Veblen’s Institutional Economics And The 2008 Financial Crisis

Honours Dissertation

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This dissertation is submitted in partial fulfillment of the requirements for the degree of Bachelor of Commerce (Honours) in Economics at the University of KwaZulu Natal.
DECLARATION

I declare that the content of this dissertation is my own work, except where otherwise acknowledged, and that it has not been submitted for a degree at any other university.

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ABSTRACT
This paper attempts to draw a theoretical link between the events that characterise the financial crisis and the economics of Thorstein Veblen. The paper takes the stance that deregulation in financial markets alters interactions within the economy by altering the pecuniary activities undertaken by financial institutions. Following deregulation apart from observing increased concentration and increased access to credit the economy is expected to become increasingly unstable as businessmen seek to increase earnings by increasing the volume of loans, which are of a decreasing quality, as well as increased speculation in the market. The increased access to credit is assumed to increase the monetary value of the assets being purchased, this increase in price is to increase further speculation thus further inflates prices. However, this inflation cannot continue forever. The realisation that the price of an asset is just a result of inflation results in a devaluation of the assets, in this case houses, which due to increased speculation forces banks to sell assets to maintain position. This devaluation of assets and subsequent selling to maintain position following a period of prosperity is typical of a Veblenian business cycle and it is argued to be observable in the financial crisis and its associated boom in the subprime mortgage market.
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Thank you to all my friends
LIST OF ACRONYMNS
ABCP: Asset-Backed Commercial Paper
ARM: Adjustable rate mortgage
CDO: Credit Default Obligation
GSE: Government sponsored enterprise
Libor: London inter-bank over rate
MBS: Mortgage Backed Security
NCM: New classical macroeconomics
NINJA: No verified INcome, Job or Asset
OIS: Overnight Index swap
SIV: Special Investment Vehicle
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CHAPTER ONE – Introduction

1.1 Background

As far as topical events in the world economy go none demands more of our attention or impacts on as many lives as does the 2008 financial crisis. The effects of the crisis continue to unravel as we discover the extent of its proliferation. To many it begs the question, “how bad will things get?” Another question, one certainly more important, is “what went wrong?” It is the latter question that I hope to shed some light upon by analysing the crisis through the framework and writings of Thorstein Veblen.

Orthodox economic theory treats the institutional framework as relatively static. The result is that orthodox explanations largely shy away from incorporating institutional change in the analyses of the crisis. Orthodox economists primarily focus on analysing the impact of policies by the US government and Federal Reserve in the run-up to the crisis. In particular how, over a number of years, these policies allowed a housing bubble to develop. By largely ignoring the role of institutional change, mainstream economists are in fact omitting a considerable amount of activity that occurred in the run-up to the crisis. Much of these institutional changes were brought about by the deregulation of financial markets, which in turn profoundly altered the behaviour of both lenders and borrowers. It is these changes that are of interest to an institutional interpretation of the crisis.

For the purpose of analysing the crisis through a framework of dynamic institutions we shall turn to the economics of Thorstein Veblen, widely considered to be the father of the Institutionalist School of Economics. The Institutionalist approach is concerned with the role that the evolution of institutions have on the interactions between different agents within the economy. In contrast, orthodox economic theory treats institutions as relatively static and is therefore primarily concerned with individual behaviour, which is considered predictable under certain market stimuli. However, it has to be noted that Veblen’s economic theory is

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far more diverse than merely being concerned with the role of institutions. His theoretical framework also accommodates the role that credit has in affecting inflation\(^5\) and business cycles\(^6\).

The crisis presents an ideal opportunity to use Veblen’s framework for an alternative interpretation of the events leading up to the crisis. These events include deregulation of the financial markets, the housing bubble and the ensuing crisis.

### 1.2 Research Objectives

#### 1.2.1 Overall Objective

The overall objective of this paper is thus to consider the crisis from a perspective consistent with Veblen’s economic theory with specific emphasis being placed on the role of institutions, credit, prices and the Veblenian business cycle. In conducting such an analysis it is hoped that Veblen’s framework will give a broader as well as a deeper understanding of the crisis.

#### 1.2.2 Specific Aims

1) To provide a concise framework consistent with Veblen’s institutional economics with which to analyse the crisis. Specific emphasis will be placed on the role of institutions, credit and prices as well as Veblen’s theory of the business cycle.

2) To assess how changes in the US institutional framework have altered behaviour. This analysis shall be limited to discussing changes in the banking, investment and housing markets.

3) To assess whether there is an observable link between increased access to credit and the price level within the housing sector.

4) To determine if the nature of the crisis is consistent with Veblen’s theory of the business cycle.

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1.3 Methodology

This study has adopted a qualitative methodology relying exclusively upon secondary data from journal articles and US Federal Reserve publications. The findings of the study shall be presented in the form of a literature review.

The orthodox analysis of the crisis is drawn primarily from John B. Taylor and Paul Mizen who both published papers on the subject consistent with mainstream economics.

In developing the institutional framework it was deemed prudent to consult a number of sources. Scholarly texts were used to develop an initial understanding, before a direct reading of Veblen was attempted. Texts on Veblen were limited to those published in economic journals. I therefore excluded some important works such as his many books, among which *The Theory of the Leisure Class* (1899), *The Theory of Business Enterprise* (1904) and *Engineers and the Price System* (1921). To make up for this shortcoming a considerable amount of research was undertaken in an attempt to distil the overall thesis of Veblen’s arguments and his framework.

The findings of the research is presented mostly in the style of a literature review, which spans the current literature on the crisis and historical literature relating to the development of institutional economics as well as various critiques of mainstream economics.

1.4 Structure of Dissertation

Chapter Two contains a concise outline of events and some of the symptoms, which characterised the crisis. Orthodox explanations of these events form part of an extensive literature review, which has grown up around the crisis.

Chapter Three reviews the underlying philosophy behind orthodox explanations of the crisis as well as various critiques of its analytical framework.

Chapter Four provides a brief analysis of Veblen’s framework, concentrating primarily on the relevant aspects of institutions, credit and business cycle theory.

Chapter Five uses Veblen’s analytical framework to conduct a reinterpretation of the crisis. This chapter shall formally consist of three sub-sections linked to the specific aims of this dissertation.

Chapter Six will consist of the overall conclusions reached in this dissertation.
CHAPTER TWO – The 2008 Financial Crisis

2.1 Introduction

This chapter will serve to provide a description of the main events that characterised the crisis. It will start with the bursting of the US housing bubble and then proceed to discuss the background to the crisis. The discussion will then turn to orthodox explanations for the crisis.

2.2 The 2008 Financial Crisis

The 2008 financial crisis was ignited by the bursting of the asset price bubble in the US, particularly in the housing market. A sharp drop in house prices, led to the evaporation of equity in many properties, with some homeowners having to pay for bonds that were far above the existing value of their properties. It brought to a suddenly end the widespread practice whereby homeowners refinanced existing debt by using the equity in their properties, which in the run-up to the crisis, was made possible by increases in house prices. The result was massive defaults and foreclosures on subprime mortgages and ARM’s (Adjustable Rate Mortgages) as homeowners were unable to refinance their debts.

At the heart of these foreclosures and defaults however was a significant decline in lending standards. Subprime mortgages are distinguished from their prime counterparts by their low credit scores, generally a FICO\textsuperscript{7} score below 660 and were often granted based on a declaration of income, without verification.\textsuperscript{8} ARM’s provide borrowers with the option of refinancing their mortgage after an initial “teaser” rate expired. This practice worked well during the period when housing prices were on the ascendency.\textsuperscript{9} However as prices started to fall over the 2006-2007 period the option to refinance disappeared. Once the initial terms of the teaser loans had dried up, borrowers were left having to make much higher repayments and on more difficult terms.\textsuperscript{10} The fall in house prices and the higher repayments having to be

\textsuperscript{7} FICO (Fair Isaac Corporation)
\textsuperscript{9} Ibid.
made on subprime and ARM properties thus led to an acceleration in the rate of foreclosures and defaults on subprime properties.\textsuperscript{11}

The US economy experienced low interest rates in the years prior to the crisis. This was partly due to foreign investment in US treasury bonds as well as expansionary monetary policy by Fed, following the 9/11 terrorist attacks.\textsuperscript{12} These low interest rates enabled consumers to increase consumption as well as investment in the housing market, thus fuelling the increase in house prices. As credit and mortgages were extended, so did the number of financial instruments that derived their value from debt repayments, such as MBS’s (Mortgage Backed Securities) and CDO’s (Credit Default Obligations).

MBS’s and CDO’s derive their value from the bundling of Subprime and ARM properties into asset pools, which were then sold onto investors. Debt repayments were then distributed among the purchasers of those securities.\textsuperscript{13} These securities became sought after in a world with an abundance of savings. This was due to the high savings rates in the newly industrialised countries, like China, as well as excess funds from the Middle East that were accumulated through high oil prices. The creation of these financial instruments thus enabled investors from around the world to purchase a share of the US housing market.

The high rates of return on MBS’s and CDO’s also stimulated demand for these assets, particularly by institutions who sought to increase their leveraging positions. Leveraging forced financial institutions to speculate in the market for borrowed funds, generally of a short-term variety.\textsuperscript{14} These funds would for the most part be obtained through the sale of asset backed commercial paper (ABCP). ABCP acts like a short term loan to the bank with a fixed maturity date and value.\textsuperscript{15} This practice increase exposure to risk; both market related risk and risks associated with maturity mismatch. Maturity mismatch is possible to occur because the MBS’s represent a long-term obligation that the bank continually has to finance with short-term loans. If the supply of the short-term loans were to dry up then the financial

\textsuperscript{13} Ibid.
\textsuperscript{15} Ibid
institution may run the risk of becoming illiquid as more and more short-term loans reach maturity and it becomes unable to make payments.\textsuperscript{16}

The continuing demand for MBS’s and CDO’s inevitably drove down the quality of the underlying mortgages as lending standards of the originators started to deteriorate.\textsuperscript{17} These mortgages found their way into asset pools of MBS’s and CDO’s, making them far more prone to deviations in interest rates and property values, thereby increasing instability in the property market.\textsuperscript{18}

As housing prices started to fall so financial institutions that used borrowed funds to invest in these MBS’s started to experience increasing losses. The losses were due to the increase in the rate of foreclosures and defaults on the properties contained in the asset pools. As prices started to decline so the refinancing option attached to ARM mortgages became more difficult to obtain. Over the same period US interest rates also started to increase making repayments more expensive.\textsuperscript{19} The net result was an increase in the default rate of subprime properties.\textsuperscript{20} As default rates increased so the pool of payments dwindled, this in addition to the decrease in value of the underlying asset served to decrease the value of the securities.

