sup>14</sup> See table 577, <http://www.communities.gov.uk/housing/housingresearch/housingstatistics/housingstatisticsby/housingmarket/livetables/>.

<sup>15</sup> Note that this measure fails to take into account real interest rates, which is of particular concern to studies that focus on the impact of artificially lowering borrowing rates. See “Ratio Rentals,” *The Economist*, Jan. 2, 2010.

measure, houses were overvalued at both the beginning and end of the 1980s, reached a trough in 1996, but then began a sustained rise until peaking in 2008. Despite falling significantly in 2009, the index still suggests that houses are above their long-term average. From 1997 to 2009 the price-to-rents ratio rose by 175 percent.

Another measure that helps distinguish between some of the underlying demand and supply conditions for all housing is to look at the ratio of purchase prices to rental prices.<sup>16</sup> Setting 1994 equal to 100, the ratio of prices to rents reaches around 225 at the height of the housing boom, before falling down to under 200 through 2010 (see Figure 3).<sup>17</sup>

**Figure 3. *The Economist's* House Price to Rent Ratio**



Bolstering this view, the number of first time buyers hit record lows in 2007, suggesting that the marginal buyers were struggling to step onto the ladder. At the same time, The Council of Mortgage Lenders said that house prices were 3.29 times the

<sup>16</sup> I am grateful to Steven Baker for pointing this out.

<sup>17</sup> The raw data have some flaws, and this chart utilizes *The Economist's* house price indicators tools ([http://www.economist.com/blogs/freexchange/2010/10/global\\_house\\_prices](http://www.economist.com/blogs/freexchange/2010/10/global_house_prices)).

average first-time buyer household income—their highest ever level, and the National Association of Estate Agencies declared that the number of first-time buyers decreased to 10.4 percent in December 2007.

To recap, the parallels between the subprime crisis in the US and the decline of house prices in the UK rest on two concepts. Firstly, adverse selection: as the boom develops people become systematically less credit worthy and capable of meeting repayments. Secondly, marginal entrepreneurship: once the credit crunch occurs, some entrepreneurs were well placed, but the new entrants that are forced out are driving the market.

Figure 4 shows the contribution of the construction industry to UK national income, from 1997 through 2010. The boom phase is clearly evident with a peak occurring in Q1 of 2008. This heralded a collapse back to levels not seen since 2000.<sup>18</sup>

**Figure 4. Construction Sector GVA**



<sup>18</sup> See table B1 in UK national statistics, series code L2N8. Source: ONS. At <http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcn%3A77-317324>.

### 3. POLICY ERRORS: THE HIDDEN COSTS OF REGENERATION

While credit creation from the banking industry is an important factor in the determination of house prices, it is also important to understand the compounding effects of policy. As previously seen, the government significantly intervened in the subprime market in the US, and indeed home ownership is a policy goal in the UK. Several policy areas demonstrate that prices are kept artificially high. For example in June 2007 “Home Information Packs” were launched, which required sellers to pay £600 for various searches and thus reducing—at the margin—the supply of housing. Another policy that might affect the situation is inheritance tax, because bracket creep means that ever more properties are becoming worth the £285,000 that triggers a 40 percent rate of taxation. According to the BBC, “Since 2001 the number of postcode areas where the average property price is above that level has more than doubled.”<sup>19</sup>

However the main reason the supply of new housing is unresponsive to price changes is planning legislation that limits new builds. These planning restrictions can take the form of outright bans on building on the greenbelt, to height restrictions in urban centers, to forced environmental standards that raise the cost of renovations or new builds. Indeed the deliberate desire to build new housing in brownfield rather than greenfield sites created a flood of city-center apartments.<sup>20</sup>

The housing boom has led to a gentrification in many urban centers, where decades of urban decay have been replaced by contemporary housing that entice people back into cities. It is beyond the scope of this paper to discuss recent regeneration projects in great detail, but we can make some broad points. Firstly, we must separate the construction of new housing due to entrepreneurial speculation, and state-funded regeneration projects. In many instances the latter emerges under the guise of the former,

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<sup>19</sup> “More Homes Face Inheritance Tax” Apr. 5, 2007. At <http://news.bbc.co.uk/1/hi/business/6390307.stm>.

