THE GLOBAL ECONOMIC CRISIS, A REFLECTION OF
THE GREAT DEPRESSION

by
ELIE NAJIB EL GEMAYEL

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by
ELIE NAJIB EL GEMAYEL

Approved by:

Dr. Simon Neaime, Professor
Economics

First Reader

Dr. Yassar Nasser, Assistant Professor
Economics

Second Reader

Date of project presentation: June 7th, 2012
I, Elie Najib El Gemayel

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AN ABSTRACT OF THE PROJECT OF

Elie Najib El Gemayel for Master of Arts in Financial Economics
Major: Financial Economics

Title: The Global Economic Crisis, a Reflection of the Great Depression.

This project examines the current crisis of the global economy, the so called “great recession”, it emphasizes on the causes of the crisis and whether we can link it to the causes of the Great Depression. The project also examines the economic history of the United States from early 18th century until the late 2000s financial crisis. The project will show that among all past recessions, the 2008 financial crisis was the closest to reflect the great depression.

The purpose of the study is to offer economists, policy makers and world leaders a study guide and a set of recommendations to avoid severe economic recessions. The area of my research is based on the U.S economy. The methodology pursued throughout the study is mainly an analysis of the economic history with extensive comparisons. Conclusions are drawn from economic reasoning of monetary and fiscal policies and backed by data analysis. The research also offers a space to present literature review.

The project is divided into 5 chapters. Chapter I is a general introduction that presents the topic and the subsequent chapters. Chapter II introduces the Great Depression, its causes and impacts, and highlights aspects of fiscal and monetary policies that were implemented in the US after World War I. Chapter III presents the current global economic crisis, the causes, and the economic impact on U.S and the world. Chapter IV highlights similarities and differences of the great recession and the great depression and the lessons learnt. Finally, Chapter V will be the essence of the entire research; it offers a set of recommendations for the future that can be considered in order to avoid falling in severe recessions and huge capital destructions.

Keywords: Great Depression, great recession, gold standard, Fed Reserve, fiscal policy, monetary policy, subprime mortgage crisis, house bubble, credit crisis, speculation, financial institution, U.S history, global economy.
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ABBREVIATIONS

AAA Agriculture Adjustment Administration
ABS Asset-Backed Securities
ARM Adjustable Rate Mortgage
CDO Collateralized Debt Obligations
CDS Credit Default Swaps
Dow Dow Jones Industrial Average
ECB European Central Bank
FDIC Federal Deposit Insurance Corporation
Fed Federal Reserve Bank
FHA Federal Housing Administration
GDP Gross Domestic Product
GNP Gross National Product
GSE Government Sponsored Enterprises
MBS Mortgage Backed Security
NAR National Association of Realtors
SEC Security and Exchange Commission
WPA Works Progress Administration
WWI World War One
WWII World War Two
To my beloved mother who always encourage me to achieve more and support me by all means. To my mother who has always dreamt in sitting in AUB’s Green Field to see me graduating.

To my fiancée, my love, my second half and the love of my life who without her I wouldn’t be here today.
CHAPTER 1

GENERAL INTRODUCTION

This project examines the current global economic crisis of 2008, the so called “great recession”, and its connection to the Great Depression. Now as the topic indicates, I will try throughout my research to link both crises and see if they have any common economic patterns and decide whether the recent crisis is a reflection of the Great Depression or not.

The Great Depression began in 1929 and lasted more than a decade and is considered to be one of the most severe economic crises in modern economy. It resulted in drastic declines in output, severe unemployment, and acute deflation in almost every country of the globe.

The great recession was marked by the collapse of the housing bubble in the U.S resulted from rising number of defaults on subprime mortgages.

The project also examines the economic history of the United States from early 18th century until the late 2000s financial crisis. The project will show that among all past recessions, the 2008 financial crisis was the closest to reflect the great depression.

The purpose of the study is to offer economists, policy makers and world leaders a study guide that they can rely on to get all necessary information about the two recessions. It also offers solutions and a set of recommendations to avoid severe economic recessions based on lessons learnt from history. The methodology pursued throughout the study is mainly economic analysis of the U.S history, extensive comparisons between the two crises backed by data analysis from IMF, Federal Reserve, Bureau of Economic Analysis and Bureau of Labor Statistics.

The project is divided into 5 chapters. Chapter I is a general introduction that
presents the topic and the subsequent chapters. Chapter II introduces the Great Depression, its causes and impacts, and highlights aspects of fiscal and monetary policies that were implemented in the US after World War I. Chapter III presents the current global economic crisis, the causes, and the economic impact on U.S and the world. Chapter IV highlights similarities and differences of the great recession and the great depression and the lessons learnt. Finally, Chapter V will be the essence of the entire research; it offers a set of recommendations for the future that can be considered in order to avoid falling in severe recessions and huge capital destructions.

It is necessary before we move to the next chapter and talk about the Great Depression to note the following assumptions that marked the U.S at the end of the 19th century. First, the U.S was not as established as today and its states were still not integrated as many were still opposing the federal government and therefore there was no policy coordination among different stakeholders. The workforce was composed of unskilled labor, immigrants, salves and women were still not taking part. The economy was agricultural based with little potential in heavy industry like steel production. The government was weak and had very limited role. Federal Reserve or any form of central bank was not yet formed. The monetary system was governed by the rigid Gold Standard. Lastly, one needs not to ignore the influence of the British Empire on the world economy and international trade. Luckily for the U.S, conflicts in Europe soon turned into World War which turned the compass toward a new leadership. Because of its distant location, the U.S was not initially involved in the war. It therefore permitted it to dodge any war losses that Europe suffered and placed it as the world top supplier of goods and raw materials. It wasn’t until 1917 that the US entered the war and ended it. The U.S was the only nation to emerge from war as the world political and economical leader and the protector of people’s freedom and democracy. World War I was a turning
point in the American history, granting the U.S the position it currently has. However, for a relatively “inexperienced” nation, it had a big role to assume by leading an alienated world, weak economies, high reparation costs, a fragile monetary gold system and newly independent nations. As history shows, the U.S failed in addressing democracy and freedom as Nazi, Fascist and Communist movements propagated all over Europe. They also failed as leaders of the economy by driving themselves and the world into the Great Depression. It wasn’t until the aftermath of World War II \(^1\) that the U.S took a real lead and proved its political, economical, technological and military efficiency.

The inexperienced U.S took several hits and shocks in order to become the strong nation of 1950. A series of shocks between the two World Wars shaped the U.S into a “great” nation. One of the most notable shocks was the Great Depression.