Increased defaults and foreclosures in the subprime market forced the rating agencies to downgrade MBS’s from investment grade status of AAA to a noninvestment grade asset of A+. This downgrade was drastic by industry standards and it served to decrease the value of the assets and therefore also the demand. Investors requiring the sale of ABCP to finance their positions in the security market thus found it increasingly difficult to find funds.\textsuperscript{21} The inability of financial institutions to secure more short-term loans to maintain their positions in the MBS market led to them losing large sums through devalued MBS’s or facing liquidity problems. For instance, Bear Stearns lost large sums of money through its hedge funds holding a considerable number of devalued MBS assets.\textsuperscript{22} Other banks such as IKB, BNP Paribas and Sachsen LB were left without sufficient liquidity to maintain their positions and

\textsuperscript{16} Ibid
\textsuperscript{17} Ibid
\textsuperscript{18} Ibid
had to be bailed out or opted to suspend withdrawals from MBS related hedge funds. These events placed pressure on the liquidity of banks and also decreased the incentive for banks to lend to other banks due to the perceived increase in counterparty risk, resulting from the highly leveraged positions of many institutions.\textsuperscript{23}

Thus the use of short-term commercial paper (ABCP) amplified the crisis. The leveraging activity served to increase returns during the good times, but exposed institutions to severe risk following the subsequent devaluation of subprime MBS’s. Suddenly liquidity was under pressure as investors no longer sought to purchase ABCP’s. Figure 1 shows the drastic decline in sales of ABCP’s, which normally provided funding for investments in MBS’s. The increase in the perceived risk of subprime MBS’s and the highly leveraged position of many financial institutions resulted in a decreased willingness to lend to one another. This in turn resulted in increased interest rate spreads, making credit more expensive.\textsuperscript{24}

\begin{figure}
\centering
\includegraphics[width=0.7\textwidth]{figure1.png}
\caption{Short Term Commercial Paper}
\end{figure}

The net outcome of the investment activities of banks led to the conditions that became synonymous with the crisis. This included decreased liquidity amongst banks, which resulted in an inability to meet their short term obligations. Some financial institutions had to file for bankruptcy, while others received bailouts from government or were bought out by other companies. Credit also became more expensive and more difficult to obtain due to the increased risk of some investment portfolios and concern about future liquidity problems.

\textsuperscript{23} Ibid
\textsuperscript{24} Ibid
connected to further foreclosures. The decrease in credit availability had a drastic impact on the real economy and resulted in a sharp downturn in economic activity.

The above discussion has served to highlight some of the key characteristics that are recognised as defining the crisis without explicitly attempting to explain underlying causes. What shall follow is an explanation of the credit crisis using an economic framework that is consistent with that which has dominated the mainstream since the 1980’s.

2.3 Causes of the Crisis

Analyses of the crisis are consistent in identifying the housing bubble as either the fundamental cause of the crisis or at least the trigger. Taylor, whilst recognising the importance of the housing bubble, puts greater emphasis upon the role of monetary policy as being the underlying cause. He argues, with the aid of data, that there is a correlation between US monetary policy and behaviour in the housing market. According to Taylor, increased risk taking behaviour on the part of borrowers, can be directly connected to the low interest rate policies pursued by the Federal Reserve. This view has become widely accepted among orthodox economists and therefore needs to be explained in some detail.

2.3.1 Monetary Policy

The orthodox analysis begins with the assumption that over the period, preceding the crisis, interest rates were held at artificially low levels when compared to levels one would normally expect from the Fed. It is argued that rates were reduced to below normal rates to help the US economy recover from the Dot-com crisis and 9/11 terrorist attacks. Interest rates were however also maintained at these unusually low levels by increased demand for US treasury bonds from Asian markets, seeking secure assets. This increased demand for Treasury bonds resulted in downward pressure on US interest rates. This “loose” monetary policy is shown in Figure 2 below, which illustrates the interest rate decisions followed by the Fed and the interest rates that one would normally have expected the Fed to follow if its behaviour had been historically consistent. The historically consistent line is

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25 Ibid
27 Ibid
29 Ibid
labelled as the “Taylor rule” as it had been calculated by using a policy rule developed by John Taylor.

Figure 2: Taylor Rule

![Taylor Rule Graph]

Source: John Taylor (2008)

It should be clear from the above figure that interest rates over the period preceding the crisis were significantly lower when compared to interest rate policies followed in the previous 20 years, which is represented by the Taylor rule. It should also be clear from figures 2 and 3 that the period of unusually low interest rates corresponds with the observed surge in the housing market over the period 2001-2006.  

Taylor supports his argument regarding extraordinary low interest rates and the housing boom with regression analysis, and developed a model that shows the relationship, between interest rates and new housing starts. Figure 3 below shows the results of Taylor’s regression analysis, using both actual interest rates and rates that would have been consistent with the aforementioned Taylor rule, superimposed upon a graph depicting the actual number of housing starts.  


31 Ibid.
Figure 3: Boom and bust in the housing market

Source: John Taylor (2008)

The two dashed lines show the results of Taylor’s regression analysis. The line labelled “counterfactual” represents the number of housing starts that Taylor’s model predicts would have occurred had the Fed followed appropriate monetary policy. The counterfactual line is considerably below the actual and estimated number of housing starts, which is represented by the higher dashed line with actual interest rate data. This provides a fairly accurate estimate of actual events. These results according to Taylor provide proof that, “monetary policy was the key cause of the boom and hence the bust and the crisis.”

2.3.2 Subprime Mortgages and Securitisation:

The effects of the boom and bust in the US real estate market were exaggerated by the nature of lending that was fuelling the boom. Much of the boom in the housing market was fuelled by increased lending in the subprime market. As explained above, subprime and those of the ARM variety became more difficult or were no longer an option as house prices began to level off or even decline.

Taylor illustrates this by using data specific to the subprime and ARM variety of mortgages. Figure 4 shows the sharp increase in house prices that occurred from around mid-2003 and the subsequent drop from mid-2005 onwards. It also illustrates the relationship between

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32 Ibid
house prices and the rate of delinquencies and foreclosures, which exhibit a negative correlation with the price of houses.\textsuperscript{34}

\textbf{Figure 4: Subprime Delinquencies and Foreclosures and Housing prices}

The rate of delinquencies and foreclosures shows that in an environment of higher interest rates and falling prices, the ability and indeed incentive to service this debt were greatly diminished.\textsuperscript{35} Further evidence of the volatility of subprime mortgages and especially those of the ARM variety is provided by comparing the delinquency and foreclosure rates of subprime mortgages to their prime counterparts. This is shown in figure 5. It is clear that subprime mortgages and especially those of the ARM variety are far more responsive to changes in interest rates and movements in the housing market and thus represent a far riskier class of asset than their prime counterpart.

MBS’s were bundled into extremely complex structures with the aim of making them tradable to buyers that were not skilled enough to understand the often hazy world of real estate markets. At the birth of these securities the market focussed on the idea that these investments were inherently safe.\textsuperscript{36} After 1990 however these instruments started to contain

\textsuperscript{35} Ibid
particularly volatile ARM and subprime mortgages. The inclusion of this volatile debt into tradable instruments resulted in securities containing the volatile subprime debt finding their way onto the balance sheets of various non government-sponsored enterprises (GSE’s). These toxic subprime mortgages increased the risk to private financial institutions as they increased their leveraged positions.

**Figure 5: Foreclosure Rates, 1998-2007**

![Foreclosure Rates Graph](image)


### 2.3.3 Liquidity and Counterparty Risk

Taylor identifies the large jump in the Libor-OIS spread, which occurred on August 9th 2007, as an important indicator of the increased risk to the system as a whole. The reason for this jump was due the lack of liquidity and the increasing concern about counterparty risk. This jump is shown in figure 6.

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40 London inter-bank offer rates (Libor) and Overnight-Swap-Index (OIS)
This spread difference interfered with monetary policy as it raised the cost of borrowing.\textsuperscript{41} Taylor attributed the increased cost of borrowing between banks to the inability of some banks to attract enough short-term loans to finance the positions held by their hedge funds. In addition to the liquidity problem there was also increasing concern about counterparty risk, as the balance sheets of banks became increasingly affected by defaults and devaluations of subprime MBS’s. The ability of banks to repay interbank loans was therefore increasingly questioned.\textsuperscript{42}

\textbf{Figure 6: Libor OIS Spread}

![Figure 6: Libor OIS Spread](image)

Source: Taylor and Williams (2008)

The spread is essentially a measure of financial stress. Taylor attributed the increase in stress more to counterparty risk than the lack of liquidity, which means attention needs to be paid to the balance sheets of banks and their involvement in the MBS market in light of the increased number of subprime mortgage defaults.\textsuperscript{43}

\textbf{2.4 Conclusion}

According to the orthodox perspective therefore the international credit market came under considerable amount of stress, resulting in limited access to credit as well as more expensive credit for those who could obtain it. Due to the decreased value of property and the


subsequent high default rates, assets tied to the subprime market faced significant
devaluations and downgrades. Institutions that held highly leveraged positions in such asset
classes faced severe liquidity problems. They were unable to meet their short-term lending
requirements and were forced to try and borrow from other banks or get bailed out by
governments as losses mounted. And much of this, according to the orthodox perspective, can
be traced back to loose monetary policy in the run-up to the crisis.
CHAPTER THREE – The Role of Economic Philosophy

3.1 Introduction

The purpose of this chapter is twofold. Firstly, it will serve to provide an outline of the relevant theoretical fundamentals of economic orthodoxy. This will be used to consider its impact on some of the events discussed in chapter two. Secondly, it will provide a brief sample of the various alternative economic frameworks with the view of assessing the possibility that these frameworks may offer some alternative explanations of the crisis.

3.2 The Modern Economic Philosophy

Modern economic orthodoxy stems from both the monetary economics of Milton Friedman and the realignment towards classical and neoclassical tenets embodied in the work of Robert Lucas and Robert Barro among others. This realignment is mostly associated with the tradition of economic liberalism of the Chicago school, which gained a foothold after the failure of Keynesian economics to fully explain the economic traumas of the 1970s.44

The economy, according to the orthodox approach, consists essentially of individuals who are believed to be rational and profit maximising agents who operate within a relatively static institutional framework. These individuals are however also able to combine to form larger organisations to maximise their welfare.45 The economy is considered to be inherently stable and self-regulating, while fluctuations are self-limiting provided they are relatively minor. Major fluctuations are attributed to inappropriate actions by policy makers.46 The market is considered the most efficient and effective tool to allocate resources with the ability to maximise both the individual and society’s welfare. Friedman was a staunch proponent of this view, stressing that government should have a limited role in the economy with a greater reliance being put upon markets.47 This stance to a large extend constitutes a reaffirmation of the classical doctrine of laissez-faire.

The demise of Keynesianism and the rise of free market ideas brought a major change to economic policy. Economic liberals argued that government should reduce its involvement in the economy through deregulation. Many argued that deregulation should include a reduction in any mandatory standards.\(^{48}\) Deregulation, it was further argued, would serve to increase competition and through it ensure the more efficient operation of the market, resulting in increased profits and welfare.

