CHAPTER 1

The Fundamentals of Forex

We begin in this chapter with an exploration of the forces that move the prices: the fundamentals. The reader will learn why fundamentals are important to foreign exchange (forex) traders as well as what kinds of economic activity are most important in affecting price movements. These include interest rates, interest rate differentials, economic growth, and sentiment regarding the US dollar.

WHY FUNDAMENTALS ARE IMPORTANT

In many ways, forex trading is similar to playing a game. You have an opponent (the market). In games of chance, the key feature is that everyone faces the same odds and therefore the same level of information. In these games, no player can change the odds.

Playing forex, however, is not a game of odds. It might feel like gambling, but it is not gambling. In a fair game, like the roll of a dice, the person rolling the dice does not affect the outcome. Everyone has the same probabilities of winning. However, participants in forex trading do not share the same amount of information. Asymmetry of information results in advantages and disadvantages. Some players have more information than the others. In forex, information about fundamental aspects of economies does not arrive simultaneously to all participants. The important question is, what kind of knowledge and information can improve trading performance? The search for an edge starts with a fundamental understanding of the nature of the forex market. Having a foundation of knowledge in fundamentals is a first step in evolving into a winning trader.

Why take time to look at forex fundamentals? Why should fundamentals matter if a trade is done in a short-term time interval such as the five-minute chart? The short answer is that one cannot separate the fundamentals from the technical analysis without exposing oneself to great distortions in understanding the forex market and avoidable losses. The five-minute trader who is on the side of the longer trend is likely to be more profitable. Foreign exchange is by its nature *both* fundamental and technical and reflects the increased globalization of the world economy.

It is worthwhile to note the comments of the late, great Milton Friedman in a 2005 conversation with Dallas Fed president Richard Fisher:

> *The really remarkable thing about the world is how people cooperate together. How somebody in China makes a little bit of your television set. Or somebody in Malaysia produces some rubber. And that rubber is used by somebody in the United States to put on the tip of a pencil, or in some other way. What has happened has been an enormous expansion in the opportunities for cooperation.*[1]

Consider the following: Every transaction in the world settles in a currency. Whether it is a consumer purchase, an imported or exported item, an investment in an equity, or even cash under the mattress, the world's economic activity is essentially a flow of money. What makes forex fascinating as a market and as a trading vehicle is the fact that currencies provide an intimate linkage to the world economy. The currency trader by putting on a currency trade becomes a participant the world economy. The trader is participating as a speculator looking for a very short-term profit. The forex trader is riding on a global wave. The wave consists of economic, geopolitical, and emotional influences. Some will surf the waves, jumping on and off; others will stay in much longer and face the volatility. Forex trading becomes possible because the world is constantly assessing and reassessing the value of one currency against another. The forex currency trader is looking to tap into this stream of changing values.

The challenge is to find the right combination of tools that can assist the trader in finding high-probability profitable trades. In meeting this challenge, the first step is understanding what moves currencies over time. In putting together a recipe for successful forex trading, knowing the fundamental chemistry of forex is highly recommended. Anyone who doubts this should simply look at daily headlines that evoke names and places that are, and certainly need to be, part of the daily consciousness of a trader. These names should be familiar to all traders: Yellin, Draghi, Kuroda, Carney, Stevens, Poloz, Jordan, and Zhou Xiaochuan.

Notice, these aforementioned names are the current heads of the major central banks in the world. The fact is that the words and decisions of these central bankers of the

[1]Richard Fisher for Federal Reserve Bank of Dallas, "On the Record: An Appreciation of Milton Friedman, Champion of Economic Freedom," *Southwest Economy* (December 2006), http://www.dallasfed.org/assets/documents/research/swe/2006/swe0606e.pdf.

United States, the Bank of Japan, the European Central Bank, Bank of England, Reserve Bank of Australia, Bank of Canada, Swiss National Bank, and the Bank of China alert the trader to interest rate and monetary policy and news that affect sentiment about the direction of the dollar. Mention the cities of Baghdad, Tehran, Crimea, and Gaza, and they evoke emotions of fear and crises. Detect news about retail giant Wal-Mart's sales, and one starts anticipating a potential reaction in the currency markets. These and other factors mix together and form the chemistry of forex, which results in shifts of sentiment regarding economic growth in the United States, Eurozone, Britain, China, and Japan. These shifts in sentiment cause price reactions and shift the balance between buyers and sellers. Let's look in more detail at these fundamental factors.