\(^1\) World War II, abbreviated as WWII or WW2, was a global war that was under way by 1939 and ended in 1945. It involved a vast majority of the world's nations—including all of the great powers—eventually forming two opposing military alliance: the Allies and the Axis.
CHAPTER 2

THE GREAT DEPRESSION

2.1. Introduction

The economic history of the US has always suffered from events of depression and deflation long before the famous Great Depression of 1929. The US underwent a series of depressions from 1873 to 1896 better known as the Long Depression. So it is interesting to examine the history of the economy before World War I\(^2\) which has changed the rules of the game and had deterministic results on most nations, while some totally vanished or weakened some others rose and prospered.

After the Second Industrial Revolution\(^3\), nations were experiencing strong economic growth that soon seemed to fade away with overoptimistic stock prices and fears from bubbles which drove Europe and the U.S into series of financial crises and depressions. The primary cause of price depression in the U.S was the tight monetary policy\(^4\) that the U.S. followed to return to the gold standard\(^5\) after the Civil War. The

\(2\) World War I (WWI), which was predominantly called the World War or the Great War from its occurrence until 1939 was a major war centered in Europe that began on 28 July 1914 and lasted until 11 November 1918.

\(3\) The Second Industrial Revolution, also known as the Technological Revolution, was a phase of the larger Industrial Revolution corresponding to the latter half of the 19th century until WWI. It is considered to have begun with Bessemer steel in the 1860s and culminated in mass production and the production line.

\(4\) Monetary policy is the process by which the monetary authority of a country controls the supply of money, often targeting a rate of interest for the purpose of promoting economic growth and stability.

\(5\) The gold standard is a monetary system in which the standard economic unit of account is a fixed weight of gold – the gold standard is the system that was implemented before the Gold Exchange Standard of 1870.
U.S was taking money out of circulation and therefore there was less cash available to facilitate trade. Because of the monetary policy the price of silver started to fall causing substantial losses of asset values and wealth which led to the collapse of 1873\(^6\). Other contributing factors to the collapse were the overinvestment in railways and the demonetization of silver by European and U.S governments in the early 1870’s. The western U.S states namely Nevada, Colorado, and Idaho were outraged because they were huge silver producers with productive mines, and for a few years mining paused. The resumption of the U.S government to buying silver was enacted in 1890 with the controversial Sherman Silver Purchase Act\(^7\). While not authorizing the free and unlimited coinage of silver that the Free Silver supporters wanted, it increased the amount of silver the government was required to purchase every month. The Sherman Silver Purchase Act had been passed in response to the increasing complaints of farmers and miners’ interests. Farmers had large debts that could not be paid off due to deflation caused by overproduction. They urged the government to pass the act in order to boost the economy and cause inflation, allowing them to pay their debts with cheaper dollars. Under the Act, the federal government purchased millions of ounces of silver with issues of paper currency; moreover the government was now required to purchase an additional 4.5 million ounces of silver bullion every month. The law required the Treasury to buy the silver with a special issue of Treasury Notes that could be

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\(^6\) The collapse of 1873 or the Panic of 1873 triggered a severe international economic depression in both Europe and the United States that lasted until 1879. The depression was known as the Great Depression until the 1930s, but is now known as the Long Depression. The panic was caused by the fall in demand for silver internationally, which followed Germany's decision to abandon the silver standard in the wake of the Franco-Prussian war.

\(^7\) The Sherman Silver Purchase Act was enacted on July 14, 1890 as a United States federal law. It was named after its author, Senator John Sherman, an Ohio Republican, chairman of the Senate Finance Committee.
redeemed for either silver or gold. That plan backfired, as people turned in the new coin notes for gold dollars, thus depleting the government's gold reserves and leading to the panic of 1907\(^8\) better known as the Bankers’ Panic. It was another financial panic that occurred when the New York Stock Exchange fell almost 50%. Panic amplified with numerous bank runs and runs on trust companies where many state and local banks and businesses went bankrupt. The main cause of the bank panic was the absence of a regulator and Federal Reserve Bank that could intervene to pump in money when banks run short on liquidity. It was the first time that supporters of the laissez-faire policy claimed the need of a regulator. To explain the situation more clearly, we go back to the time when U.S President Andrew Jackson allowed the charter of the Second Bank of the United States\(^9\) to expire in 1836. The U.S was without any sort of Central Bank, and the money supply in New York City fluctuated with the country's annual agricultural cycle. Each autumn, money flowed out of the city as harvests were purchased and in an effort to attract money back interest rates were raised. Foreign investors then sent their money to New York to take advantage of the higher rates. So with the fluctuation of money going in and out and the depletion of gold reserves from banks following the Sherman Silver Purchase Act, government sought the need of a structured Central Bank.

The Gold Exchange Standard was successful at the beginning of 1890’s as a means to suppress exchange rate fluctuation and to encourage international trade, but then nations started to feel the burden of the tight monetary policy that they needed to maintain to

\(^8\) The Panic of 1907, also known as the 1907 Bankers’ Panic, was a financial crisis that occurred in the United States when the New York Stock Exchange fell almost 50% in one year.

\(^9\) The Second Bank of the United States was chartered in 1816, five years after the First Bank of the United States lost its own charter. The predominant reason that it was chartered was that in the War of 1812, the U.S. experienced severe inflation and had difficulty in financing military operations.
honor the gold standard, which reduced their economic growth and harmed their competitive advantage on the international market. In 1914 World War I ended their deadlock and many suspended the Gold Exchange Standard claiming that they needed money to finance their war factories but suffered significant inflation. Because inflation levels varied between states, when they returned to the standard after the war at price determined by themselves as some, for example, chose to enter at pre-war prices, some countries' goods were undervalued and some overvalued, ultimately, the system as it stood could not deal quickly enough with the large deficits and surpluses created in the balance of payments and soon after, the world entered into the Great Depression (Lipsey 1989).

2.2. Great Depression 1929-1941

The Great Depression, in the U.S, began in the summer of 1929. The downturn became markedly worse in late 1929 and continued until early 1933. Real output and prices fell abruptly. Between the peak and the trough of the downturn, industrial production in the United States declined by 47% and real GDP\(^1\) fell by 30%, the wholesale price index\(^2\) declined by 33%. Such declines in the price level are referred to as deflation. Moreover one fourth of the American workforce were out of work as the unemployment rate exceeded 25%.

The Great Depression was the most severe depression ever experienced by the industrialized Western world (Romer 2003). Although the Depression started in the

\(^1\) Real Gross Domestic Product (GDP) is an important macroeconomic measure of the value of output economy adjusted for price changes (inflation or deflation) – often economist rely on real GDP to measure a nation’s growth.

\(^2\) The Wholesale Price Index (WPI) was the name of the program from its inception in 1902 until 1978, when it was renamed Produce Price Index. It measures the price of a representative basket of wholesale goods.
United States, it resulted in drastic declines in output, severe unemployment, and acute
deflation in almost every country of the globe. But its social and cultural effects were no
less staggering, especially in the United States, where the Great Depression ranks
second only to the Civil War as the gravest crisis in American history (Romer 2003).