<sup>20</sup> Between 2005 and 2008, 50 percent of new housing was on plots of land that were designated “gardens,” but due to a reclassification they will no longer be indistinguishable from brownfield sites, and this contributed to the inelasticity of housing supply. See “This blessed plot,” *The Economist*, June 10, 2010.

and what appears to be a market-driven project is in actual fact political spending. Secondly, the drastic overhaul of some Northern city centers were driven more by retail construction than housing. Finally, the benefits of regeneration projects tend to be overestimated for two reasons: (i) they are concentrated, whereas the costs (if funded through general taxation) are dispersed; (ii) they are visible, whereas the costs are unrealized. If the housing market falls, the costs are highly noticeable, since it is easy to estimate how many people fall into negative equity, and to measure repossessions. However the costs of rising house prices are less noticeable—it is the first time buyers that are priced out of the market and decide to rent or stay longer in shared accommodation. In short, discussions of the effects of regeneration would benefit from a deeper application of opportunity cost reasoning.

Indeed when house prices began to fall in late 2007/2008, new-build flats bore the main brunt. According to Selwyn Lim, “price falls have not discriminated according to how much a property cost in the first place or how desirable the area was,” the main observation is that it is city-center developments that saw the biggest fall.<sup>21</sup> One well-known property developer reported that in April 2008 prices in London fell by 20–25 percent since the start of the year (Brummer, 2008, p. 150). This ties into the Austrian story: “it seems something of a paradox that the self-same goods whose scarcity has been the cause of the crisis would become unsalable as a consequence of the same crisis.” (Hayek, 1931, p. 272)

#### 4. MISES AND THE BRICKS

The act of entrepreneurship is notoriously difficult; it involves speculating about future states of the world and mobilizing the resources necessary to act upon those visions. Since this activity takes place over time, situations change and what might have appeared to be highly likely can turn out a costly error. Even if prices and interest rates act as accurate signals of resource scarcity, it takes foresight, judgment and luck to understand market conditions and respond to the pressing needs of potential customers. Any activity

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<sup>21</sup> See “Flats See Biggest Price Falls,” *BBC News*, Oct. 9, 2008.

that disrupts these price signals and interrupts market data makes entrepreneurship even more difficult.

A simple explanation for macroeconomic fluctuations is that investors are irrational—that their decisions are not based on considered calculations but on waves of sentiment that dislodge valuations from value. However, if the quality of information is low—or if the information being received is *misleading*—it is quite possible to see asset bubbles amongst rational investors. Ultimately, notions of rationality obfuscate reality, since the key issue is the institutional framework within which investors operate and the quality of information flows that occur. And this requires a theory of *error*. According to Hayek, “before we explain why people commit mistakes, we must first explain why they should ever be right” (Hayek, 1937, p. 34). Where does coordination come from? How is it manipulated?

It is not our intention to restate the Austrian theory of the business cycle (ABC). The classic expositions are Hayek (1931), Mises (1934), Garrison (2001). The key aspect is the unsustainability that results from artificial credit creation that encourages investment in excess of the stock of real resources in the economy. We would not argue that the Austrian theory is universally applicable. As Horwitz and Callahan point out, it is an ideal type that has varying degrees of relevance depending on historical contingencies (Callahan and Horwitz, 2010). However,

...it would be a mistake to assume that Hayek’s triangulation as applied to the inter-war episode applies in some wholesale fashion to the so-called bubble economics of recent years, but it would be a greater mistake to assume that Hayek’s insights have no modern application of all.” (Garrison, 2001, p.107–108)

It might seem counterintuitive, but rising house prices can often be a sign of wealth destruction. It is possible that people become accustomed to viewing their house as a financial asset, and release some of the equity (i.e., bringing forward the expected future valuation of the house) for present consumption. In many cases, this additional purchasing power is the entrepreneurial reward for investing in an asset that has an increasing value. In other cases, it may be the entrepreneurial reward for refurbishing the property and improving its value relative to other houses. However, there is

also the possibility that the house price is driven not by economic fundamentals, but by a general inflation caused by excess credit creation. If this is the case, the owners have not been creating wealth, but *consuming* it. We have the possibility that homeowners are engaged in capital consumption that reduces the economy's productive capabilities.