Evidence of this stance can be clearly identified through the actions of regulators as well as the commentary of economists who pointed to the positive effects that deregulation was having on the efficiency and profitability of the US banking system.\(^{49}\) A study conducted by Stiroh and Strahan started from the premise that regulation in the banking sector, prior to the 1980s, served to stifle competition and protected small and inefficient firms. Deregulation that occurred allowed more efficient firms to expand their operations and increase their market share. This increased activity by efficient firms allowed the banking sector to become more profitable.\(^{50}\) What the study did not take into account was that deregulation in the banking sector not only allowed more efficient firms to increase their market share, but also allowed banks to earn profits from activities that previously were not part of their business model.\(^{51}\)

While economic liberals called for limited government involvement, they did argue that in areas in which government involvement is necessary, both actions and policies should be predictable.\(^{52}\) This argument had a significant impact on monetary policy as it was believed that recessions and inflation were the result of inappropriate growth in the money supply.\(^{53}\) This belief in the role of monetary policy can clearly be seen in the analysis of the credit crisis provided by Taylor. He of course links the boom and bust of the subprime housing bubble with deviations in interest rates from the normal monetary growth rule, which the Fed


\(^{50}\) Ibid


followed in the past.\textsuperscript{54} It is this inappropriate change in the money supply that Taylor places at the heart of the crisis.\textsuperscript{55}

According to economic liberals it is not the deregulation of the financial markets that is to blame for the crisis, but rather the inappropriate behaviour of the Fed. The role that institutions play in governing the interactions of market participants plays a limited role in orthodox analysis.

\textbf{3.3 Critiques of Modern Economic Philosophy}

Throughout history the economic mainstream and the economic liberalism - be it laissez-faire or its modern reincarnation through the Chicago school - that it prescribes has been criticised from many fronts and for a variety of reasons. What follows in this section is a brief outline of some the alternatives to the liberal approach in economics as epitomised by the classical and neoclassical schools and more recently by the monetarist and new classical approaches.

\textbf{3.3.1 Keynesianism}

With Keynes we see the beginning of what we recognise as modern macroeconomics as well as an alternative to economic liberalism that was dominated by laissez-faire. Whilst holding onto many of the neoclassical tools of analysis, such as partial equilibrium analysis, Keynesian economics differs from orthodoxy by adopting several arguably more realistic assumptions about the market economy as well as moving away from the emphasis on microeconomics towards aggregate problems.\textsuperscript{56}

According to Keynes the economy was inherently unstable and thus prone to booms and busts, which were due to fluctuations in the marginal efficiency of investments and changes in business confidence or perceived risk.\textsuperscript{57} In addition to this instability, Keynes held that the economy lacks the ability to self-adjust and recover. This inability was due to both Keynes’ rejection of Say’s law - supply creates its own demand - placing emphasis rather on the role of demand in the economy and; secondly, due to his belief that both prices and wages were downwardly rigid, thus not allowing the labour market to efficiently adjust via lower wages.

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{54} Ibid
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resulting in unemployment. Keynes identified the presence of institutions, such as monopolies and labour unions, as interfering with the neoclassical ideal of perfectly competitive markets. Keynes viewed the model of the economy presented by neoclassical economists as being an ideal and not representative of reality. The inherent instability of the economy and its inability to self-adjust let Keynes to the conclusion that there is potential for government to become actively involved via appropriate fiscal and monetary policies. He argued that by stimulating the level of demand the economy can be pushed in the direction of full employment and price stability.

A modern explanation of why the economy is inherently unstable is provided by Hyman Minsky through his Financial Instability Hypothesis. According to Minsky, the fragility of financial markets results from periods of financial stability, which in effect encourage investors to undertake increasingly risky investments on the basis of their previously successful endeavours in less risky spheres of investment. The writings of Minsky have garnered much attention in light of the investments undertaken prior to the collapse of the housing bubble.

It can be argued that the relative stability of the US economy increased the confidence of investors. This increased confidence led to an increase in investments of an insecure nature. In the US this was embodied in increased investment in securities backed by risky subprime mortgages. These riskier assets represent a decrease in the cushion of safety leaving investment portfolios as a whole more susceptible to shocks and thus more fragile. This fragility went unnoticed due to the low interest rate environment and the upward trend in house prices, which created a perception of security. As time progressed and institutions continued to invest optimistically in MBS’s in a bid to increase profits, the positions that they held became increasingly leveraged, exposing these institutions to greater degrees of risk. As discussed earlier, this leveraging was conducted via short-term loans generated by selling

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60 Ibid
62 Ibid
63 Ibid
64 Ibid
commercial paper. Once the value behind these assets collapsed it set off a classic maturity mismatch problem arising from the practice of lending long and borrowing short.  

Keynesian economics thus departs from the classical paradigm by arguing that the economy is inherently unstable and that prices and wages do not adjust efficiently to bring about full employment. Keynes goes further to suggest that there is a role for government involvement in the economy, which departs sharply from the principle of laissez-faire.

3.3.2 Marxian Economics (Scientific Socialism)

Marxian economic analysis differs from orthodox economics in numerous respects and this is partly due to Marx wishing to explain a different set of questions than those addressed by orthodox economics. Marx analysed changes in the forces of production within a capitalist society, believing that there will inevitably be a breakdown in the capitalist system as a result increased class conflict, leading to the rise of socialism and later to communism.  

Marx criticised mainstream economists for their static conception of the economic system. They provided no attempt at explaining the cause of capitalism, but were content in explaining the functioning of the system. Marx’s economic system stems from a theory of historical process and culminates in a theory of how the existing order will change. In this dynamic system Marx was less concerned with the individual as the unit of analysis, choosing rather to emphasise the role of changes in the production process within the capitalist system. It is this production process that Marx sees as shaping human nature and social interactions.

Marx held that continual division of labour would be to the detriment of society, because it would increase conflict between classes. A conflict that he believed already existed between labourers and the capitalists - who exploited the wage earner by paying him only a fraction of his productive worth. It can be clearly seen that Marx repudiated the concept of laissez-faire, which the free marketeers of our present day are clearly in favour of.

The economics of Marx, whilst it may be touted as the antithesis of orthodox economics, also contains some relevant insights into the workings of the economy. Marx foresaw that the

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65 Ibid
67 Ibid
68 Ibid
capitalist system exhibited a tendency towards monopoly. This increased concentration of markets leads to an increase in the profits earned by capitalists.\textsuperscript{69} This trend can be observed in the events of the crisis. Stiroh and Strahan argue that the deregulation financial markets have led to competitive forces in the market weeding out weaker firms, resulting in greater concentration and increased profits.\textsuperscript{70} Marx went further to argue that increased profits earned by capitalists would result in increased misery of the working class due to exploitation.\textsuperscript{71}

Marx recognised that there is a link between excessive investment in capital and the business cycle. According to Marx, there existed times when capitalists would invest more in capital than normal, which initially would increase profits, but will eventually result in an increase in the price of both capital and labour. The increase in wages that capitalists must pay workers reduce profitability and thus ends the expansion of production, sending the economy into a depression.\textsuperscript{72} As is the nature of a depression, the capital accumulated during the expansionary phase becomes devalued in money terms, thus enabling those larger and more successful firms to buy the surplus capital in the market at a discount. This enables firms to substitute labour for more capital intensive means of production and as a result increase unemployment and thus misery amongst the working class.\textsuperscript{73}

Thus the Marxist framework is one that is derived from the historical understanding of the production process and the interaction between workers and capitalists, who Marx believed, were in constant conflict. Importance is placed upon the historical process and understanding of the capitalist system.

### 3.3.3 The Austrian School

The Austrian school of economics differs from its neoclassical counterpart on several key issues. The Austrians suggest that all relations in the economy are there as a result of the choices of man which are subject to errors due to subjective variations.\textsuperscript{74} The individual is considered as the unit of analysis. However, man is not considered to have perfect

\textsuperscript{69} Ibid


\textsuperscript{73} Ibid

knowledge, rather he is assumed to be a considerably clumsy economic agent, bumbling and erring as he continues his economic life. However, the actions of man are considered to be purposeful and goal orientated, that is to say, man does not simply seek to maximise his utility. As such the Austrians see the inevitability that goals may change over time and indeed differ between individuals. In this sense the Austrians break away from the utilitarian teachings that orthodoxy hold dear.

The Austrians also reject mainstream attempts to define the economy through mathematical functions, arguing that functions are form dependent and as such do not contribute to any real understanding of the forces at play. Instead, Austrians prefer to look for the essential conditions or characteristics. The application of such mathematical models in relation to the credit crisis it striking. Models were extensively used to predict and assess risk in the housing market. However, these models failed to predict the collapse of the housing bubble, partly due to the samples used, which did not contain appropriate information and thus failed to capture the underlying motivations of market participants.

In a similar vein the Austrian school also rejects mainstream attempts to treat economics as a science. Hayek himself argued that the application of scientific method to the habits and relations of a choice defined system is very unscientific.

Of interest to the discussion on the credit crisis is the emphasis that the Austrian school places upon the transmission mechanism through which an increase in the money supply enters the economy. Money in the Austrian explanation of business cycles has been given a key role due to the effect that it has in determining relative prices, in contrast to the neoclassical approach in which money is non-neutral. Disturbances in the money supply result in coordination problems between consumption, investment and productive capacity. These coordination problems occur because money does not enter the economy in a uniform manner that results in a uniform increase in the price level. Instead it is channelled into the economy through the expansion of credit and thus enters the economy asymmetrically, resulting in relative prices changing.

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75 Ibid
76 Ibid
79 Ibid
Coordination errors are likely to occur when the market interest rates are lower than the natural rate of interest as was the case in the US. This discrepancy induces market distortions. In the current case the excess money supply was channelled into the housing market. Whilst there was an observed increase in the general price level in the US, the prices in the housing sector rose considerably more than the average, representing a relative increase in the price of houses.\textsuperscript{80} This price distortion is however unsustainable and as investors realise that the increase in the prices of assets are only being fuelled by an asymmetry in the transmission of the money supply, prices inevitably have to be revised downwards, resulting in investor disappointment and a crisis.\textsuperscript{81} The severity of the ensuing crisis is however determined by the duration of the boom phase. The longer investors are fooled by the distorted price signal the larger the price bubble becomes and so shall be the ensuing crisis as expectations are revised downwards.\textsuperscript{82}

### 3.3.4 Veblen’s Institutional School

The economics of Thorstein Veblen represent a radical departure from mainstream economics, primarily because Veblen felt that orthodox economics was asking the wrong questions for it to be considered a science. In this regard he felt that economics needed to follow the lead taken by the natural sciences, by becoming concerned with the causal process of economic life, rather than the enumeration of wealth within a static environment.\textsuperscript{83} Veblen’s economics is not concerned with the concept of equilibrium, but rather with cumulative causation.\textsuperscript{84} He considered the economy is an ever evolving system, one that the concept of equilibrium fails to capture. In this vein Veblen was much inspired by the work of Charles Darwin.\textsuperscript{85}

Veblen considers institutions as the most adequate unit of analysis, as they represent durable social structures that both limit and enable an individual’s interaction with the economy. As such the institutional framework guides the wants and desires of individuals in an economic

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\textsuperscript{82} Ibid


setting. Institutions, within a Veblenian setting, are not static as they would be under an orthodox treatment of the economic system. They gradually change over time by responding to changes in technology, innovation and desires. In this way the individual becomes an active participant in shaping the economic structure rather than being a passive agent.\textsuperscript{86}