The Federal Reserve Board did not directly cause the depression but it also
made no effort to intervene by helping banks. The money supply fell by one-third, and it
was almost impossible for banks to get loans. In his last year as president, Herbert
Hoover 12 passed a massive tax increase to boost federal revenues, and signed the
protectionist Smoot-Hawley Tariff13, which prompted retaliation by Canada, Britain,
Germany and other trading partners. Economists generally agree that these measures
deepened an already serious crisis. By 1932, the unemployment rate was 25%.
Conditions were worse in heavy industry, lumbering, export agriculture (cotton, wheat,
tobacco), and mining (Mitchell 1947).

Franklin Delano Roosevelt was elected President in 1932 without a specific
program. He relied on a highly eclectic group of advisors who patched together many
programs, known as the New Deal. Government spending increased from 8.0% of GNP
under Hoover in 1932 to 10.2% of GNP in 1936. While Roosevelt balanced the regular
budget the emergency budget was funded by debt, which increased from 33.6% of GNP
in 1932 to 40.9% in 1936 (Kennedy 1999). Deficit spending had been recommended by

12 Herbert Clark Hoover was the 31st President of the United States from 1929
to 1933. He is ranked among the worst presidents because of his role during the Great
Depression.

13 Smoot-Hawley Tariff was an act signed into law on June 17, 1930, that
raised U.S tariffs on over 20,000 imported goods to record levels. The overall level
tariffs under the Tariff were the second-highest in U.S. history. The act, and the ensuing
retaliatory tariffs by U.S. trading partners, reduced American exports and imports by
more than half.
some economists, most notably John Maynard Keynes14 in Britain.

There are many factors that contributed to the Great Depression, most notably the rigid Gold Exchange Standard, unregulated markets that permitted overoptimistic loans by banks and investors, the lack of high-growth new industries, the unwillingness of Hoover administration to let the Federal Government intervene and stimulate the market, the high tariffs that slumped exports, the inefficient high taxes that contracted companies’ profits and resulted in employees layoffs and other factors that I will elaborate in the next section, have all interacted to create a downward economic spiral of reduced aggregate demand, falling confidence, and lowered production.

2.3. Causes of the Great Depression

The fundamental cause of the Great Depression in the United States was a decline in aggregate demand which led to a decline in production as manufacturers and merchandisers noticed a low demand to raise inventories. The sources of the contraction in spending in the United States varied over the course of the Depression, but they cumulated into a monumental decline in aggregate demand. The American decline was transmitted to the rest of the world largely through the gold standard. However, a variety of other factors also influenced the downturn in various countries.

2.3.1. Stock Market Crash

The initial decline in output in the United States in the summer of 1929 is widely believed to have stemmed from tight U.S. monetary policy aimed at limiting

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14 John Maynard Keynes was a British economist whose ideas have profoundly affected the theory and practice of modern macroeconomics, as well as the economic policies of governments. He greatly refined earlier work on the causes of business cycles, and advocated the use of fiscal and monetary measures to mitigate the adverse effects of economic recessions and depressions.
stock market speculation. The 1920s had been a prosperous decade, but not an exceptional boom period; wholesale goods prices had remained nearly constant throughout the decade and there had been mild recessions in both 1924 and 1927 (Romer 2003). The one obvious area of excess was the stock market.

Stock prices had risen more than fourfold from the low in 1921 to the peak reached in 1929 (Kennedy 1999). In 1928 and 1929, the Federal Reserve had raised interest rates in hopes of slowing the rapid rise in stock prices. These higher interest rates depressed interest-sensitive spending in areas such as construction and automobile purchasing, which in turn reduced production.

By the fall of 1929, U.S. stock prices had reached levels that could not be justified by reasonable anticipations of future earnings (Taylor 2008). As a result, when a variety of minor events led to gradual price declines in October 1929, investors lost confidence and the stock market bubble burst. Consequently, the price declines forced some investors to liquidate their holdings, thus exacerbating the fall in prices. Between their peak in September and their low in November, U.S. stock prices declined 33%. Because the decline was so dramatic, economists often refer to it as the Great Crash of 1929.

The stock market crash reduced American aggregate demand and wealth substantially. Consumer purchases of durable goods and business investment fell sharply after the crash. A likely explanation is that the financial crisis generated considerable uncertainty about future income, which in turn led consumers and firms to put off purchases of durable goods. As a result of the drastic decline in consumer and firm spending, real output in the United States, which had been declining slowly up to this point, fell rapidly in late 1929 and throughout 1930. Thus, while the Great Crash of the stock market and the Great Depression are two quite separate events, the decline in
stock prices was one factor causing the decline in production and employment in the United States (Romer 2003).

### 2.3.2. Banking Panics and Monetary Contraction

The next hit to aggregate demand occurred in the fall of 1930, when the first of four waves of banking panics raided the U.S. A banking panic arises when many depositors lose confidence in the solvency of banks and simultaneously demand their deposits be paid to them in cash. Banks, which typically hold only a fraction of deposits as cash reserves, must liquidate loans in order to raise the required cash. This process of rushed liquidation can cause even a previously solvent bank to fail. The U.S experienced widespread banking panics in the fall of 1930, the spring of 1931, the fall of 1931, and the fall of 1932 (McElvaine 2004). The final wave of panics continued through the winter of 1933 and culminated with the national “bank holiday” declared by President Franklin Roosevelt on March 6, 1933. The bank holiday\textsuperscript{15} closed all banks, permitting them to reopen only after being deemed solvent by government inspectors.

The panics took a severe toll on the American banking system. By 1933, one-fifth of the banks in existence at the start of 1930 had failed.

By their nature, banking panics are largely irrational, inexplicable events, but some of the factors contributing to the problem can be explained. Economic historians believe that substantial increases in farm debt in the 1920s, together with U.S. policies that encouraged small, undiversified banks, created an environment where such panics could ignite and spread. The heavy farm debt stemmed in part from the response to the

\textsuperscript{15} Bank Holiday was a nationwide bank closure to reduce bank runs. The bank holiday was possible thanks to The Emergency Banking Act an act signed by President Franklin D. Roosevelt during the Great Depression. This act allows only Federal Reserve-approved banks to operate in the United States of America.
high prices of agricultural goods during World War I. American farmers borrowed heavily to purchase and improve land in order to increase production. The decline in farm commodity prices following the war made it difficult for farmers to keep up with their loan payments (Romer 2003).

In ordinary times, such as the 1920s, both the money supply and output tend to grow steadily. But, in the early 1930s, both plummeted. The decline in the money supply depressed spending in a number of ways. Perhaps most importantly, because of actual price declines and the rapid decline in the money supply, consumers and business people came to expect deflation and therefore they expected wages and prices to be lower in the future. As a result, even though nominal interest rates were very low, people did not want to borrow because they feared that future wages and profits would be inadequate to cover the loan payments. This hesitance, in turn, led to severe reductions in both consumer spending and business investment spending. The panics surely exacerbated the decline in spending by generating pessimism and a loss of confidence (Romer 2003).