THE MAIN INGREDIENT: INTEREST RATES AND INTEREST RATE EXPECTATIONS

Interest rates are the "dough" of the fundamental forex pie. They are one of the most important factors that affect forex prices, as interest rates have been the most used tool that central banks use as a throttle or break on their economies. The central banks of the world do not hesitate to use this important tool. Before the great financial collapse of 2008, almost all of the central banks increased interest rates. The European Central Bank raised interest rates eight times from December 6, 2005, to June 13, 2007, to a level of 4.0 percent to guide a booming European economy to slow down and avoid too-high inflation. The US central bank—the Federal Reserve—increased interest rates 17 times between June 30, 2004, and August 2006, and then paused when it decided the economy no longer needed the brake of interest rate increases.

Then came the financial crisis of 2008. It was so great a collapse that statisticians remarked it was more than 12 standard deviations from the norm. In other words, no one saw it coming. Rather than focus here on the causes of the collapse, we simply need to note that the immediate consequence was a global shift to nearly a zero interest rate environment. That near-zero interest rate environment has prevailed since then, and as a result, central banks ran out of tools to stimulate economies and turned to quantitative easing (QE), which resulted in expanding the money supply in order to stimulate demand.

However, in late 2014, the world central banks began to see the end of a policy of lowering interest rates. The US Federal Reserve Bank ended its quantitative easing policy in October 2014 and put an increase in rates back on the agenda. The Bank of England (BOE) also has provided guidance that an increase in interest rates is due. In late 2014, only New Zealand, among the Western economies, increased rates. However, the world recovery from the collapse of 2008 has not been equal. The Eurozone faced deflationary fears and therefore remains sustaining low interest rates. The Bank of Japan also has remained in a quantitative easing policy, with an official target of reaching a 2 percent inflation rate.

In other words, the forex trader in 2015 and the years beyond will need to recognize that interest rate expectations, whether they are for remaining low or increasing, provide one of the most important fundamental forces moving currencies.

As the globe recovers in growth, the role of interest rate increases is to try to avoid excessive inflation. Inflation is itself a complex set of events. But for the forex trader, there are basically two kinds:

1. *Demand inflation*—consumer spending increasing pushes up prices.
2. *Wage inflation*—the lack of a supply of workers pushes up average wages.

Inflation in wages is increasingly a focus of central banks. In fact, a puzzle is emerging where expectations of wage inflation are increasing, but there is little evidence that it is occurring. The world is in a tectonic shift where economies are experiencing lower annualized growth and lower inflation pressures. This is challenging central banks and monetary policy. The result is an environment of constant focus on economic data and therefore more potential for surprises. It is an exciting time for trading. In the next chapter, we take a closer look at inflation.

Since it is likely that the world is entering an era where interest rate decreases are essentially over, the forex trader should understand the general impact and role of interest rate increase. Interest rate increases do much more than slow down an economy; they also act as a magnet to attract capital to bonds and other interest-bearing instruments. This has been called an *appetite for yield*, and when applied globally the flow of capital in and out of a country can be substantially affected by the difference in interest rates between one country and another. In the coming years, if interest rate increases are not uniform around the world, the phenomenon of the "carry trade" will likely come back into focus. The carry trade is driven by the interest rate differential that exists between currencies—for example, between Japan (0.10%) and New Zealand (3.5%), causing low-cost borrowing in yen to invest in higher-yielding kiwis. Historically the yen was the low-interest-rate currency that was borrowed or sold to finance investments in instruments with higher interest rates. It can lead to market turbulence, however.