Institutions represent a wide variety of traits and forces ranging from economic relations, such as money and the capitalist system, to rules and regulations.\textsuperscript{87} All these can be considered to be dynamic and as such their affect upon the individual is profound and thus a static framework would be erroneous. These institutions would interact with the habits and instincts, which Veblen believed define human nature and as such help to shape the social system.\textsuperscript{88}

The Veblenian analysis of the economy contains more than just insights into the role of changing institutions and social systems, it also analyses the role that credit plays in price determination. Indeed, Veblen developed a business cycle theory along these lines.\textsuperscript{89} Like Marx, Veblen recognised that a conflict may arise, between the asset owning capitalist class and labour, because of a movement towards greater concentration in the market, which erodes the neoclassical ideal of perfect competition.\textsuperscript{90}

The literature of Veblen spans many topics. Due to the available scope of this research project the portion of Veblen’s economic framework will be limited to three core concepts namely, his theory on institutional change, the role of credit and prices as well as the business cycle. These concepts shall be expanded upon in the following chapter before they are applied to the recent events that constitute the crisis.

\begin{footnotes}
\item[86] Ibid
\item[88] Ibid
\item[90] Ibid
\end{footnotes}
CHAPTER FOUR – Thorstein Veblen’s Institutional Economics

4.1 Introduction

The economics of Thorstein Veblen represent a departure from the analytical preconceptions held by the classical economists of his time and those now perpetuated through mainstream economic thought. Although his attacks on the mainstream are well documented, I feel that they have been misconstrued by many authors as an attempt to falsify the contributions made by those economists. Rather Veblen sought to answer a different set of questions and to that end the contributions by economists of an orthodox variety are of limited worth.\textsuperscript{91}

Veblen felt that for economics to be a science it needed to take into account the economic process. It needs to be “an inquiry into cultural or institutional development as affected by economic exigencies.”\textsuperscript{92} Herein lay his point of departure. Where economics is concerned with the concept of equilibrium, Veblen sought to explain economic processes in terms of their institutional background and in terms of “present and prospective social consequences.”\textsuperscript{93}

It can be argued that the crisis represents a “social consequence” that is the result of changes in our institutional structure and that this “social consequence” is in line with Veblen’s description of a business cycle.\textsuperscript{94} This will be the thesis that I will present in chapter five.

4.2 Human Nature

Unlike the neoclassical approach, Veblen did not use his theory of human nature as a premise or as an empirical theory, but merely as a guiding principle which he used to judge institutional change and the human scheme of life.\textsuperscript{95} Veblen asserted that human nature can be described in terms of a complex bundle of instincts and habits.\textsuperscript{96}

Veblen, in his conception of human nature, concentrated on those instincts that he believed to have a direct economic bearing. It is to this end that he considered three main instincts driving human behaviour. These consist of the instincts of workmanship, idle curiosity and the parental bent.97

The instinct of workmanship is that instinct that drives the economic agent towards effective work and to despise waste of effort. It is this instinct that Veblen thought shaped the economic scheme towards efficiency and productivity. The instinct of workmanship stays with man through all the varying forms of economic life. It is only the mode through which this instinct is expressed that changes.98

Idle curiosity is that instinct that urges man to inquire about the world around him and is the origin of science and religion as well as the source of technical innovations.99 Technical innovations place pressure upon the existing institutional structure to alter through the incorporation of the innovative products of idle curiosity. These innovations may alter relationships within the economy. For instance, money induced a pecuniary culture into man’s economic life that had never before been seen. This drastically altered the institutional framework.100 The parental bent is that instinct that inspires compassion among individuals and is not limited to one’s children, but extends to society at large.101

In Veblen’s theory man is no longer passive, but actively seeks to fulfil the desires set out by his instincts, much like the Austrian conception of man. Thus the economic agent is of a dynamic sort, constrained in a sense by the set of institutions that man interacts with.102 However, institutions themselves change slowly over time and thus result in varied expressions of man’s desires and indeed varied types of institutions.103

98 Ibid
99 Ibid
101 Ibid
4.3 Institutions

According to Veblen, the individual is an inappropriate unit of analysis, because he is not a given, but is a function of his institutional environment.\(^{104}\) It is for this reason that institutions are favoured above individuals. To Veblen institutions are both subjective ideas and objective structures.\(^ {105}\) As he put it:

“They are the products of his hereditary traits and his past experience, cumulatively wrought out under a given body of traditions, conventionalities, and material circumstance...both the agent and his environment being at any point the outcome of the past process.”\(^ {106}\)

Accordingly, it would seem fair to define an institution rather loosely as any established pattern of behaviour that does not already fall under the definition of an instinct.\(^ {107}\) Such a loose definition allows for the inclusion of habits, conventionalities, tastes, money, securitised assets, laws and policies to be considered as institutions.

Institutions for Veblen are a dynamic force within the economy. At any given point in time they are a product of previous interactions. Veblen loosely identifies two forms of institutions that are locked in a continuous process of interaction and evolution. They are the “dynamic” technological institutions and relatively “static” ceremonial institutions.\(^ {108}\) Technological institutions are more closely linked to the machine process that embodies man’s instinct of workmanship of which some products are inventions, production methods and technology.\(^ {109}\) The ceremonial institutions to some extent exhibit both a constraining and enabling force upon the technological process as they are considered to be the product of a given state of the machine process. However, in the long run it is the technological institutions that shape the economic environment.\(^ {110}\)

\(^ {105}\) Ibid
\(^ {109}\) Ibid
\(^ {110}\) Ibid
4.4 Credit and Prices

For Veblen the system of credit leads to two problems in the capitalist system, namely inflation and instability.\textsuperscript{111} In this section Veblen’s theory of the role of credit in affecting the price level will be discussed, while instability will be discussed in the next section entitled “business cycles.”

Veblen wondered if the availability of credit played a role in determining the general price level. He undertook this line of inquiry by considering the historical relationship that existed, between credit and the price level.

Veblen noticed that large credit extensions were granted in prosperous times and that this was associated with a general increase in the price level. Likewise, he noticed that a depression is associated with a downturn in economic activity brought about by a decline in the availability of credit and downward pressure upon the price level.\textsuperscript{112} It should be noted however that nowhere in Veblen’s discussion did he mention a relationship between interest rates and inflation; rather we should consider the interest rate as a determinant of the amount of credit.

There are however more determinants as was alluded to in previous chapters. These other determinants can be thought of as increased flexibility in the granting of credit, such as arising out of deregulation as well as decreased lending standards. Increased demand for credit may arise as a result of the perceived expansion in the market. In the tradition of Minsky, increased credit may be granted due to increased optimism in the market leading to credit being granted to borrowers, previously deemed too risky.\textsuperscript{113}

Veblen observed that the granting of credit enabled borrowers to bid up the prices of assets. These increases in the value of assets encourage banks to extend further credit thus bidding up the money value of the asset further.\textsuperscript{114} Conveniently, for the purposes of this paper, Veblen relates this theory to the real-estate market.\textsuperscript{115} The process is much the same if not identical. Increased access to credit pushes up the price of property. This signals to banks

\textsuperscript{115} Ibid
that the value of the assets have increased, thereby encouraging them to extend further credit as it appears to be profitable.\textsuperscript{116}

Veblen however holds that this increase in the relative price of assets cannot continue indefinitely. Eventually the gap between the assets inflated value and its real earning potential will be realised. Following this, creditors will force a settlement of outstanding debts.\textsuperscript{117} This reduces capital and what ensues is the Veblenian business cycle.

Veblen notes that the movement of credit and prices can be disguised by “secondary phenomena.” Such phenomena can consist of the insurance of large loans and - of particular interest to the later discussion on the crisis - speculation in extra-hazardous business enterprises and the collapse thereof following a depression.\textsuperscript{118}

Veblen understood the role of credit in the economy, that is, credit is an expedient of business, enabling the entrepreneur to mobilise his capital towards profitable endeavours. However he goes further by asking why it is that banks provide credit. It isn’t for altruistic reasons. Banks, like other capitalist entities, engage with the economy in order to earn a profit. They earn their profits from the interest upon the loan as well from providing other services and by charging additional fees.\textsuperscript{119} What if practices and legislation changed, changing the pecuniary motives of market participants? Could this then induce increased activity in the credit market? These are questions of process and it is the aim of this paper to address some of these questions. This will be done in chapter five.

4.5 Business Cycles

Veblen’s theory of the business cycle stems directly from his view on the link between credit and prices. Veblen asserted that overvaluation occurs due to the habits of pecuniary thinking, and would precipitate a crisis once the situation has been realised.\textsuperscript{120}

Once the discrepancy between real and observed values had been observed it would lead to forced liquidation of assets, bankruptcy and an inevitable chain of credit defaults, which

\textsuperscript{116} Ibid
\textsuperscript{119} Ibid
would result in deflationary pressures. Eventually it would lead to these failing businesses being taken over by their creditors or other surviving firms, leaving market power concentrated in fewer hands.\textsuperscript{121}

Veblen saw a role for the formation of monopolies in a bid to restore profitability to the market by restricting output and raising prices. If the monopoly was successful it would raise prices up to the capitalised level.\textsuperscript{122} In the long run Veblen identified that government may have to become involved through fiscal intervention to rescue the economy from its recession through wasteful production.\textsuperscript{123}

Veblen’s theory of a business cycle attempts to explain how an economy, although acting efficiently according to neoclassical terms, would find itself in a recession.\textsuperscript{124}

### 4.6 Cumulative Causation

Unlike the neoclassical and new classical approaches Veblen is not concerned with the notion of equilibrium. We must remember that Veblen was seeking answers to a different set of questions. He was concerned with the economic process by way of the evolution of institutions and how man interacts with them. To this end the concept of equilibrium is insufficient. Veblen preferred the concept of cumulative causation.\textsuperscript{125}

According to Veblen, the economic process in which man is engaged is a continual process of adaption and interaction. At any point in time both man and his environment are products of previous processes.\textsuperscript{126} As Veblen put it:

> 'The economic life history of the individual is a cumulative process of adaptation of means to ends that cumulatively change as the process goes on, both the agent and his environment being at any point the outcome of the last process' \textsuperscript{127}

\textsuperscript{121} Ibid
\textsuperscript{124} Ibid
\textsuperscript{125} Ibid
\textsuperscript{127} Veblen, Thorstein, \textit{The Place of Science In Modern Civilisation}, B. W. Huebsch, New York, 1919.
Veblen saw the economy as a self-balancing mechanism, however it is a mechanism that is continuously evolving and adapting.\textsuperscript{128} Due to this adapting nature of institutions it is them that should be studied so as to understand their affects on society, rather than following in the Marshallian tradition of analysing the problem of resource allocation, within a framework of fixed institutions.\textsuperscript{129}

With the concept of cumulative causation Veblen’s conception of the economy is freed from the teleological conception of the neoclassical and new classical economists.\textsuperscript{130} The present and future states of the economy are determined, not by natural laws, but rather by the continual process of interaction, between man and his institutional environment.


\textsuperscript{129} Ibid.