2.3.3. The Gold Standard

Economists believe that the Federal Reserve had to contract its monetary policy to maintain the gold standard and reduce speculative attacks. Under the gold standard, each country set a value of its currency in terms of gold and took monetary actions to defend the fixed price. If the Federal Reserve had expanded greatly in response to the banking panics, foreigners could have lost confidence in the United States’ commitment to the gold standard. This could have led to large losses in gold reserves and outflows and the United States could have been forced to devalue. It is possible that there would have been a speculative attack on the dollar and the Unites
States would have been forced to abandon the gold standard along with Great Britain.

Based on my research, I noticed that while some economists still debate the role the gold standard played in tightening U.S. monetary policy and its inability to face the depression, there is no doubt that it was a key factor in the transmission of the American decline to the rest of the world.

France decided after World War I to return to the gold standard with an undervalued franc which led to trade surpluses and substantial gold inflows whereas Britain chose to return to the gold standard after World War I at the pre-war parity.

Wartime inflation, however, implied that the pound was overvalued, and this overvaluation led to trade deficits and substantial gold outflows after 1925. To reverse gold outflow, the Bank of England raised interest rates substantially. High interest rates depressed British spending and led to high unemployment in Great Britain throughout the second half of the 1920s (Eichengreen 1996; Mitchell 1947).

When the U.S. economy began to contract severely, gold fled out from other countries toward the United States. This occurred because deflation in the U.S made American goods particularly cheap for foreigners, while low income reduced American demand for foreign products. To counteract the resulting tendency toward an American trade surplus and foreign gold outflows, central banks throughout the world raised interest rates. Keeping the international gold standard required a massive monetary contraction throughout the world to match the one occurring in the United States. The result was a decline in output and prices in countries throughout the world that also nearly matched the downturn in the United States (Eichengreen 1996).

2.3.4. International Lending and Trade

Foreign lending to Germany and other countries had heavily expanded in the
mid-1920s. However U.S. lending abroad fell in 1928 and 1929 when interest rates started to increase as a measure to reduce the booming stock market. This reduction in foreign lending caused a further credit contractions and declines in output in borrower countries which forced some to default on their previous obligations. In Germany, which experienced hyperinflation\(^1\) in the early 1920s, monetary authorities hesitated to undertake expansionary policy to counteract the economic slowdown because they were worried it might restart inflation. The effects of reduced foreign lending may explain why the economies of Germany, Argentina, and Brazil experienced a downturn before the Great Depression began in the United States (Romer 2003).

The Smoot-Hawley tariff in the United States and the worldwide rise in protectionist trade policies created more complications. The Smoot-Hawley tariff originally was created to boost farm incomes by reducing foreign competition in agricultural products. But other countries followed suit, both in retaliation and in an attempt to force a correction of trade imbalances. Protectionist policies contributed to the extreme decline in the world price of raw materials, which caused severe balance-of-payments problems for primary-commodity producing countries and led to contractionary policies (Eichengreen 1996).

### 2.4. Literature Review

Economists and historians disagree as to what role the crash played in

\(^1\) Beginning in August 1921, Germany began to buy foreign currency with Marks at any price in order to pay reparations. The lower the mark sank in international markets, the greater the amount of marks were required to buy the foreign currency demanded by the Reparations Commission, Mark fell to 8000 Marks per Dollar by December 1922. The cost of living index was 41 in June 1922 and 685 in December, an increase of more than 16 times.
subsequent economic, social, and political events. The Economist\textsuperscript{17} stated in 2009 article - Lessons from great depression for economic recovery in 2009- that the Depression did not start with the stock market crash nor was it clear at the time of the crash that a depression was starting. On November 23, 1929, The Economist wondered whether serious Stock Exchange collapses can produce serious setback to industry when industrial production is for the most part in a healthy and balanced condition. Experts have agreed that there must be some setback, but there is not yet sufficient evidence to prove that it will be long or that it need go to the length of producing a general industrial depression.

But The Economist also cautioned that bank failures are also to be expected. Given the circumstances will the banks have any margin left for financing commercial and industrial enterprises or will they not? The position of the banks is without doubt the key to the situation, and what this is going to be cannot be properly assessed until the dust has cleared away

Many academics see the Wall Street Crash of 1929 as a historical process that was a part of the new theories of boom and bust. According to economists such as Joseph Schumpeter and Nikolai Kondratieff the crash was merely a historical event in the continuing process known as economic cycles. The impact of the crash was merely to increase the speed at which the cycle proceeded to its next level.

Milton Friedman's \textit{A Monetary History of the United States}, co-written with Anna Schwartz, makes the argument that what made the great contraction so severe was not the downturn in the business cycle, trade protectionism, or the 1929 stock market crash, but instead the collapse of the banking system during four waves of

\textsuperscript{17} The Economist is an English-language weekly news and international affairs publication owned by The Economist Newspaper Ltd. and edited in offices in London (http://www.economist.com).
Panics over the 1930-33 period (Friedman and Schwartz 1971).

Wheelock similarly argues that the Fed’s policies during this period were “exceptionally contractionary” and the result of “misguided policies” (Wheelock 1998). Hall and Ferguson add to the discussion by pointing out the instability in government’s position, stemming from the adherence to the gold standard (Hall and Ferguson 1998). In contrast, Temin argues that the fall in income was not caused by monetary factors, but rather supports the spending hypothesis on the grounds that interest rates in fact fell (Temin 1976). Mankiw and True provide explanations to reconcile the observed behavior of interest rates with the money hypothesis (Mankiw 1997; True 1993). It is important to note that adherence to the gold standard and limitations on the powers of the Fed greatly contributed to the Fed’s inability to stabilize the monetary decline during these years.

Evidence and existing literature suggest that The Great Depression revealed the flaws of the gold standard and the need to expand the Federal Reserve System’s money stabilizing role. The money supply was drastically diminished by gold and capital outflows and prices underwent a severe deflation, thereby disrupting output, debt-creditor arrangements, and lowering expectations of future improvements. It was not until the newly elected President, Franklin D. Roosevelt, suspended the gold standard in 1933 and the Fed was given more powers through the 1933 Glass-Steagall Act18 that it was able to counteract some of the debilitating trends of the Great Depression.

The Federal Reserve did little to try to stem the banking panics. Friedman and

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18 The Glass-Steagall Act or The Banking Act of 1933 was the law that established the Federal Deposit Insurance Corporation (FDIC) and imposed banking reforms, several of which were intended to control speculation. Of the most important articles of the act is that it limited commercial bank securities activities and affiliations between commercial banks and securities firms. The Act was later repealed by the Gramm-Leach-Bliley Act in 1999 by President Bill Clinton which many economists consider it as one of the cause of the Subprime Mortgage crisis of 2007.
Schwartz argue that the death of Benjamin Strong, the governor of the Federal Reserve Bank of New York, was an important source of this inaction. Strong had been a forceful leader who understood the ability of the central bank to limit panics. His death left a power vacuum at the Federal Reserve and allowed leaders with less sensible views to block effective intervention. The panics caused a dramatic rise in the amount of currency people wished to hold relative to their bank deposits (Friedman and Schwartz 1971).