Some forex traders learned this lesson, about the consequences of carry trades, when the US stock market sold off on February 27, 2007. It was precipitated by traders getting out of their carry trade positions. Since billions of dollars were sold to be converted back into yen, equity markets were also affected because equity positions had to be sold to buy back the yen positions. In Figure 1.1 we see how the Dow Jones Industrial Index correlated directly with the US dollar–Japanese yen (USDJPY) pair that day. Many traders will find the USDJPY relationship to the US equities highly correlated. When the markets are risk averse, the yen strengthens against the dollar. When the markets are risk-on,

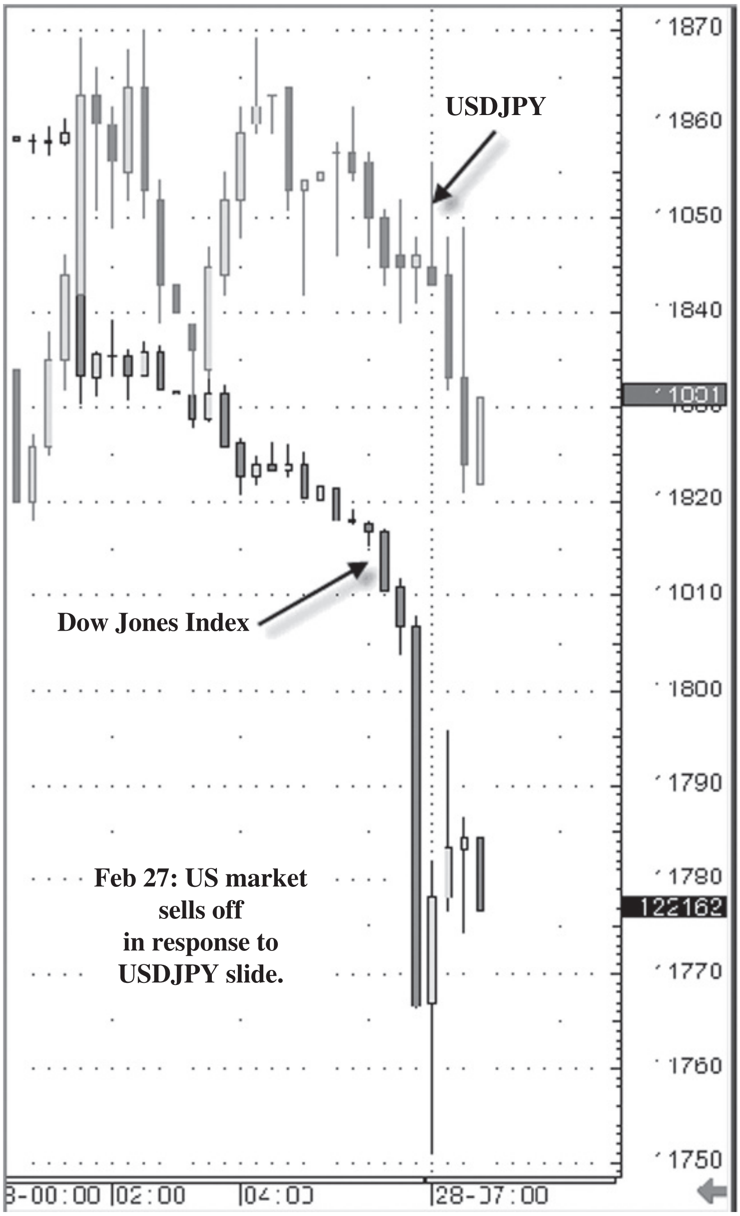

FIGURE 1.1 Dollar-to-Yen Slide Causes Dow Sell-Off.
Source: CQG Inc., Copyright © 2006. All rights reserved worldwide.