Newly created credit cannot increase the supply of real resources, and therefore the increases in economic growth cannot be sustained. It is crucial to understand that such growth is not genuine economic prosperity—it is an illusion of prosperity, and those errors are revealed during the subsequent recession. According to Woods (2009), “when the interest rate is artificially lowered, more loans can be extended and more projects started, but artificially low rates do not magically supply the additional real resources necessary to complete all the projects” (p. 69). He continues by drawing upon Mises's building parable that opened this article, saying that,

he will build a house whose size and proportions are different from the ones he would have chosen if he had known the true supply of bricks. He will not be able to complete this larger house with the number of bricks he has. The sooner he discovers his true brick supply the better, for then he can adjust his production plans before too much of the finished house is produced and too many of his labor and material resources are squandered (p. 69)

Indeed this ties into policy prescriptions, demonstrating why Austrians view recessions (the reallocation of resources) to be an inevitable and necessary consequence of artificial booms.

Some have argued that housing is not an interest-intensive good, of the type envisaged by Austrians to constitute the credit boom, because it is a consumer good. To be sure, the concept of “consumer durables” presents a problem for economists that attempt to neatly separate consumer and capital goods, since the act of consumption (the direct satisfaction of wants) can take place in the distant future. Indeed when utility is derived over a protracted time period, we can consider the present price of a good to be a discounted present value of future periods. A simplistic rendition of the Austrian theory draws a distinction between “capital goods” and “consumer goods.” However, this assumes that capital goods are being used

to generate future consumer goods, which are exhausted when they are “consumed.” However it is the *interest-sensitivity* of goods that gives rise to the business cycle, and how they fit into the time structure of production, as opposed to their belonging to neat analytical categories imposed by economists.

Indeed consumer durables are not necessarily in the hands of the ultimate “consumer,” since intermediate markets often exist that not only shift ownership but make it possible for such goods to return to being capital goods. While for some goods their utility is enjoyed almost at the point of sale (e.g., a cinema ticket), those that confer utility over a longer time period (e.g., a car) have a greater chance of (i) being resold; (ii) forming part of the *capital stock* of a subsequent owner.

Therefore, if interest rates act as a proxy for time preference, both production that takes place over time *and* consumption that is enjoyed over time will be relevant, “thus it comes as no surprise that both consumer durables and higher-order capital goods are “interest-sensitive” (Skousen, 1990, p. 163).<sup>22</sup>

If we look at housing in particular, although we see direct want satisfaction in the present, the vast majority of the service provided will accrue over future time periods. As Roger Garrison points out, housing thus resembles a capital good,

Goods that cannot be readily resold by consumers are not to be considered as part of the economy’s capital structure. Goods such as houses and (less so) automobiles, for which there are effective secondary markets, should be considered capital goods even from an Austrian point of view (Garrison, 1990).

Critics have also argued that once we start trying to trace the “structure of production,” it becomes an arbitrary attempt to separate goods into different time periods. The likes of Frank Knight and George Stigler notoriously dismissed the tractability of a “time” dimension on these grounds—if steel is used to produce

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<sup>22</sup> Furthermore, “the time discount applies to consumption activities no less than to production activities. That is, the services to be provided in the remote future are discounted relative to the same services provided in the present” (Garrison, 2001, p. 48).

steel how do you decide where to start and where to finish? Skousen (1990) (citing Böhm-Bawerk) points to a solution:

...the first stage of constructing a building... does not have to be traced back to when the cranes and other tools to be used were manufactured. These capital goods have already been made and are in inventory, ready for use. The period of construction is actually measured from the point when the company directors, having decided to construct the building, call in the architects to make the plans. The production period ends when the building is finished and ready to open for business. (p. 152)

Note the importance of our definition of entrepreneurship—it is when resources are mobilized *for a specific entrepreneurial plan* that we find our markers for the production process. We shall proceed by drawing attention to some key aspects of ABC: relative price adjustments, the signal extraction problem, euphoria, forced savings, real wealth destruction, and the Ricardo effect.