This rise in the currency-to-deposit ratio was a key reason why the money supply in the United States declined by 31% between 1929 and 1933. In addition to allowing the panics to reduce the U.S. money supply, the Federal Reserve also deliberately contracted the money supply and raised interest rates in September 1931, when Britain was forced off the gold standard and investors feared that the United States would devalue as well (Friedman and Schwartz 1971).

2.5. Post World War I Government Policies

The Roaring Twenties\(^1\), the decade that led up to the Crash, was a time of wealth and excess. Despite the dangers of speculation, many believed that the stock market would continue to rise indefinitely. The market had been on a six-year run that saw the Dow Jones Industrial Average increase in value, peaking at 381.17 on September 3, 1929. Shortly before the crash, economist Irving Fisher famously proclaimed, "Stock prices have reached what looks like a permanently high plateau." (Teach 2007) The optimism and financial gains of the great bull market were shaken on

\(^1\) The Roaring Twenties characterizes the distinctive cultural edge of the 1920s, principally in American cities, Berlin and Paris, for a period of sustained economic prosperity. The phrase emphasizes the period's social, artistic, and cultural dynamism.
Black Thursday, October 24, 1929\textsuperscript{20}, when share prices on the New York Stock Exchange fell dramatically.

So let us examine the aspects of the fiscal and monetary policies that were implemented after World War I that gave a decade of prosperity during the Roaring Twenties but then led to the Great Crash and eventually the Great Depression, and what President Franklin D Roosevelt New Deal’s achieved in terms of recovery.

On March 4, 1921, President Harding \textsuperscript{21} assumed office while the nation was in the midst of a postwar economic decline, known as the Depression of 1920–21. By summer of his first year in office, an economic recovery began.

President Harding convened the Conference of Unemployment in 1921, headed by Secretary of Commerce Herbert Hoover that proactively advocated stimulating the economy with local public work projects and encouraged businesses to apply shared work programs (Report of the President’s Conference on Unemployment).

Andrew Mellon, the Treasury secretary at that time, revealed a study claiming that as income tax rates were increased, money was driven underground or abroad. Mellon concluded that lower rates would increase tax revenues. Based on this advice, Harding cut taxes, starting in 1922. The top marginal rate was reduced annually in four stages from 73\% in 1921 to 25\% in 1925. Taxes were cut for lower incomes starting in 1923 (See Figure 1).\textsuperscript{22}

As a result, revenues to the treasury increased substantially. Unemployment also continued to fall. Economists claim that the tax cuts ended the Depression of 1920–

\textsuperscript{20} Black Thursday refers to October 24, 1929, when panicked sellers traded nearly 13 million shares on the New York Stock Exchange (more than three times the normal volume at the time), and investors suffered $5 billion in losses

\textsuperscript{21} Warren Harding was the 29th President of the United States and served from 1921 to 1923, he was known for his promise to return to “normalcy”.

\textsuperscript{22} Data of Figure 1 is taken from Internal Revenue Service website.
1921 and were responsible for creating a decade-long expansion. Wages, profits, and productivity all made substantial gains during the 1920s.

One of President Harding’s greatest achievements was the creation of the Budget and Accounting Act of 1921. The law created the Presidential Budget Director who was directly responsible to the President, rather than the Secretary of the Treasury. The General Accounting Office was created to assure monitoring of federal budget expenditures. President Warren Harding appointed Charlie Dawes, known for being an effective financier, as the first director of the Bureau of the Budget.

Fig. 1. Tax Rate on Higher and Lower Brackets from 1913 to 1934
Source: Data taken from Internal Revenue Service

Dawes reduced government spending by $1.5 billion his first year as director, a 25% reduction, along with another 25% reduction the following year (Russell 1962). In effect, the Government budget was nearly cut in half in just two years. Harding believed the federal government should be fiscally managed similar to the private sector having
campaigned "Less government in business and more business in government". Federal spending declined from $6.3 billion in 1920 to $5 billion in 1921 and $3.3 billion in 1922. Tax rates, meanwhile, were slashed for every income group. Over the course of the 1920s, the national debt was reduced by one third (Russell 1962).

2.5.1. Protective Tariffs

On September 21, 1922, President Harding signed a double edged sword act, the Fordney-McCumber Tariff Act\(^\text{23}\), that despite its worthiness for the economy and agriculture in the short term had devastating results in the long run and many historians consider the Act as one of the factors that caused the Great Depression. The Act increased the tariff rates contained in the previous Underwood-Simmons Tariff Act of 1913, to the highest level in the nation's history. Harding became concerned when agricultural business suffered economic hardship from the high tariffs. By 1922, Harding began to realize that the long-term effects of tariffs could be unfavorable to the national economy. Harding’s successors, President Calvin Coolidge and President Herbert Hoover ignored Harding’s fears and advocated tariff legislation.

The first sector of the economy that was hit by a fall in post-war demand was agriculture. During World War I, the American agricultural industry enjoyed prosperity, through the raising of prices which led to increased output as Americans were at that time supplying Europe. Some of the post war problems for American agriculture come from the great surplus of farm goods that could not be absorbed in the national market, because European countries had recovered sufficiently from the war,

\(^{23}\) The Fordney–McCumber Tariff of 1922 raised American tariffs in order to protect factories and farms. Congress displayed a pro-business attitude in passing the ad valorem tariff and in promoting foreign trade through providing huge loans to Europe, which in turn bought more American goods.
and their markets no longer required large quantities of American agricultural products. Gross farm income in 1919 amounted to $17.7 billion (Kindleberger 2000).

By 1921, exports to Europe had plummeted and farm income fell to $10.5 billion. Other sectors of the economy wanted to avoid a similar fate. The 1920 election put the Republicans in control of Congress and the White House. Special interests began to petition an amenable Congress for trade protection which led to the creation of the Fordney-McCumber Tariff Act.

The tariff was supported by the Republican Party and conservatives and was generally opposed by the Democratic Party and liberal progressives. One objective of the tariff was to help those returning from World War I have greater job opportunities. Trading partners complained immediately. European nations affected by World War I sought access for their exports to the American market to make payments to the U.S. for war loans. Cordell Hull, a Democratic Representative, said, "Our foreign markets depend both on the efficiency of our production and the tariffs of countries in which we would sell. Our own tariffs are an important factor in each. They injure the former and invite the latter" (Hull 2004).