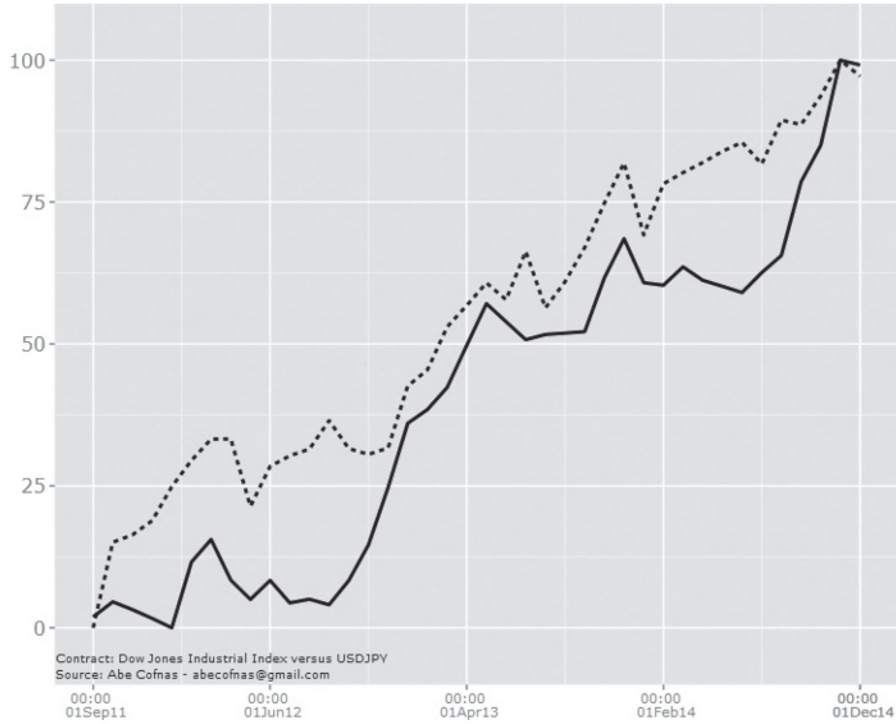

FIGURE 1.2 Dollar-to-Yen Surges in Tandem with Dow Jones Uptrend.

the yen weakens. Figure 1.2 shows how the USDJPY weakened while the Dow Jones Industrial Index strengthened.

The fundamental fact that interest rates will increase or decrease at different times around the world will create trading opportunities not seen in a decade or more.

THE ROLE OF HOUSING DATA IN FOREX PRICE MOVEMENTS

Fundamentally, however, one of the most important categories of economic data around the world, which is sensitive to interest rate changes, is housing data. The housing sector in the United States, as well as other nations, provides a major share of wealth, consumer spending, and job creation. Expectations about rates of growth or decline in housing data are important indicators to watch. Of particular importance is to watch for housing bubbles. Before the collapse of 2008, there was an international housing boom, with prices growing at more than 10 percent per year in many countries. For example, Ireland grew at 15 percent in 2006; Spain's growth actually slowed to 13 percent. Canada, Norway, and

Sweden shared more than 10 percent growth. The United States saw prices up 7 percent. The increased wealth fueled economic growth and consumer purchasing.

Closely watched are data releases that relate to housing activity. Some of the main data releases track the following:

- Unsold homes
- Mortgage loan applications
- New and existing home sales
- Single-family housing permits
- Housing prices

Forex traders' expectations of the future direction of interest rates are significantly affected by housing data because, for example, weak housing leads to expectations of a slowdown on consumption. The economic reasoning is that consumers start seeing a decline in housing values and restrain their consumer spending. The collapse of the housing boom in 2008 was a global phenomenon. Housing recovery in the United States and Great Britain are and will be highlights of the strength of the overall recovery.

One of the most important indicators in periods of housing growth before the financial collapse of 2008 was the level of mortgage equity withdrawals (MEWs). As home prices increased around the world, consumers took out loans against their mortgages, which stimulated consumption. During periods of housing booms, MEWs rise. MEWs have been, in fact, calculated to contribute to the growth of gross domestic product (GDP). However, if MEWs slow down, or remain low, this can portend a decline in consumption and a slowdown in the economy. If and when a slowdown in MEWs occurs, the impact is that of lessening the likelihood of an interest rate increase. Damon Darlin wrote in the *New York Times*:

> *Economists argue over what effect the access to money, which mortgage equity withdrawals allow, has had on consumer spending. Homeowners cash out to pay off more expensive credit card debt, remodel the house to build more equity, or just have fun. They may very well have used it to buy another house or not spent it at all, but added it to savings. Economists really are not certain.*
>
> *"I guess it is one of those mysteries," said Christopher D. Carroll, an economics professor at Johns Hopkins University. "I don't think anyone knows what the answer is."*
>
> *Nevertheless, mortgage equity withdrawal is closely watched as an indicator of the general economy because, Mr. Carroll said, "there is a lot of concern that a cooling housing market could result in a sharp fallback in consumer spending."*