### Relative Price Adjustments

The “skyscraper index” began as a simple observation: Andrew Lawrence (1999a, 1999b) wrote a briefing report linking the construction of skyscrapers with economic downturns, and found evidence of a correlation between “the world’s tallest building” and the business cycle. Theoretical foundations were added by Thornton (2005), who utilized the Austrian theory of the business cycle to show that skyscrapers are the type of capital-intensive asset that are likely to be produced when interest rates are artificially low:

...the skyscraper project is announced and construction is begun during the late phase of the boom in the business cycle; when the economy is growing and unemployment is low. This is then followed by a sharp downturn in financial markets, economic recession or depression, and significant increases in unemployment. The skyscraper is then completed during the early phase of the economic correction, unless that correction was revealed early enough to delay or scrap plans for construction (Thornton, 2005, p. 53)

If we refer back to Mises’s building parable, the error can be revealed at various stages. It could be revealed early on, before

work has even started.<sup>23</sup> It can be revealed once construction is under way, and be left dormant. As Hayek said, “this will mean a fairly sudden stoppage of work in at least all the earlier stages of the longer processes” (Hayek, 1931, p. 270). It might be so close to being finished that significant cost overlays are incurred so as to complete the project. Developers may ignore the fact that costs are sunk, and divert resources from other (potentially more profitable) uses to ensure completion. Or indeed the project may be complete before the economy-wide problems are noticed, in which case the builders are bidding away bricks from more profitable alternative uses that are at a latter stage of progress. Thornton (2005) presents convincing evidence as to the historical regularity with which this phenomenon manifests itself, but again it is important not to infer an overly literal meaning. There is nothing to say that skyscrapers will *always*, or *necessarily* signal the peak of the boom. The empirical regularity is “merely” illustrative, or useful as a rule of thumb.<sup>24</sup>

## The Signal Extraction Problem

One of the most striking aspects of Property Ladder is the money illusion (the conflation of nominal and real variables) displayed by

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<sup>23</sup> As an example of this, consider the proposal for a new stadium in Stanley Park for Liverpool FC. The stadium received planning permission in 2003 and was due to open in 2012. However, funding problems for the £400m project meant that work stopped soon after initial site preparation work had began. As of May 2010, the plans are still on hold as financing is sought. Note that this example does not necessarily indicate an Austrian-style explanation. It may be down to a change of mind by the clubs owners about the necessity of a new stadium, or specific financing issues related to those individuals, rather than a general liquidity problem. Indeed, Everton FC curtailed their own plans for a new stadium after central government rejected the plans following an inquiry. However in the case of Liverpool it seems clear that the credit crunch was the primary reason for the postponement of the project.

<sup>24</sup> Indeed, understanding the link between construction and the business cycle is well known, and focusing on “the world’s tallest building” is merely a proxy for this. It is a well-known adage at senior levels in the construction industry that “the boom is near its end when the sky is full of cranes.” Another proxy for the property boom might be the amount of money spent by estate agents. Since 2001, Foxtons launched a deal with Mini that would provide branded cars for estate agents to use as a form of advertising. One of the defining images of the housing downturn were the rows of dormant cars, and rumors suggest that the fleet size has reduced significantly. See “It’s a Mini crisis... estate agents’ runarounds lay idle,” *Daily Mail*, July 21, 2008.

participants. In a typical example, a couple may purchase a house for £200,000, spend £20,000 on renovations, and then hear an estate agent place a value of £230,000. One immediate observation is that these costs do not take into account the opportunity costs incurred. If the couple spend a year working full time on the property, the real cost should include their foregone salary. However, as Sarah Beeny often pointed out, rising house prices meant that the value of the property would have gone up *regardless* of any work undertaken. If house prices were rising at 20 percent per year, then it would have been worth £240,000 as it stood. The £20,000 spent has actually *decreased* the value of the property. Compelling television would often follow as Beeny pointed out that they had not made a profit of £10,000, since they would have had a larger return had they not lifted a finger. But often times, the couple would confuse house price inflation with economic profit, treat it as validation of their entrepreneurial prowess, and then use the capital to fund a bigger project.<sup>25</sup> Beeny displayed the following economic wisdom in an interview on the Channel 4 website:<sup>26</sup>

Q: If the housing market collapses are a lot of these amateur developers likely to get seriously burned?