Five years after the passage of the tariff, American trading partners had raised their own tariffs by a significant degree. France raised its tariffs on automobiles from 45% to 100%, Spain raised tariffs on American goods by 40%, and Germany and Italy raised tariffs on wheat (Hull 2004).

In 1928, Henry Ford attacked the Fordney–McCumber Tariff, arguing that the American automobile industry did not need protection since it dominated the domestic market, and their interest is in expending foreign sales (Kaplan 1996).

Democratic Senator David Walsh also challenged the tariff by arguing that the farmer is the net exporter and does not need protection because they depend on
foreigner markets to sell their surplus. The Senator pointed out that during the first year of the tariff the cost of living climbed higher than any other year, presenting a survey of the Department of Labor, in which all 32 cities assessed had seen an increase in the cost of living. Statistics of the Bureau of Research of the American Farm Bureau showed that farmers had lost more than $300 million annually as a result of the tariff (Kaplan 1996).

2.5.2. Speculative Bubble

In the years before the famous Wall Street Crash of 1929, hundreds of thousands of Americans invested heavily in the stock market. A significant number of them were borrowing money to buy more stocks which eventually led to a speculative bubble. By August 1929, brokers were routinely lending small investors more than two-thirds of the face value of the stocks they were buying. Over $8.5 billion was out on loan, more than the entire amount of currency circulating in the U.S at the time (Kennedy 1999).

The rising share prices encouraged more people to invest; people hoped the share prices would raise further. Speculation thus fueled further rises and created an economic bubble. Because of margin buying, investors stood to lose large sums of money if the market turned down. On October 24, 1929, with the Dow\textsuperscript{24} just past its September 3 peak of 381.17, the market finally turned down, and panic selling started.

2.6. The Rest of the World

By 1914, most developed countries had adopted the gold standard with a fixed exchange rate between the national currency and gold. In World War I, European

\textsuperscript{24} The Dow Jones Industrial Average is sometimes referred as Dow.
nations went off the gold standard to print money, and the resulting price inflation drove large amounts of the world’s gold to banks in the United States. The United States remained on the gold standard without altering the gold value of the dollar. Investors and others who held gold sent their gold to the United States, where gold maintained its value as a safe and sound investment. At the end of World War I, few countries, most notably the United States, continued on the gold standard while others temporarily adopted floating exchange rates. Some countries pledged to return to the gold standard with devalued currencies, while others followed the British lead and aimed to return to gold at prewar exchange rates. This was not possible, however, because too much money had been created during the war to allow a return to the gold standard without either large currency devaluations or price deflations (Coppock 1961; Mitchell 1947). In addition, the U.S. gold stock had doubled to about 40 percent of the world’s monetary gold. There simply was not enough monetary gold in the rest of the world to support the countries’ currencies at the existing exchange rates. As a result, the leading nations established a gold exchange system whereby the governments of the United States and Great Britain would be willing, at all times, to redeem the dollar and the pound for gold, and other countries would hold much of their international reserves in British pounds or U.S. dollars.

In 1928, the Federal Reserve System raised its discount rate in order to raise interest rates in the U.S, which would stop the outflow of American gold and dampen the booming stock market. As a result, the U.S began to receive shipments of gold. By 1929, as countries around the world lost gold to France and the United States, these countries’ governments initiated deflationary policies to reverse their gold outflows and remain on the gold standard (Mitchell 1947). These deflationary policies were designed to restrict economic activity and reduce price levels, and that is exactly what they did,
bringing international trade to a standstill.

Economic historian Charles Kindleberger said, in 1929 there was no "lender of last resort effectively present, which, if it had existed and were properly exercised, would have been key in shortening the business slowdown that normally follows financial crises" (Kindleberger 2000). The crash marked the beginning of widespread and long-lasting consequences for the United States. The main question is: did the crash ignited the depression? Only 16% of American households invested in the stock market during the period leading up to the depression, suggesting that the crash carried somewhat less of a weight in causing the depression. However, the psychological effects of the crash echoed across the nation as business became aware of the difficulties in securing capital markets investments for new projects and expansions. Business uncertainty naturally affects job security for employees, and as the consumer faces uncertainty with regards to income, naturally the propensity to consume declines. The decline in stock prices caused bankruptcies and severe macroeconomic difficulties including contraction of credit, business closures, layoffs, bank failures, decline of the money supply, and other economic depressing events. The failure set off a worldwide run on US gold deposits and forced the Federal Reserve to raise interest rates therefore limiting liquidity and contracting money supply leading to the bankruptcies of 4,000 banks and other lending institutions (Kindleberger 2000).

2.7. The New Deal and the Road to Recovery

Calls for greater government assistance increased as the U.S. economy continued to decline. Hoover rejected direct federal relief payments to individuals, as he believed that a dole would be addictive, and would reduce the incentive to work. He was also a firm believer in balanced budgets, and was unwilling to run a budget deficit
to fund welfare programs. However, Hoover did pursue many policies in an attempt to pull the country out of depression.

In 1932, the Pecora Commission\(^\text{25}\) was established by the U.S Senate to study the causes of the crash. The following year, the U.S. Congress passed the Glass–Steagall Act, an act that was signed under Roosevelt’s New Deal Program, mandating a separation between commercial banks, which take deposits and extend loans, and investment banks, which underwrite, issue, and distribute stocks, bonds, and other securities.

When Roosevelt assumed office on March 4, 1933 the U.S. was at the whirlpool of the worst depression in its history. A quarter of the workforce was unemployed. Farmers were in deep trouble as prices fell by 60%. Industrial production had fallen by more than half since 1929. Two million were homeless (Kennedy 1999). By the evening of March 4, 32 of the 48 states – as well as the District of Columbia – had closed their banks. The New York Federal Reserve Bank was unable to open on the 5th, as huge sums had been withdrawn by panicky customers in previous days. Beginning with his inauguration address, Roosevelt began blaming the economic crisis on bankers and financiers, the quest for profit, and the self-interest basis of capitalism: “Primarily this is because rulers of the exchange of mankind's goods have failed through their own stubbornness and their own incompetence, have admitted their failure, and have abdicated. Faced by failure of credit they have proposed only the lending of more money. Stripped of the lure of profit by which to induce our people to follow their false leadership, they have resorted to exhortations, pleading tearfully for

\[^{25}\text{The Pecora Investigation was an inquiry begun on March 4, 1932 by the United States Senate Committee on Banking and Currency to investigate the causes of the Wall Street Crash of 1929. The name refers to the fourth and final chief counsel for the investigation, Ferdinand Pecora.}\]
restored confidence....The measure of the restoration lies in the extent to which we apply social values more noble than mere monetary profit.\textsuperscript{26}