CHAPTER FIVE – An Institutional Analysis of the Crisis

Conducting an analysis of the crisis, using Veblen’s institutional economics, requires an appreciation of the complex institutional interactions that exist within the economy. The findings in this section shall follow the structure adopted when discussing Veblen’s economics in the preceding chapter. The changes in the institutional framework will be considered first as well as the affects of these on the market. Secondly, the possible link between the granting of credit and prices will be discussed. This section will conclude with a discussion of the nature of the crisis and any resemblance that it may bear to a Veblenian business cycle.

5.1 Changes in the Institutional Framework

Institutions in the Veblenian sense constitute a broad range of social structures and behaviours, including codified rules and regulations, implicitly learned patterns of behaviour, sets of goals and desires, money and credit as well as more abstract social systems such as capitalism. What will follow is a discussion relating to institutional changes that occurred in three sectors that have arguably had a major role in the development of the crisis, namely, the deregulation of the banking sector, changes in home ownership and the role of technology and other innovations.

5.1.1 Banking Regulation and the New Business Model

Veblen considered the financial sector, much like the economy at large, to be an ever evolving system, having to adapt to changes in available technologies and various disturbances that occur, as businessmen attempt to extract maximum pecuniary gains. Such disturbances arise from new waves of competition and financial innovation. Veblen argued that deregulation leads to instability in financial markets as it creates an institutional

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asymmetry, which exposes individuals to increased risk as they engage in markets that lack rules, and a body of knowledge that would enable efficient coordination of plans.\textsuperscript{134}

It can be argued that the commercial banking sector experienced such competition in the early 1980s, losing market share in the deposits and loans market to other non-bank entities. However, commercial banks, due to the regulations still in place at the time, were unable to efficiently compete or expand their activities into other markets, such as the sale and management of investment funds. Section 20 of the Glass-Steagall Act of 1933 served to segment the behaviour of both commercial and investment banks. Commercial banks were specifically prohibited from lending against real-estate, creating or trading investment assets as well as from borrowing short and lending long. These measures were put in place to curb the excessively optimistic attitudes of bankers, which may result in increasingly risky assets appearing on their balance sheets.\textsuperscript{135}

The Glass-Steagall Act also prohibited commercial banks from affiliating with entities that were engaged principally in activities restricted to them. Come the mid-1980s, commercial banks, clearly acting on pecuniary motives, sought to get the interpretation of the law changed, to one that would allow them to affiliate with entities that were engaged in practices prohibited to them. This participation was eventually allowed so long as those activities do not comprise the majority of that entity’s principal business. This reinterpretation of the law allowed the holding companies of banks to own a subsidiary that engaged in such activities so long as the volume of these activities did surpass a certain limit. The first of these entities was created in 1987.\textsuperscript{136}

How did this initial step towards deregulation constitute a change in the institutional framework? It must be remembered that the definition of an institution in this context is as a mode of behaviour. Institutions proximately govern interactions in society. In this instance, deregulation allowed banks to engage the market in a more extensive manner.\textsuperscript{137} Commercial banks were now constrained by fewer regulations and were allowed to participate in more markets. Deregulation thus changed the manner in which commercial banks interact with the


\textsuperscript{136} Ibid

public and *vice versa*. It is in this way that deregulation constituted a change in the institutional framework. However, to appreciate how deregulation affected the market and in particular how it increased instability, we need to see how the market responded to deregulation.

Commercial banks in the US eventually operated 51 of these subsidiaries engaged in auxiliary activities. Due to the bank’s increased involvement in these activities the very nature of the banking system changed. The banks no longer relied upon interest rate margins as a means of generating revenue, as was the case prior to deregulation. Instead, they started to rely more heavily upon the trading desks of their subsidiaries to earn fee and commission income. As mentioned above, deregulation changed the pecuniary motives of banks from relying upon interest rate margins to the productivity of their trading desks, the profitability of which was linked to the volume of business, rather than the quality of transactions.\(^{138}\)

The year 1999 saw a monumental shift in the reduction of regulation, through the Gramm-Leach-Bliley Bank Reform Act, which sought to remove key legislation left over from the Glass-Steagall Act. This enabled the US financial sector to resemble the German system of universal banking.\(^{139}\) This piece of legislation allowed commercial banks to engage in all forms of financial activity. Deregulation saw an expansion of activities undertaken by the commercial banks, which started to behave much like investment banks. There was an observable increase in the amount of loans made to the private sector. This increase was due to their new found ability to issue marketable financial instruments on the basis of those loans, thereby enabling them to move assets off their balance sheets.\(^{140}\)

This ability to sell financial instruments onto secondary markets constitutes a change in the business model of banks. No longer were banks a direct source of finance. They became instead originators or arrangers of finance. In fact, their ability to own subsidiaries have enabled them to control the entire process from the origination of an asset to the sale and management of portfolios containing those originated assets.\(^{141}\) This increase in control is consistent with Veblenian theory, which suggests that following an innovation in the

\(^{138}\) Ibid


financial market, large financial institutions will be able to increase their control of the creation of credit as well as its distribution.\(^\text{142}\)

Shown below is a simplified representation of the new process of origination and distribution, which is embodied in the new business model of commercial banks. It should be noted that while it illustrates the mechanics of the banking system, it also demonstrates a market reaction to a change in the regulatory and institutional environments. The market evolved, creating new institutions by changing the way commercial banks behaved; indeed, by changing the very way they generated revenue.

**Figure 7: Flow of New Business Model**

![Diagram of new business model]

Adapted from Mizen (2008)

However, the new business model increased instability in the system. This was due in part to the fact that profits were being earned on fees and commission, rather than the performance of the loans.\(^\text{143}\) Another reason was the fact that it created inappropriate incentives throughout system, which resulted in parties maximising throughput in the hope of earning bonuses.\(^\text{144}\)

Brokers typically received an upfront fee as well as a bonus based on the yearly growth of business, without any consideration of the performance of those brokered deals. The broker also faced no penalties if deals went bad, but was however rewarded for increasing the volume of business.\(^\text{145}\) Brokers were also under pressure to increase the number of mortgages originated to meet the needs of asset funds to supply low level tranches with new mortgages.

\(^{145}\) Ibid
Over time the origination of subprime mortgages became increasingly more important. In this respect originators had little additional motivation to concern themselves with the underlying quality of the loan, due to the high probability that the assets would be combined and sold as securities. In fact, the 2003-2006 period, saw a rapid increase in the origination of subprime loans, including a doubling of those of the NINJA variety. NINJA loans are those mortgages that are granted with No verified INcome, Job or underlying Assets and represented a decline in the quality of mortgages being originated.

Profitability of securitisation gave mortgage originators the incentive to increase the number of loans originated, even those of poor quality, as long as they met the minimum standards required to enable them to become securitised assets. Fund managers, like brokers, received bonuses based upon the short-term performance of their funds. CDO’s and subprime mortgages represented a simple way to increase the returns on their portfolios, which increased the demand for this type of asset backed security.

In addition to the altered pecuniary motives underpinning the granting of loans by financial institutions, the new business model of moving assets onto the secondary market, decreased the role banks played as an assessor of risk. In its place stepped the credit rating agencies. However, the credit rating agencies were exposed to similar inappropriate incentive structures and pecuniary motives. Credit rating agencies were often paid an upfront fee for their services and in addition provided the issuer with recommendations on how to improve the ratings of their products. When issuers were seeking to obtain a credit rating it was the normal practice, within the industry, to consult multiple agencies and then select that agency that required the least amount of capitalisation in order to bring the financial instrument up to investment standards.

As discussed at the very beginning of this section, the previous set of legislation not only limited the business model of commercial banks, but it also forbid banks from funding speculative positions in long-term contracts, through the issuing of short-term loans. However, deregulation allowed the banks to lend long and borrow short through the issuing

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148 Ibid
of short-term commercial paper.\textsuperscript{150} Mizen points out that this increase in the use of short-term credit to fund highly leveraged positions was one of the important factors that led to the crisis.

Thus far the discussion has been concerned with the impact of deregulation on the institutional framework. To be consistent with Veblen’s economics however, deregulation needs to be followed by 1) increased concentration and profitability; 2) an increase in the creation and distribution of credit; 3) increased speculation in financial markets; and 4) speculation needs to be increasingly funded through short-term borrowing.\textsuperscript{151}

\textbf{5.1.1.1 Increased Concentration and Profitability}

In 2003, Stiroh and Strahan published a paper in which they analysed the competitive dynamics of the banking sector, following deregulation in the US. They analysed the performance of the banking sector by state, using data prior to the initial deregulation from the early 1980s to mid 1990s. The study used econometric techniques to analyse the effects that deregulation had on industry competitiveness, concentration - defined in the study as market share - and profitability.\textsuperscript{152}

Figure 8 illustrates the increase in the correlation between relative performance and market share. It shows that there is a marked improvement after 1980. The authors of the study sought to formally test whether this was due to the initial deregulation that had occurred in the market.\textsuperscript{153}

The study found that the increased correlation, between relative performance and market share, was due to more efficient banks being allowed to expand. Deregulation pushed weaker banks out of the market and in the process improved quality within the banking sector. The authors however recognised the possibility that the increase in market share may be the result of increased mergers and acquisitions, which is clearly unrelated to banking quality.\textsuperscript{154}

\textsuperscript{150} Ibid
\textsuperscript{153} Ibid
\textsuperscript{154} Ibid
They concluded that deregulation improved both the performance and degree of concentration within the market. This finding is consistent with Veblen’s theory that following financial deregulation, large firms are able to exploit the new environment by maximising their pecuniary gains through increased market share.\footnote{Ekelund, J. R., & Hérbert, R. F, A History of Economic Theory and Method, 3rd Edition,. McGraw-Hill, Singapore, 1990.}

5.1.1.2 Increased creation and distribution of credit

Following deregulation we should, according to Veblen’s theory, see a surge in the amount of credit being created and distributed in the economy.\footnote{Raines, P. J., & leathers, C. G, Veblen’s Theory of Institutional Change: An explanation of the deregulation of Japanese financial markets, American Journal of Economics and Sociology, Vol. 54, No. 3 (July), pp 357-367, 1995.} Evidence relating to the housing sector will be used to assess this aspect of deregulation.

The new business model of banks led to an increase in lending activities for the purpose of securitisation for sale to secondary markets. When looking at the debt to income ratio for the US, one can clearly see that the amount of household debt was increasing year on year. This however is only superficial evidence for the increased lending activities by banks. Although superficial, Figure 9 does illustrate an interesting trend, which is that the debt to income ratio accelerates immediately after 1999. This was around the same time when the Gramm-Leach-
Bliley Bank Reform Act granted banks near unlimited freedom within the market.\textsuperscript{157} What is also of interest is that from 1999 onwards the average debt to income ratio was in excess of 100 percent.

**Figure 9: Debt to Income Ratio**

More direct evidence of the expansion of credit creation and distribution can be found in statistics, relating to the subprime mortgage market. If Veblen’s theory is consistent with events then what should be observed is a simultaneous increase in the amount of credit granted as well as an increase in the distribution of that credit.