A: Yes, because most of them are making practically no profit in real terms. They count their profit from a rise in the market, which is always unwise.

Money illusion is just one part of what is referred to as the “signal extraction problem.” This relates to how economists believe economic agents interpret price signals, with particular reference to the how this affects the transmission mechanism between the supply of money and output (see Lucas, 1972, 1973). When agents are faced with fluctuating prices for their goods and services, they must distinguish between general price inflation (which affects all goods), and the specific demand and supply conditions of their own market. Horwitz (2000) provides two ways in which

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<sup>25</sup> Of course a key implication of the Austrian cycle is the systematic tendency for capital-intensive projects. Cursory evidence suggests that as the boom went on participants were engaging in ever-bigger projects—i.e., projects with a longer period of production.

<sup>26</sup> See [http://www.channel4.com/4homes/on-tv/property-ladder/about-sarah-beeny/q-a-with-sarah-beeny-08-06-27\\_p\\_1.html](http://www.channel4.com/4homes/on-tv/property-ladder/about-sarah-beeny/q-a-with-sarah-beeny-08-06-27_p_1.html). Accessed June 13, 2010.

the signal extraction problem occurs. Firstly, the challenge of separating increases in prices due to changes in relative demand from increases in prices due to inflation. Secondly, the challenge is predicting the permanence of any of these effects.

It is no surprise that Lucas' work was based on Hayek (Evans and Aligica, forthcoming). However there are several ways in which an Austrian account differs from the new classical school. Horwitz (2003) shows how institutional factors compound signal extraction problems to mean that credit expansions are always non-neutral:

relative price effects are not the result of confusing a general price increase with a relative price increase, or of the costs involved in changing prices (though these do exist), rather they are *inherent in the very institutional processes by which inflationary increases in the money supply take place.* (p. 81)  
[emphasis in original]

Whereas a 5 percent increase in the money supply may ultimately increase the overall price level by the same amount, whether the price of an individual product rises by more or less than 5 percent depends on where it fits into the transmission mechanism. We might reasonably infer that prices in the banking sector adjust before prices in construction, but general inflation—even if publicly known—creates an additional source of entrepreneurial error.

Garrison points out that the knowledge assumptions at play in classical models are categorically different to Austrian ones. Whereas the signal extraction problem rests on a distinction between “local” and “global” knowledge, and the relative ease at which agents receive information pertaining to both, Hayek (1945) makes a distinction between scientific knowledge and the knowledge of time and place. These are not the same thing. Garrison (2001, p. 28) draws a parallel between the knowledge assumptions used in monetary expansions and for socialist calculation. Hence it misunderstands Hayek to suggest that traders need merely to augment their market “savvy” with more theoretical sophistication (e.g., by reading up on Austrian economics), to eliminate credit cycles. To summarize, the Austrian view states that because agents knowledge is derived from the price system, our knowledge assumptions cannot be independent (or anterior) to the institutional structure that the agents finds themselves in. If, as Garrison points out, prices, wage rates and interest rates convey information, it is logically inconsistent to claim

that our representative agent behaves as if they already have access to such information about underlying economic data. (Garrison, 2001, p. 27).

## Euphoria

A sure sign that a boom has developed is the general euphoria exhibited by those who are stoking the fire. Indeed, such euphoria tends to coincide with a general ignoring of scarcity, and disregard the fact that opportunity costs always provide a constraint. As Rothbard points out:

the quality of work will decline in an inflation for a more subtle reason: people become enamored of “get-rich-quick” schemes, seemingly within their grasp in an era of ever-rising prices, and often scorn sober effort. Inflation also penalizes thrift and encourages debt, for any sum of money loaned will be repaid in dollars of lower purchasing power than when originally received. The incentive, then, is to borrow and repay later rather than save and lend. Inflation, therefore, lowers the general standard of living in the very course of creating a tinsel atmosphere of “prosperity.” (Rothbard, 1963, p. 67)<sup>27</sup>

As this develops—such as in the buy-to-let market, it begins to resemble a game of musical chairs. House “flipping” implies that there are not enough funds to satisfy all claims, and the investment horizon shrinks as people move from project to project.