\textbf{2.7.1. First New Deal, 1933–1934}

Implemented after the great depression during the first term of Franklin D Roosevelt administration, the New Deal was a series of economic programs in response to the Great Depression and focused on the 3 R’s: Relief, Recovery and Reform: Relief for unemployed and poor, Recovery of the economy to normal levels, and Reform of the financial system to prevent a repeat depression. The first part of his strategy: immediate relief. From March 9 to June 16, 1933, he sent Congress a record number of bills, all of which passed easily. Like Hoover, he saw the Depression caused in part by people no longer spending or investing because they were afraid. Hence the backdrop for his famous words: "The only thing we have to fear is fear itself." The very next day Congress passed the Emergency Banking Act which declared a "bank holiday" and announced a plan to allow banks to reopen (Burns 1956). This was his first proposed step to recovery. To give Americans confidence in the banks, Roosevelt signed the Glass–Steagall Act that created the Federal Deposit Insurance Corporation (FDIC). The Act provided safer and more effective use of the assets of banks, to regulate interbank control, to prevent the undue diversion of funds into speculative operations, and for other purposes. Congressional efforts to repeal the Glass-Steagall Act culminated in the 1999 Gramm-Leach-Bliley Act (GLBA), which repealed the two provisions restricting affiliations between banks and securities firms and which Krugman attributes to Greenspan and Gramm for the key roles they played in

\textsuperscript{26} The inauguration speech of Franklin D. Roosevelt as the 32nd President of the United States was held on Saturday, March 4, 1933. The inauguration marked the commencement of the first four-year term of Franklin D. Roosevelt as President
keeping derivatives, financial markets, and investment banks unregulated, and to the Gramm-Leach-Bliley Act, which repealed Great Depression era safeguards that prevented commercial banks, investment banks and insurance companies from merging (Krugman 2008).

The National Recovery Administration\(^2\) (NRA), sought to stimulate demand and provide work and relief through increased government spending. To end deflation, the Gold standard was suspended and a series of panels comprising business leaders in each industry set regulations which ended what was called cut-throat competition, believed to be responsible for forcing down prices and profits nationwide (Hawley 1995).

The NRA, which ended in March 1935 when the Supreme Court of the United States declared it unconstitutional, had these roles (Norton \textit{et al.} 2011):

- Setting minimum prices and wages and competitive conditions in all industries.
- Encouraging unions that would raise wages, to increase the purchasing power of the working class by 93%.
- Cutting farm production so as to raise prices and make it possible to earn a living in farming.

\subsection*{2.7.1.1. Relief}

Relief measures for the unemployed, the Federal Emergency Relief Administration, the most popular of all New Deal agencies – and Roosevelt's favorite

\textsuperscript{2} The National Recovery Administration (NRA) was the primary New Deal agency established by U.S. president Franklin D. Roosevelt in 1933. The goal was to eliminate cut-throat competition by bringing industry, labor and government together to create codes of fair practices and set prices.
was the Civilian Conservation Corps\(^\text{28}\) (CCC), which hired 250,000 unemployed young men to work on rural local projects.

Congress also gave the Federal Trade Commission broad new regulatory powers and provided mortgage relief to millions of farmers and homeowners. Roosevelt expanded a Hoover agency, the Reconstruction Finance Corporation, making it a major source of financing for railroads and industry. Roosevelt made agricultural relief a high priority and set up the first Agricultural Adjustment Administration\(^\text{29}\) (AAA). The AAA tried to force higher prices for commodities by paying farmers to take land out of crops and to cut herds.

2.7.1.2. Reform

Reform of the economy was the goal of the National Industrial Recovery Act\(^\text{30}\) (NIRA) of 1933. It tried to end cutthroat competition by forcing industries to come up with codes that established the rules of operation for all firms within specific industries, such as minimum prices, agreements not to compete, and production restrictions. Industry leaders negotiated the codes which were then approved by NIRA officials. Industry needed to raise wages as a condition for approval. Provisions

\(^{28}\) The Civilian Conservation Corps (CCC) was a public work relief program that operated from 1933 to 1942 for unemployed, unmarried men from relief families, ages 17–23. A part of the New Deal, it provided unskilled manual labor jobs related to the conservation and development of natural resources in rural lands owned by federal, state and local governments.

\(^{29}\) The Agricultural Adjustment Act enacted in May 12, 1933 which restricted agricultural production by paying farmers subsidies not to plant part of their land and to kill off excess livestock. Its purpose was to reduce crop surplus and therefore effectively raise the value of crops.

\(^{30}\) The National Industrial Recovery Act enacted in June 16, 1933 which purpose to authorize the President of the United States to regulate industry and permit cartels and monopolies in an attempt to stimulate economic recovery, and established a national public works program.
encouraged unions and suspended anti-trust laws. The NIRA was found to be unconstitutional by unanimous decision of the U.S. Supreme Court on May 27, 1935. Roosevelt opposed the decision, saying "The fundamental purposes and principles of the NIRA are sound. To abandon them is unthinkable. It would spell the return to industrial and labor chaos" (Schlesinger 2003). In 1933, major new banking regulations were passed. In 1934, the Securities and Exchange Commission was created to regulate Wall Street, with 1932 campaign fundraiser Joseph P. Kennedy in charge (Burns 1956).

2.7.1.3. Recovery

Recovery was pursued through "pump-priming" or federal spending. The NIRA included $3.3 billion of spending through the Public Works Administration to stimulate the economy. Roosevelt worked with Republican Senator George Norris to create the largest government-owned industrial enterprise in American history – the Tennessee Valley Authority (TVA) – which built dams and power stations, controlled floods, and modernized agriculture and home conditions in the poverty-stricken Tennessee Valley (Burns 1956).

The repeal of prohibition also brought in new tax revenues and helped Roosevelt keep a major campaign promise. In April 1933, he issued an Executive Order redefining 3.2% alcohol as the maximum allowed. That order was preceded by Congressional action in the drafting and passage of the 21st Amendment, which was ratified later that year (Schlesinger 2003).

Executive Order 6102 declared that all privately held gold of American citizens was to be sold to the U.S. Treasury and the price to be raised from $20 to $35 per ounce (Executive Order 6102 1933). Exceptions were made for jewelers, coin collectors and a few others. The goal was to counter the deflation which was paralyzing the economy.
Roosevelt tried to keep his campaign promise by cutting the federal budget – including a reduction in military spending from $752 million in 1932 to $531 million in 1934 and a 40% cut in spending on veterans' benefits – by removing 500,000 veterans and widows from the pension rolls and reducing benefits for the remainder, as well as cutting the salaries of federal employees and reducing spending on research and education (Schlesinger 2003).

2.7.2. Second New Deal, 1935–1936

The Second New Deal started after Congressional elections in 1934, which gave Roosevelt large majorities in both houses, there was a fresh surge of New Deal legislation. These measures included the Works Progress Administration (WPA) which set up a national relief agency that employed two million family heads. At the height of WPA employment in 1938, unemployment was down from 20.6% in 1933 to only 14.5% (See Figure 2). 31

The Social Security Act established Social Security and promised economic security for the elderly, the poor and the sick. Senator Robert Wagner wrote the Wagner Act, which officially became the National Labor Relations Act. The act established the federal rights of workers to organize unions, to engage in collective bargaining, and to take part in strikes.