**Table 5.1: Mortgage Origination Statistics**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Mortgage Originations (billons)</th>
<th>Subprime Originations (billons)</th>
<th>Subprime Share in Total Originations (percent of dollar value)</th>
<th>Subprime Mortgage-Backed Securities (billions)</th>
<th>Percent Subprime Securitized (percent of dollar value)</th>
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</thead>
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<td>2001</td>
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<td>$190</td>
<td>8.6</td>
<td>$95</td>
<td>50.4</td>
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<td>$231</td>
<td>8.0</td>
<td>$121</td>
<td>52.7</td>
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<tr>
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<td>$3,945</td>
<td>$335</td>
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<td>$202</td>
<td>60.5</td>
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<td>2004</td>
<td>$2,920</td>
<td>$540</td>
<td>18.3</td>
<td>$401</td>
<td>74.3</td>
</tr>
<tr>
<td>2005</td>
<td>$3,120</td>
<td>$625</td>
<td>20.0</td>
<td>$507</td>
<td>81.2</td>
</tr>
<tr>
<td>2006</td>
<td>$2,980</td>
<td>$600</td>
<td>20.1</td>
<td>$483</td>
<td>80.5</td>
</tr>
</tbody>
</table>

Source: Kregel (2008)

The above table illustrates clearly that there was an increase in the amount of credit made available to the subprime mortgage market, increasing from just 8.6 percent of total mortgage originations in 2001 to 20.1 percent in 2006. Over the same period the amount of subprime

mortgages that were securitised, increased from 50.4 to 80.5 percent. This trend in the origination rate and securitisation represents an increase in the amount of credit in the market as well as an increase in the velocity with which those assets reached the secondary market.\footnote{Ibid}

Limiting the discussion, by simply showing that deregulation was followed by an increase in credit related activities in the subprime mortgage mark, is appropriate to the task at hand.

### Figure 10

**Secondary Market Activity of Total Mortgage Loans**

[Graph showing secondary market activity of total mortgage loans]

*Source: Kregel (2008)*

#### 5.1.1.3 Increased Speculation by Banks

An increase in the level of speculation on growing debt has been cited by Minsky and others, including Veblen, as a major destabilising factor in the economy. Such speculation in the economy, as mentioned previously, is expected to occur following deregulation of financial markets.\footnote{Hodgson, G. M, *After 1929 economics changed: will economists wake up in 2009?* Real-World Economics Review, Issue no.48 (December), pp 273-278, 2008.} In fact, prior to the crisis there had been some speculation, during the Dot-com boom. It has been argued that following the bust of that market, investors turned to safer assets, linked to real-estate. However, as confidence increased so did speculation in riskier forms of real estate assets, like non-prime - subprime and ARM - mortgages. This conforms to the Minskian hypothesis of market behaviour. The increase in the amount of speculation in
mortgages occurred around 2003 as can be seen in figure 10, which shows increased activity in the secondary market for mortgage loans.\textsuperscript{160}

The shift that occurred had major consequences for the stability of the economy, because it represented a shift from speculation - secured implicitly by the government - to market speculation, which was unsecured and thus prone to default risk. The reason was that MBS’s purchased by GSE’s (Government Sponsored Entities) have traditionally been conducted with the understanding that the value of their position in the market will be guaranteed by the government. However, the US government has sought to privatise its thrift agencies, which led to an increase in the secondary market for mortgage backed securities by private individuals.\textsuperscript{161}

The sudden change in market share can be explained through the excessive optimism that was fuelling the real-estate boom, which started around 2003.\textsuperscript{162} Increased house prices, coupled with returns from MBS’s that were above the market interest rate, led to increased speculation.\textsuperscript{163} As figure 10 shows, there was a large drop in the volume of MBS’s held by GSE’s, between 2003 and 2006, from 80 to just over 40 percent. Activity in the secondary market shows a clear change in behaviour as the majority of mortgage based assets were now falling into the hands of private investors, seeking to speculate in the booming house market.

5.1.1.4 Borrowing Short and Lending Long

The speculative behaviour by banks, as described above, was funded by short-term borrowing. These funds had to be continually renewed so that the banks could maintain their positions.\textsuperscript{164} Evidence of this behaviour can be gained from observing the amount of commercial paper that was issued by the banks as well as their increasingly leveraged positions.

Figure 1 clearly shows that starting in early 2004 there was a steady increase in the amount of commercial paper being issued. Most importantly we see a marked increase in the amount of ABCP being issued. This represents an increase in the amount of short-term borrowing.


\textsuperscript{161} Ibid


conducted by the banks to finance their positions in asset markets. The amount of short-term commercial paper being issued increased as banks sought to capitalise on the returns from the subprime mortgage assets. This practice led to an increase in the bank’s leverage ratios.\footnote{Mizen, P, \textit{The Credit Crunch of 2007-2008: A discussion of the Background, market reactions, and policy responses}, Federal Reserve Bank of St. Louis Review, pp 531-567, 2008.} The increase in the degree of leveraging by the banks is shown below in Figure 11.

\textbf{Figure 11: Leverage Ratios for Major Investment Banks.}

\begin{figure}[h]
\centering
\includegraphics[width=0.7\textwidth]{leverage_ratios.png}
\caption{Leverage Ratios for Major Investment Banks.}
\end{figure}

By leveraging their positions - investing with borrowed funds coming in the form of ABCP - banks not only increased their earnings, but also exposed themselves to greater risk. This type of behaviour Minsky describes as investor optimism,\footnote{Kregel, Jan A, \textit{The Natural Instability of Financial Markets. Working Paper No. 523}. The Levy Institute of Bard College, 2007.} while Veblen attributed it to the short–sightedness of businessmen as they seek to maximise their pecuniary gains.\footnote{Sowell, T, \textit{The 'Evolutionary' Economics of Thorstein Veblen}, Oxford Economic Papers, New Series, Vol. 19, No. 2 (July), pp 177-198, 1967.}

5.1.2 Changes relating to the Housing Market

Whilst regulatory changes were occurring in the banking sector, the housing market was evolving along similar lines. Changes in the US housing market started in 1968 with the US government seeking to lessen the financial burden that its housing thrifts placed upon the Federal budget. This was done by no longer guaranteeing the bonds and securities issued by Fannie Mae and Freddie Mac.\footnote{Kregel, Jan A, \textit{Changes in the US Financial System and the Subprime Crisis, Working Paper No.530}, The Levy Economics Institute of Bard College, (2007).}
Fannie Mae and Freddie Mac are two of the GSE’s that were first responsible for creating mortgage backed securities. These institutions are commonly referred to as thrifts as their purpose was to help low income US citizens become home owners. Thrifts initially would sell these MBS’s to the government. However, they were forced to seek alternative sources of funding once the government decided that it would no longer fund these activities.\footnote{Ibid.}

Thrifts sought to ensure a stream of income by packaging mortgages into securitised assets and then selling these securities to private institutions, such as banks and investment funds. It must be remembered that this occurred prior to the banking sector becoming involved in the origination of mortgages. When they eventually got involved the volume of origination and securitisation increased. This initial change in the housing market represents an institutional change in the sense that the financing of real-estate shifted from GSE’s to the private market.\footnote{Ibid.}

Initially the majority of such mortgages that passed through to the securitised market were of the prime variety and was provided mainly by the former government sponsored thrifts. However, by the mid 1970s investment banks sought to become involved in the securitisation of mortgages, primarily for the profits they could earn through fee and commission incomes. By the 1990s private banks had become a dominant force in the market, however the market had remained relatively stable. Part of the reason for the relative stability was because private banks were still holding a large share of the mortgages that they were originating. Moving to a business model of “originate and trade” is at least part of what increased the instability in the market. The shift in emphasis from the origination of mortgages towards the purpose of securitisation decreased the incentive to ensure credit quality, because the risk of default was passed onto the buyers of securities.\footnote{Ibid.}

The 1990s saw the dotcom boom and bust, which inevitably led to investors seeking safer havens for investment. This led to an increase in the demand for mortgage based investments as they were perceived to be tangible investments and safe. As pointed out earlier, the business model adopted by banks meant that profits could only be increased by increasing the rate of mortgage origination. It however became increasingly difficult to find additional prime mortgage candidates. This drove banks to widen the net and seek to offer mortgages to non-conforming candidates. This practice would see a surge in the volume of subprime loans

\footnote{Ibid.}
as well as a gradual decrease in the quality of those loans. Figure 12 shows that the share of subprime loans increased dramatically over the 2003 to 2006 period, from about 8 to just over 20 percent. This period was marked by increased house prices. This correlation between increasing house prices is no accident as shall be explained below in section 5.2.

**Figure 12 US Subprime Lending 2004-2006.**

![Graph showing subprime share of mortgage originations and home ownership rate from 1997 to 2007.](image)


The increasing price environment encouraged a rapid expansion of subprime loans of the ARM variety. These mortgages had adjustable repayment rates, starting off low for an initial period and thereafter shifting to higher rates. However, to avoid paying the higher rates home owners would attempt to refinance their homes. The refinancing option was however only available so long as interest rates stayed low and housing prices continued to rise. The share of subprime loans of the ARM variety, increased from 73.8 to 91.3 percent between 2001 and 2006. This made the stability of securities backed by subprime mortgages extremely dependent upon house prices and interest rates.

The prospect of refinancing was considered a certainty, during the period when house prices were increasing. It in a sense became an institution as buyers were expecting and in some cases relied upon the option to refinance. The increasingly speculative activity in risky assets

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172 Ibid.
173 Ibid.
is in line with Veblen’s assertion that the motives of businessmen become short-sighted in the face of pecuniary gain.174

5.1.3 Technology and Innovation

The application of technology played an increasingly important role in the origination of mortgages and in predicting the performance of the housing market in the period leading up to the crisis. An increase in computational power saw greater reliance upon mathematical models to estimate the risk of investments. These models were most notably used to predict the performance of the housing market. Increasingly banks also used technology to facilitate the origination of mortgages through automated programs.175 The increased reliance upon models and technology saw a steady decline in the quality of mortgages being originated, as well as increased faith in the future profitability of mortgages.176

Economists of an orthodox bent use mathematical models to describe reality and to make predictions about future market trends.177 There is ample evidence of the reliance upon these models, which were used to estimate the performance of the housing market as well as the risk of candidates.178 Credit rating agencies used statistical models to rate the risk of mortgage-based assets. These were of limited use in predicting the inevitable slump due to their inappropriate data sets, which concentrated on successful periods in real estate history during which mortgages originated through thrifts were backed by government.179 Also the data used consisted primarily of prime or conforming loans that were inherently more stable and less prone to default than the increasingly important subprime loans.180 These shortcomings of models left them ill-equipped to assess the risk of subprime mortgages. In addition, by the very nature of their design, models were overly optimistic due to the use of

time series data to extrapolate a trend. Thus the model failed to identify that growth was being fuelled by increasing prices and low interest rates.  

As noted earlier, the role of the banks as assessors of risk had been reduced through the change in their business model. This role was further reduced by the introduction of statistical scoring models to determine the risk of individuals based upon a predetermined set of information. The assessment of risk could be conducted without ever meeting the client. The use of such computerised risk assessment models continued to grow to the point where the system became automated.