> *A recent paper that Mr. Carroll helped write contends that for every $1,000 change in housing wealth there is an immediate propensity to consume about $20 more. The wealth effect, as the phenomenon is called, is twice as high for housing wealth as it is for stock wealth, Mr. Carroll and his associates said.*[2]

The 2008 financial collapse generated a decline of housing values. Consequently, MEWs declined because home to equity values declined, eliminating the ability to loan against it. The issuance of subprime mortgages created housing stock that had very high loan/home ratios and encouraged the collapse when values declined and homeowners couldn't keep up the payments. Economic forces ultimately worked to create mortgage delinquencies and a collapse in this market. In Great Britain, the Bank of England no longer publishes MEWs as a separate data series. But forex traders should keep an eye on them if an uptrend is spotted.

For the forex trader, it is a clear case where housing fundamentals affect the dollar. More housing strength translates to greater consumer demand, and that translates to raising the probability of interest rate increases by the central bank. It's difficult to be bullish on the currency whose economy is not strong in the housing sector.

ASSIGNMENT

Find the recent MEW rates of the past quarter in Canada, Australia, and the United Kingdom. This will take some exploration on the Internet, but it is worth tracking.

HOUSING DATA AS A LEADING INDICATOR

What is important to realize about fundamental analysis of housing sector data is that the trader can use the data to identify pending changes in trends and direction of the economy. Of course, it is true that forex prices move all the time in reaction to news (or rumors), but economies don't change direction overnight. By understanding housing data, one can develop a fundamental viewpoint that leads to deciding on being bullish or bearish on the currency involved before technical price patterns reflect the underlying change.

For example, in Table 1.1 we see data on US new housing starts during the pre-collapse era. The year 2005 was a year of a high level of housing starts, peaking

[2] Damon Darlin, "Your Money; Mortgage Lesson No. 1: Home Is Not a Piggy Bank," *The New York Times* (November 4, 2006).

TABLE 1.1 Housing Starts 2004–2014

Date	Housing Starts
10/31/14	84,400
10/31/13	78,400
10/31/12	77,000
10/31/11	53,200
10/31/10	45,400
10/31/09	44,500
10/31/08	68,200
10/31/07	115,000
10/31/06	130,600
10/31/05	180,400
5/31/05	197,900
4/30/05	184,600
3/31/05	156,200
2/28/05	149,100
1/31/05	142,900

in February at 2.2 million units and then testing that peak in January 2006 (see Figure 1.2). After January 2006, the data showed a decline, and by August 2006, the decline in housing starts reached levels of 2003. The forex trader might not have picked the start of the slump by looking at this kind of data, but clearly would have seen that right after the start of 2006, new home starts were in a period of weakening. When housing starts reached a peak and then started declining, it was difficult to be pro-dollar. This leads to a very important clue to trading the US dollar. When housing data show a robust uptrend, dollar strength comes along. Actually, this can be generalized to any currency. When housing data in a country are positive, the currency attracts capital. The main reason is that expectations of interest rate increases start occurring.

We can see in Table 1.1 that US housing starts have yet to fully recover from the financial collapse.

HOUSING SENTIMENT INDICATORS

One can argue that economic data on housing activity lag too much and that a trader needs to use indicators that are more coincident with activity or even leading. Survey data should be seen as a category of sentiment information that becomes predictive in its application when an underlying trend can be discerned. A valuable source for assessing housing activity in the United States is the survey releases of the National Association of Housing Builders (NAHB). According to the NAHB, “The Housing Market Index (HMI) is based on a monthly survey of NAHB members designed to take the pulse of the housing industry, especially the single-family industry. The survey asks respondents to rate general economic and housing market conditions.”[3] A reading over 50 indicates that the majority of those surveyed have a good opinion about housing sales conditions.