## Forced Savings and the Ricardo Effect

Central to the Austrian theory is the concept of “forced savings.” Here, Mises was referring to an involuntary fall in consumption due to the reduction in purchasing power brought about by credit

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<sup>27</sup> “Now the chief effect of inflation which makes it at first generally welcome to business is precisely that prices of products turn out to be higher in general than foreseen. It is this which produced the general state of euphoria, a false sense of wellbeing, in which everybody seems to prosper. Those who without inflation would have made high prices make still higher ones. Those who would have made normal profits make unusually high ones. And not only businesses which were near failure but even some which ought to fail are kept above water by the unexpected boom.” (Hayek, 1996, pp. 99–100)

expansion.<sup>28</sup> It is “forced” in that holders of money do not wish to transfer their purchasing power to other people, and it is “saving” in that it is deferred consumption (or indeed a reduction in the ability to consume). In more concrete terms, we can view Beeny herself as a forced saver in that she has to compete with new entrants into the property development market who have received the newly created credit.<sup>29</sup>

We can make a tentative link to the wider economy by pointing out that forced saving implies that resources have been committed to earlier stages of production than would have occurred absent monetary expansion (i.e., they constitute malinvestment).<sup>30</sup> The upper turning point of the ABC is what Hayek referred to as “The Ricardo effect.” Once the master builder becomes aware that there are not enough bricks, there is a scramble for resources that cause two things: a spike in prices and a credit crunch. When reality bites, we should expect prices to spike—particularly in consumer goods. Miller (2009) provides convincing evidence of the Ricardo effect occurring during this period, and Figure 5 shows what happened to the CPI measure of inflation during the relevant time period.<sup>31</sup>

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<sup>28</sup> For a more detailed discussion, see Horwitz (2000): “...the forced savers are the existing holders of money. Their ability to consume is impaired by the influx of new purchasing power represented by the excess supply of money” (p. 114), and Garrison (2004).

<sup>29</sup> This is in addition to the first time buyers that were priced out of the market discussed earlier.

<sup>30</sup> I acknowledge the comments of an anonymous referee for clarifying this point.

<sup>31</sup> Series code D7G7, source: ONS.

**Figure 5. UK CPI (Year-on-Year Percent Change)**

### Real Wealth Destruction

Throughout the buy-to-let boom, real resources were being spent on housing. If the costs of those investments are not reflected in the resale value of the property, then we know that wealth have been destroyed. When people view houses, they inevitably notice aspects that they would wish to change. They range from being minor cosmetic adjustments, such as changing wallpaper, to larger structural projects, such as replacing a conservatory. If those features were chosen to increase the value of the property, then they are a clear example of wealth destruction, since the new owners must use additional resources to replace them. If people value original wooden work surfaces, then developers that replace them with granite are destroying wealth. Rising house prices will mask these entrepreneurial errors, but they do not stop them.

## 5. CONCLUSION

True, governments can reduce the rate of interest in the short run. They can issue additional paper money. They can open the way to credit expansion by the banks. They can thus create an artificial boom and the

appearance of prosperity. But such a boom is bound to collapse soon or late and to bring about a depression (Mises, 1944, p. 251)

This paper has tried to draw together several aspects of the Austrian narrative: the role of money illusion as people mistake general inflation with changes in relative demand, the adverse selection that entices systematically less credit-worthy consumers into the market as a credit expansion advances, and the real resource constraints that lead to the revelation of misallocations of capital. To illustrate these theoretical aspects, we have relied on two separate devices. Firstly, a parable created by the originator of the Austrian theory of the trade cycle, Ludwig von Mises, and secondly, some insights gleaned from the long-standing television series "Property Ladder." The purpose has not been to rigorously "test" a theoretical conjecture, but to apply theory to history. Indeed, evidence suggests that the UK housing boom has exhibited all the hallmarks of an Austrian business cycle.

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