A candidate could have their risk assessed through a database of credit information and the mortgage application could be granted, without requiring documentation. Clearly this represents a change in the institution of acquiring credit and thus in the interaction, between the borrower and lender. In the past a bank’s loan officer played a primary goal in the loan origination process. He would be responsible for the risk assessment of the project and of the individual, requiring a full set of supporting documentation. As the risks undertaken, using this new technology seemed to perform as predicted, so the requirements needed to obtain loans began to slip, in accordance with the increased optimism that the models were validating.

The use of technology served to increase instability by providing estimates of risk that were congruent with the optimism of the market, thereby justifying loans to less credit worthy individuals. Not only did the quality of individuals being granted credit declined, but technological change also aided institutional change in a banking sector already operating under a different business model.

The purpose of this section thus far has been two-fold. First, to show how regulatory changes led to different market interactions, thus conforming to our definition of institutional change. Secondly, these new interactions resulted in increases to both the amount of credit made available as well as speculation in asset markets by banks. This increase in the availability of credit, following deregulation is consistent with Veblen’s theory of financial markets.

181 Ibid.
However, Veblen also saw a link between the availability of credit and the price level. It is to this relationship that the discussion now turns.

5.2 The Role of Credit and Prices

Veblen argued that there is a definite link between the availability of credit and the price level. In section 5.1 it has been shown that there was indeed an increase in the amount of credit being made available. This section will consider whether there was an observable increase in the price of houses and whether this increase is consistent with Veblen’s theory. Attention will also be paid to the value of MBS’s and short term credit made available to the banks, through the selling of commercial paper.

5.2.1 Houses, Prices and Credit

Increased access to credit enables economic agents to bid up the market value of goods being consumed. The increase in the market value of the good would, according to Veblen, represent an increase in the value of the collateral underlying the loan, which in turn would be an incentive to increase lending. Veblen recognised that this creates a cycle of lending based upon the optimism that prices will continue to increase. The purpose of this section will be to ascertain whether such a trend is observable in the events leading up to the crisis.

The period 2003 to 2006 saw a rapid increase in the availability of credit in the housing market, particularly to subprime candidates. Figures 9 and 13 above clearly illustrate the increase in the amount of credit being made available in the housing market as well as the substantial portion that was granted to subprime candidates.

Taylor, in his October 2008 paper, illustrates price movements in the housing market with the aid of the diagram presented in Figure 4. It shows that, starting in 2003, house prices increased rapidly before levelling off in 2005/2006. The period over which house prices are observed to increase coincided with the period which saw increased lending activity in subprime markets. The spike in lending increased the demand for houses and thus placed

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186 Ibid.
upward pressure on house prices. Rising prices made property a desirable asset and as such additional credit was granted, thereby perpetuating the cycle. This observable relationship between prices and credit is consistent with Veblen’s observation that prosperous times are associated with large extensions of credit as well as an increase in the price level.190

5.2.2 MBS’s and Credit

However, the story does not end with the rise in the value of houses leading to an increase in the availability of credit. The credit obligations of these houses were pooled to create MBS’s and other debt derived securities.191 MBS’s derive their value from both the collateral that they represent and from the mortgage repayments that they earn. Within this market too we can observe Veblen’s theory of the link between rising prices and credit.

The value of the MBS’s increased as the price of houses continued to rise and default rates remained low.192 Due to the business model adopted by banks - originating mortgages for the purpose of issuing MBS’s to the secondary market - the increasing value of properties increased demand for the securities and incentivised further lending by the banks. This further lending, as Veblen predicts, encourages increased investment in assets, which bids up the price of those assets.193

The existence of a secondary market for property based assets enabled the public to speculate in the performance of the property market. Activity in this market was dominated by large financial institutions that financed their positions in the secondary market through the use of ABCP, which in essence acts as a short-term credit advance to financial institutions.194 It is interesting to note that increases in the amount of ABCP being issued, coincided with increased lending in the subprime sector as well as the increase in house prices. This relationship can be seen by considering the data from figures 1, 4, 10 and 13 together. However in the research conducted for this paper no evidence was found that explicitly links the market for ABCP and house prices. Perhaps this represents an avenue for further research.

Explicit evidence aside, there appears to be a degree of interconnectedness between the markets. Speculation in the secondary market for MBS’s by financial institutions had been fuelled by their ability to obtain short-term credit in the form of ABCP. This speculation created a demand for these MBS’s. Mortgage originators increased their lending to supply the market with MBS’s, which coincided with an increase in housing prices. This observed behaviour in the market is consistent with Veblen’s observation of an increase in the amount of “extra-hazardous, speculative business enterprises” associated with increased credit and prices. This speculation can be considered extra-hazardous, because the mortgages being originated during this period were of a decreasing quality.

This movement in prices and credit could not, according to Veblen, continue indefinitely. At some point the discrepancy in the relative prices of the assets will be realised. This realisation would lead to a Veblenian business cycle.

5.3 The Veblenian Business Cycle and the Crisis

The business cycle theory of Thorstein Veblen stems directly from his theory of credit and prices. Veblen believed that the divergence between the money value of assets and their actual productive value - created through extending credit during prosperous times - will eventually become recognised. The recognition of this discrepancy would lead to bankruptcy and credit defaults. In this section Veblen's business cycle theory will be considered along with the effects of the downswing in the housing market.

5.3.1 The Housing Bubble

The increased availability of credit led to the creation of a bubble in the housing market, which was clearly illustrated in Figure 4. This market however was unsustainable as it required an increasing number of mortgages to be originated as well as an increase in prices within a low interest rate environment. Interest rates however started to rise in 2005, which placed pressure on borrowers as repayments became more expensive. With the increase in interest rates we observe an increase in the number of delinquencies and foreclosures.

196 Ibid.
Evidence of the increase in delinquency and foreclosure rates was provided by Taylor in Figure 4. The increased level of delinquencies and foreclosures placed downward pressure on the prices of houses. As house prices started to decrease, so the rate of delinquencies and foreclosures increased, as many mortgages had been undertaken with the anticipation of increased prices.

In a market where much of the investment in housing had been undertaken under the expectation of increasing prices and low interest rates, the reversal of these conditions saw a rapid contraction of the housing market. The bursting of the housing bubble, with its associated decrease in prices, represented a decrease in the value of the collateral underpinning the loans. Rising delinquency rates thus represented increased losses to the banks who could not recoup the value of the property in the market. This limited their ability to issue credit. This would only have been a problem for individual banks if those debt obligations were held on the bank’s balance sheet. However, due to their business model banks at that time bundled these debt obligations into securities and sold them off onto secondary market. This transmitted the effects of the bursting housing bubble into the financial sector.

While Veblen’s theory of the link between credit and prices provides and adequate explanation for the creation of the housing bubble and for the bursting of it, considering the housing market in isolation does not explain how the collapse in house prices translated into a full-blown crisis. In this respect we need to consider the role of MBS’s.

### 5.3.2 Mortgage Backed Securities

Including the practice of securitisation brings the events of the crisis more in-line with Veblen's business cycle theory. Although Veblen held that credit inflated the prices of assets he also added that the firm’s share price, a securitised asset, reflected the value of a firm’s productive assets. Inflation of the underlying assets inflates the value of the security. It is when the discrepancy between the asset value and its earning power is realised that a crisis ensues. This same logic can be applied to the housing market and MBS’s.

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Investors in MBS’s were primarily large institutional investors, such as hedge fund managers, whose business was to purchase securities to increase the value of their fund. As mentioned earlier, MBS’s became favoured by investors as they offered above market returns as well being perceived to be secure. They represented a simple way for investors to improve their portfolios. Securities in this sense can be considered as the productive asset of the hedge fund and other investment vehicles.

To take advantage of the increasing value of MBS’s, during the prosperous stage of the housing boom, investors would use borrowed funds to increase their holdings of MBS’s. These borrowed funds came in the way of selling ABCP, which represents a short-term loan thus requiring the investors to continually renew loans to fund their MBS investments. This practice had been easy when MBS’s were propped up with increasing housing prices and low interest rates. The use of borrowed funds to fuel increased investment in MBS’s, resulted in these institutions becoming increasingly leveraged as represented by Figure 11.

As delinquencies and foreclosures increased in the housing market, they directly impacted upon the value of the MBS’s. It must be remembered that the value of the MBS is derived from a pool of payments coming from various properties. Delinquencies on properties within the asset pool reduce the amount of payments received.

Over the period, prior to the collapse of the housing bubble, the market values of MBS’s had been determined by using the models of the credit rating agencies. However, in the face of increased delinquencies, credit rating agencies were forced to downgrade the value of their MBS’s. These downgrades were to bring the market value of the MBS’s in line with their real earning potential, recognising the increased rate of delinquencies and decreased property values. Figure 13 represents the MBS downgrades that occurred from the third quarter of 2007 to the second quarter of 2008.

204 Ibid.
Over the four quarters represented in Figure 13, MBS’s were devalued by nearly $1.9 trillion. This considerable drop in value is coupled with a reduction in the amount of commercial paper being sold to fund positions held by investors in the MBS market. This decrease in commercial paper sales was represented in Figure 1. The decrease in the sale of ABCP is effectively a decrease in the amount of credit being made available to the investors in MBS’s. The decrease in ABCP meant that investors relying upon short-term loans to finance their positions in the MBS’s could no longer do so. As the creditors started calling in their loans the situation became worse and these investors needed to sell their positions to make the required payments or file for bankruptcy.

In the modern circumstance, mortgages have become securitised assets and they have enabled the secondary market to speculate on the performance of the housing market. Speculation in the MBS market was based upon the expectation that house prices will continue to increase. However, when prices fell and delinquencies rose so the value of the underlying assets supporting the MBS’s fell. Because MBS’s are purchased as assets with credit, they represent a similar process as originally described by Veblen. For the entire process to be consistent with Veblen’s theory of the business cycle however, a series of credit defaults and
bankruptcies need to occur as a result of the decrease in prices and the reduction of available credit.\textsuperscript{207} 

\subsection*{5.3.3 Bankruptcies and Credit Defaults}

As the values of MBS’s were revised downwards and investors were less willing to purchase ABCP, so the stress to the financial market became amplified. Investors in MBS’s, relying upon ABCP to maintain their positions, started to find themselves with insufficient funds to repay loans. This pressured banks to sell assets in order to hold their positions and in some cases file for bankruptcy.\textsuperscript{208} This section will provide a brief outline of some of the effects that the downgrade in MBS’s and the reduction in the availability of ABCP had on financial markets.