For forex traders, it is always important to look for confirming data on the health of the housing industry. One of the more recent sources is the Standard & Poor’s (S&P)/Case–Shiller home price index. It is a benchmark measure for housing prices. It tracks the value of single-family homes in the United States. Twenty metropolitan areas are tracked, and the index is measured monthly. The last Tuesday of each month at 9 A.M. is the release time of the announcement. Traders looking for leading indicators of a housing recovery will likely see it in increases in housing prices tracked by this monthly index, posted at www.indices.standardandpoors.com. We can see in Figure 1.3 that the Case–Shiller home price index has broken new territory and is on an upward slope. IT is still below the 2006 peak.

FIGURE 1.3 Case–Shiller Price Index and US Dollar Index.

[3]National Association of Housing Builders, “What Is the NAHB–Wells Fargo Housing Market Index (HMI)?” http://www.nahb.org/generic.aspx?genericContentID=532.

ASSIGNMENT

How is housing recovering in other countries? Look for countries that are possibly experiencing sharp increases in housing prices (i.e., Great Britain, China).

ALSO WATCH HOUSING EQUITY SECTOR STOCKS

Another way for the forex trader to get a grip on housing data is to watch equities that are housing related. For example, Lennar Homes is a leading home builder. Its stock price and earnings forecasts offer good clues regarding the direction of the housing market and by inference interest rate policies (Figure 1.4). In early 2005, Lennar Homes began to decline and its weakness was an omen about the end of interest rate increases. Interestingly, when the forex market begins to conjecture whether the Federal Reserve will raise rates in the future, the trader following Lennar Homes's stock price or another housing equity leader will be helpful in shaping an opinion about the likelihood of an interest rate increase.

Here is what the Lennar chief executive officer (CEO) said as 2007 started:

> *Lennar Corp. (LEN) Chief Executive Stuart Miller is seeing no signs that the deteriorating home-building market has bottomed, and Lennar expects to take land-related write-downs of between $400 million and $500 million in its fiscal fourth quarter to reflect the weak conditions.*
>
> *"Market conditions continued to weaken throughout the fourth quarter, and we have not yet seen tangible evidence of a market recovery," said Miller, in a statement.*[4]

ASSIGNMENT

Find other equities that provide insight into the housing market.

In this assignment, the trader should select the top equities, including exchange-traded funds (ETFs) that represent aspects of the housing sector, and start watching their weekly performance. When these housing equities start probing their weekly support, resistance, and trend lines, the trader will have clues as to a potential change in the housing market. Keep in mind that a strengthening housing market is bullish on the currency.

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[4] *Wall Street Journal* (March 1, 2007).

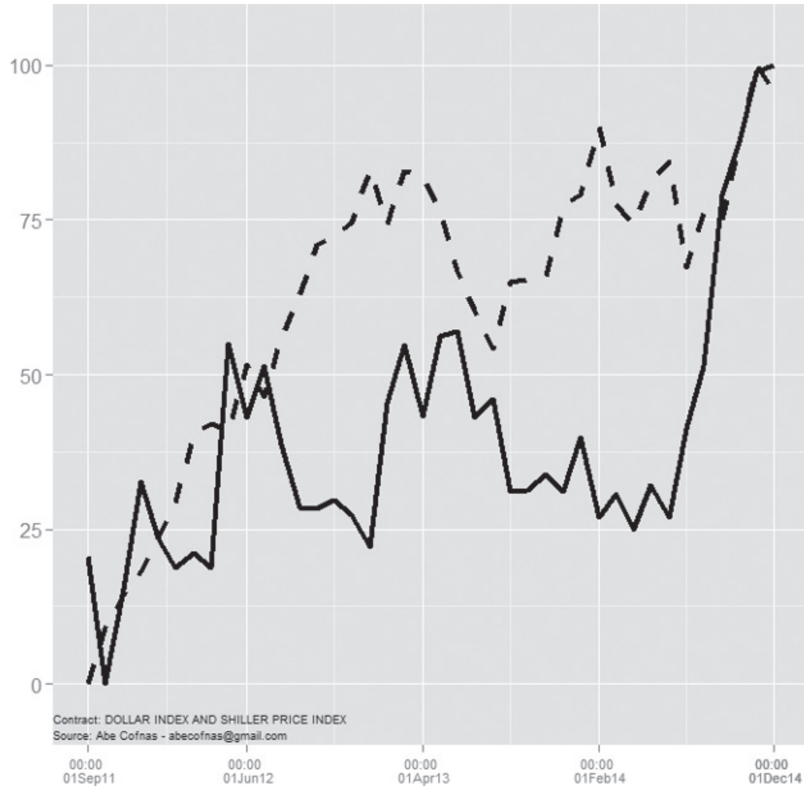

FIGURE 1.4 Lennar Homes Collapse and Recovery Versus US Dollar Index.

HOUSING DATA AND GLOBAL CURRENCIES

As discussed earlier, housing conditions are important when trading currencies, not just in the United States, but around the world. A shortcut in monitoring housing conditions in other countries is to read their central bank reports. Also, using Google, Baidu, Yahoo!, and similar search engines for scanning the latest housing conditions in a particular country works very well to give a trader a feel for what is going on. Traders should pay attention to the British housing situation because it directly affects currency and interest rate decisions of the Bank of England.

Great Britain and Housing

A 2014 headline in *The Telegraph* stated: "Why first time buyers are still piling into a hot housing market." The subhead said, "Lending to first time buyers hits record levels, as the desire to own a home negates high prices and looming interest rate rises."[5] There in a single headline one can see the relationship between a hot housing market and interest rates.

The article goes on and cites data from an important organization in Britain, the Council of Mortgage Lenders (CML):

> *In June, the CML recorded the highest number of loans lent to first-time buyers since December 2007—28,600, an increase of 7.1pc since May and 18.7pc since June 2013.*
>
> *The amount borrowed is also at levels not seen since September 2007, at £4.2bn for the month, a significant increase from May (£3.8bn) and since June last year (£3.3bn).*[6]

It is also very useful to read statements from the Bank of England. The following is from its June 2014 *Financial Stability Report*:

> *While housing market activity has eased recently, UK house prices have continued to rise and indicators of house price expectations point to continued strength. The share of new mortgages with high loan to income multiples has increased, which could result in more households encountering payment difficulties in the face of shocks to income and interest rates.*[7]

A careful reader would see some hesitation on raising interest rates, because one impact of raising rates is to reduce price inflation but another impact adversely affects the financial stability of people. It is a balancing act!

But housing fundamentals in Great Britain are red hot and won't go away that easily. Here is what the *Financial Stability Report* further noted:

> *More generally, a longer-term gap remains between the growth in demand for housing in the United Kingdom and the rate of house building. The net new supply of private housing in the United Kingdom was 110,000 in 2013—well below the 2007 average of 180,000.*[8]

[5]Anna White, "Why First Time Buyers Are Still Piling into a Hot Housing Market: Lending to First Time Buyers Hits Record Levels, as the Desire to Own a Home Negates High Prices and Looming Interest Rate Rises," *The Telegraph* (August 11, 2014).
[6]Ibid.
[7]Financial Policy Committee, *Financial Stability Report*, Bank of England No. 35 (June 2014), p. 22, http://www.bankofengland.co.uk/publications/Documents/fsr/2014/fsrfull1406.pdf.
[8]Ibid., p. 23.

Forex traders who trade the GBPUSD would gain an edge by watching housing data as a clue to whether the GBPUSD is likely to rise in value.

ASSIGNMENT

Read the latest *Financial Stability Report* from the Bank of England (http://www.bankofengland.co.uk/publications/Pages/fsr/2014/fsr35.aspx).

SUMMARY

Tracking changes in how an economy is growing is clearly an important part of gaining a sense of whether a currency will be strengthening or weakening. The relationship of growth and currencies applies throughout the world. While there are many aspects to economic growth, the forex trader's main focus should be on interest rates. An increase in interest rates tends to strengthen the currency. Traders need to go further than just knowing what the rate levels are. They need to assess whether the economy is expected to be strengthening or weakening. As a result, the forex trader should keep track of housing data when deciding on the direction of trading a currency, as housing data affect the decision to increase or decrease rates, or keep them the same.