Following the decrease in availability of short-term credit to investors, as shown by Figure 1, a number of institutions began having problems meeting their short–term commitments. This was because these institutions needed to continually renew their stock of ABCP to maintain their position in the market. Unable to obtain new funds these institutions still had to repay their short-term loans. This debt obligation placed increasing pressure upon these financial institutions. Some institutions, unable to repay their debts have had to file for bankruptcy or get bailed out.\textsuperscript{209} 

Some notable institutions became casualties, like Bear Stearns, BNP Paribas and Sachsen LB. Bear Stearns held two hedge funds that invested in subprime related assets, using borrowed funds. Once the stream of short-term funding dried up Bear Stearns was unable to renew the value of those loans reaching maturity. Not being able to make its payments would have resulted in an unravelling of its assets in order to make payments. This however never occurred due to the nature of some of the investment that Bear Stearns was counterparty too. Its unravelling threatened the stability of other financial institutions. For this reason the Federal Reserve of New York stepped in with a loan. This initial step however was not enough and eventually it was determined that Bear Stearns would have to be bought out.\textsuperscript{210} 

\textsuperscript{209} Ibid. 
\textsuperscript{210} Ibid.}
Although Bear Stearns was probably one of the most publicised of the floundering financial institutions, there were a number of others. IKB Deutsche Industriebank AG, much like Bear Stearns, could not obtain sufficient ABCP to meet its short-term obligation. IKB was however able to draw on a line of credit from its parent bank. This credit extension was however insufficient. Eventually IKB had to be bailed out from a major shareholder. Another example of stress in the financial market was BNP Paribas who experienced heavy losses on three of its hedge funds involved in the MBS market. It suspended withdrawals from those funds in a bid not having to meet its short term debt obligations. Sachsen LB also failed to meet its short-term debt obligations and was eventually bought out.\textsuperscript{211}

Many more financial institutions have had to be bought out or bailed out due to the devaluation of MBS’s and the inability to obtain short-term credit in the way of ABCP. These problems experienced by financial institutions served to decrease the availability of interbank credit as well. As more and more institutions were revealed to be facing losses, related to MBS’s and short-term obligations, other banks became unwilling to lend to them on the basis that they were not sure if the loans would be repaid. Banks also started to hoard available liquidity in case MBS losses started to mount on their balance sheets.\textsuperscript{212}

Veblen’s theory of the business cycle predicts that following a period of expansion, as creditors realise that there is discrepancy between the market value and productive value of assets, a settlement will ensue.\textsuperscript{213} This period will be characterised by bankruptcies and credit defaults as well as deflation.\textsuperscript{214} The crisis bears a resemblance to Veblen’s theory as can be observed through the behaviour of the financial institutions, the level of defaults in the housing market and the devaluation of MBS’s. Veblen however went on to add that the characteristics of the business cycle often are disguised by secondary phenomenon such as the issuing of large government loans or bailouts.\textsuperscript{215} Evidence of such behaviour was shown in the description of Bear Stearns’ financial situation, where they received assistance from the Fed.

\begin{footnotes}
\item[211] Ibid.
\item[212] Ibid.
\end{footnotes}
From the evidence provided it appears that the business cycle theory of Veblen conforms closely to the events that characterise the crisis. From the speculation of investors in MBS’s, to the reduction of credit and finally to the emergence of bankruptcies and credit defaults arising from the speculation in MBS’s.
CHAPTER SIX – Conclusion

6.1 General Conclusions

The objective of this paper has been to assess whether the economics of Thorstein Veblen could provide a deeper understanding of the 2008 financial crisis. It started with an outline of the main events and was followed with an orthodox understanding of the crisis. Once that was done it became necessary to explain the framework orthodox economists used to come to their conclusions. It was only then that Veblen’s ideas and framework could be introduced.

The economic framework of Veblen is concerned with the economic process and the effects that evolving institutions have on that process. This paper highlighted Veblen's theories on institutions, credit and business cycles. Once Veblen's economic framework had been developed the events of the credit crisis were re-examined using his framework.

The deregulation of financial markets that occurred from the 1980s onwards was considered to constitute an institutional change. It was found that the institutional changes enabled the banking sector to adopt a new business model. This model involved banks interacting with the market differently as well as cultivating among bankers different pecuniary motives.

The new business model of banks saw them moving from an “originate and hold” strategy to an “originate and distribute” strategy. Banks became originators or arrangers of credit, rather than being the source of credit. Mortgages originated under this model were sold onto the secondary market as MBS’s or CDO’s.\footnote{Mizen, P, The Credit Crunch of 2007-2008: A discussion of the Background, market reactions, and policy responses. Federal Reserve Bank of St. Louis Review, pp 531-567, 2008.} It has been shown in this paper that these practices led to an increase in the amount of credit available, which is consistent with Veblen's theory of financial innovation.

It has been observed that this increase availability of credit led to the bubble in the housing market. The increase in the price level is consistent with Veblen's theory of the link between credit and prices. Speculation in the secondary market for MBS’s - using borrowed funds - eventually led to the crisis, when investors realised that properties and their associated MBS’s were overvalued. As delinquencies increased and housing prices continued to spiral downwards so financial institutions, which invested in MBS’s faced increasing pressure to meet their short-term obligations. Pressure to unravel their asset pools in order to meet payments increased when they were unable to sell ABCP or secure inter-bank loans. A series
of bankruptcies, bailouts and takeovers inevitably ensued. These events which characterise the crisis are totally consistent with Veblen’s description of the business cycle.

It has been shown throughout this paper that the theories of Veblen are consistent with the events of the credit crisis. Veblen's framework provides us with a deeper understanding of the crisis as it accounts for the role of institutions in the development of the crisis. It is the role of institutions that has often been neglected in orthodox interpretations of the crisis. This paper was in no way an attempt to falsify the contributions of mainstream economists; rather it was to show that Veblen's framework asks a different set of questions, which allow us to consider the economy as a dynamic system, one in which institutions play a primary role.

Orthodox economists consider the deregulation of financial markets to have been positive. The call for deregulation stems from the principle of laissez-faire, which has its origins with classical economics. Laissez-faire essentially calls for a hands-off approach by the government thus allowing markets to regulate themselves. This gives a great deal of freedom to economic agents and allows them to engage in utility maximising behaviour, which is only regulated by the principles of the market. It is argued that the unhindered pursuit of self-interest by economic agents will result in higher profits and aggregate welfare. Evidence of this philosophy dominating policy and behaviour in the run up to the crisis was highlighted through the writings of Stiroh and Strahan.

Institutions exhibit both enabling and restraining qualities upon behaviour. When institutions change they are capable of changing the way economic agents interact within the economy. This paper has shown that following deregulation, market interactions were drastically altered, resulting in an entirely new business model which cultivated very different pecuniary motives among bankers. This new business model led to banks issuing increasing amounts of credit, which it has been argued led to the creation of the housing bubble.

The orthodox approach gives little account of the effect institutions have on market interactions. They are considered as relatively static and have therefore been largely ignored. Institutions however do change, and thus the incorporation of institutions into our analysis definitely creates a deeper understanding of events. The institutional approach shows that the crisis was not simply caused by unusually low interest rates, but by a regulatory environment

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that fostered unsustainable and irresponsible lending activities.\textsuperscript{218} Recognising the role of institutions in the build up to the crisis lends credence to calls for greater regulation of financial markets.

Thus, as argued by Veblen, institutions play a primary role in determining interactions within the economy. They serve both to enable and restrain the motives of man.\textsuperscript{219} An inappropriate institutional framework fostering undesirable pecuniary motives can lead to undesirable outcomes or as more aptly put by Robins, “The pursuit of self-interest unrestrained by suitable institutions carries no guarantee of anything except chaos.”\textsuperscript{220}

6.2 Recommendations

Recognising that the causes of the crisis in part stem from the deregulation of financial markets it would be logical to suggest that regulators should revert back to the regulations in place prior to 1999 or even as far back as 1980. Such a move would however be short-sighted and be criticised as a reaction out of fear. What need to be controlled are the incentives of originators and brokers.\textsuperscript{221}

As described in chapter 5, the business model in place incentivised volume over quality. Over time a steady decline in the quality of loans originated was observed. Here are some ideas that could improve the situation:

- Originators should consider more rigorously the borrower’s ability to repay the loan. If the borrower is found to be unable to make the required repayments or lacks sufficient assets to stand as collateral then the borrower should not be granted the loan.
- The income the borrowers declare needs to be verified through checks and balances within the system.
- Bonuses of originators and brokers should not be based solely upon the volume of loans originated. Some form of penalty should be put in place for those loans that do


not perform due to oversights on the part of originators. Certainly such measures would improve the quality of mortgages being originated.222

As for credit rating agencies, a similar set of ideas can be applied by simply adapting them for the difference in activities. Credit rating agencies have been criticised for the conflicts of interest that exists between them and their customers. That is they are encouraged to provide favourable scores as well as recommendations to increase scores with minimal cost. Measures need to be taken to reduce conflicts of interests. Perhaps agencies should be rewarded for the performance of the asset relative to other assets in the same class, or penalised if those assets underperform. Such a measure would certainly encourage less optimistic credit scores.

Agencies have also been criticised for their dependence upon mathematical models to forecast the performance of financial instruments. These models proved to be inadequate. The inadequacy of the models was in large part due to the data set not including periods of falling house prices. Where to proceed on this front is unclear as there are few suitable substitutes for the use of models in providing risk assessments of investment portfolios. Certainly it is important to recognise in advance the shortcomings of models and to proceed with caution. One thing is for certain however and that is that the financial sector is no longer short of data on decreasing house prices.

Another aspect of the crisis that needs to be brought under control is the excessive degree of leveraging. Certainly it is not feasible to consider banning the practice, however there needs to be some consideration into the degree of speculation we are comfortable with. There needs to be some cushion of safety in place.223

It is difficult to predict exactly how market participants and regulators will proceed, following the crisis. That will to a large degree depend on what they perceive to be the cause of the crisis. It is doubtful much meaningful reregulation will occur as long as orthodox explanations are considered in isolation from institutional change. Such explanations will perhaps simply encourage the Fed to follow a monetary growth rule with some restrictions being placed on the speculative activities of banks, possibly through some desirable debt to

222 Ibid.
equity ratio. However, legislation takes a long time to pass, perhaps in time we will see regulation put in place restricting the behaviour of the banks.

6.3 Further Research

The field of institutional economics is a relatively little known school of thought having experienced its hey-day during the early part of the twentieth century. Since then much has developed both in economic events and in analytical techniques. As such a whole variety of fruitful economic research projects are available.

It is important is to try and increase our understanding of how institutions influence behaviour. Much research needs to be done to ascertain how economies react to evolving institutions. Such research has been conducted on a limited scale as for example by Patrick Raines and Charles Leathers who analysed the deregulation of Japanese financial markets. The impact of institutional change can be applied to various circumstances for instance; Geoffrey Hodgson considers how Capitalism differs between countries. Can such differences be explained and can they explain varying economic performances?

Certainly there are many profitable research opportunities available. One such area that would require attention in order for institutional economics to obtain mainstream recognition is the empirical verification of the theories. Such verification can be obtained through the use of modern econometric techniques such as testing for structural breaks, following an institutional change. Although enlightening I am however unconvinced that such empirical research needs to be emphasised.

What is clear however is that institutions exert a lot more influence on the economy than what orthodox theory would like to admit. For this reason the role that institutions play in the economy needs to be recognised and included in the analysis of the crisis and economic performance in general.

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