While the First New Deal of 1933 had broad support from most sectors, the Second New Deal challenged the business community. Conservative Democrats, led by Al Smith, fought back with the American Liberty League, attacking Roosevelt and

equating him with Marx and Lenin (Burns 1956). However, the labor unions, energized by the Wagner Act, signed up millions of new members and became a major backer of Roosevelt's reelections in 1936, 1940 and 1944.

Fig. 2. U.S. Unemployment rate from 1910-1960, with the years of the Great Depression (1929-1939) highlighted
Source: Data of Bureau of Labor Statistics, figure taken from Wikipedia page

In 1929, federal expenditures constituted only 20% of the GDP. Between 1933 and 1939, federal expenditures tripled, but the national debt remained about level at 40% of GNP.

Government spending increased from 8.0% of gross national product (GNP) under Hoover in 1932 to 10.2% of the GNP in 1936. The national debt as a percentage of the GNP had more than doubled under Hoover from 16% to 40% of the GNP in early 1933. It held steady at close to 40% as late as fall 1941, then grew rapidly during the war. (See Figure 3)
Deficit spending had been recommended by some economists, most notably by John Maynard Keynes of Britain. The GNP was 34% higher in 1936 than in 1932 and 58% higher in 1940 on the eve of war. That is, the economy grew 58% from 1932 to 1940 in 8 years of peacetime, and then grew 56% from 1940 to 1945 in 5 years of wartime (Hull 2004).

To summarize this chapter, one cannot deny that Roosevelt succeeded in reversing the negative trend in falling output and deflation to a positive output and growth. Economists argue though that the duration of the full recovery could have been reduced if Roosevelt was clearer in his objectives and programs and less contradictory. But one must not forget that in Roosevelt’s time some institutions were not yet created and economic conditions were new and solutions were still under test. Regardless of the duration of the recovery, we can conclude that Roosevelt was able to reach the New Deal’s objective by three things: his leadership, a well regulated monetary system and central bank and the formation of a Big Government.
CHAPTER 3

THE CURRENT GLOBAL ECONOMIC CRISIS

3.1. Introduction

From the years of the Great Depression to the current financial crisis, almost 80 years of difference and yet economists described the current crisis as the Great Recession to show the severity of today’s situation to that of the Great Depression. Of course it wasn’t an honest mistake in misusing the same word in describing both situations, economists purposely used it because they saw the same attributes in both crises. Attributes such as pre-recession conditions that led to the fall, causes, duration, monetary policies, government role, amount of losses and the economic consequences of both crises on public and private sectors, and the worldwide spread of the crisis, led economists to compare and study the Great Depression and the Great Recession.

In this chapter we will focus on causes of the current financial crisis, and note that similar to the Great Depression, both crises come from credit bubble collapse. We will also describe the credit market and the innovative complex products that were created. Then we will examine the role of the Fed before and after the crisis, the first phase led by Alan Greenspan\(^{32}\) and the second by Ben Bernanke\(^{33}\). We then end the chapter in studying the role of the U.S government in the recovery.

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\(^{32}\) Alan Greenspan is an American economist who served as Chairman of the Federal Reserve of the United States from 1987 to 2006. First appointed Federal Reserve chairman by President Reagan in August 1987, he was reappointed at successive four-year intervals until retiring on January 31, 2006 after the second-longest tenure in the position.

\(^{33}\) Ben Bernanke is an American economist and currently chairman of the Federal Reserve since 2006.
3.2. The Financial Crisis and the Subprime Mortgage Crisis

The financial crisis was triggered in the first quarter of 2006, when the housing market in the U.S took a downturn. The financial disturbance was provoked by the rising number of defaults on subprime mortgages.\(^{34}\) Despite several attempts of different governments to halt its progress, the crisis spread across various countries and caused panic.

The percentage of new lower-quality subprime mortgages rose from the historical 8% or lower range to approximately 20% from 2003–2006, with much higher ratios in some parts of the U.S (The state of the nation's housing 2008). A high percentage of these subprime mortgages, over 90% in 2006 for example, were adjustable-rate mortgages (Zandi 2009)\(^ {35}\). The national median single-family home price fell in nominal terms for the first time in 40 years of recordkeeping, leaving several million homeowners with properties worth less than their mortgages (The state of the nation's housing 2008). With the economy softening and many home loans resetting to higher rates, an increasing number of owners had difficulty keeping current on their payments. Mortgage performance, especially on subprime loans with adjustable rates, eroded badly. Lenders responded by tightening underwriting standards and demanding a higher risk premium accelerating the ongoing slide in sales and starts.

U.S households had become increasingly indebted, with the ratio of debt to disposable personal income rising from 77% in 1990 to 127% at the end of 2007,

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\(^{34}\) Subprime mortgage or nonprime mortgage is a type of mortgage used by borrowers of low credit score or in other terms making loans to people who may have difficulty maintaining the repayment schedule. These loans are characterized by higher interest rates and less favorable terms in order to compensate for higher credit risk.

\(^{35}\) Adjustable-rate mortgage (ARM) or tracker mortgage is a mortgage loan with the interest rate on the note periodically adjusted based on an index which reflects the cost to the lender of borrowing on the credit markets.

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much of this increases mortgage-related (Jeffries 2008).

After U.S. house sales prices peaked in 2006 and began declining, refinancing became more difficult. As adjustable-rate mortgages began to reset at higher interest rates which cause higher monthly payments on borrowers, mortgage defaults soared. Securities backed with mortgages, including subprime mortgages, held by financial firms, lost most of their value. Concerns about the soundness of U.S credit and financial markets led to tightening credit around the world and slowing economic growth in the U.S. and Europe.

An increase in loan incentives with easier initial terms and a long-term trend of rising housing prices encouraged borrowers to assume difficult mortgages in the belief that they would be able to quickly refinance at more favorable terms.

The increased market power of originators of subprime mortgages and the declining role of Government Sponsored Enterprises\(^{36}\) as gatekeepers increased the number of subprime mortgages provided to consumers who would have otherwise qualified for conforming loans (Simkovic 2011).

The ongoing foreclosure outbreak, of which subprime loans are one part that began in 2006, continues to be a key factor in the global economic crisis, because it drains wealth from consumers and reduces the financial strength of banking institutions. In the years leading up to the crisis, significant amounts of foreign money flowed into the U.S. from the fast-growing economies of Asia and oil producing countries. This inflow of funds combined with low U.S. interest rates and depreciating Dollar value after 2001 contributed to easy credit conditions, which provoked both housing and

\(^{36}\) Government Sponsored Enterprises is a financial services corporation created by Congress to reduce the cost of capital for certain borrowing sector. Their function is to enhance the flow of credit to targeted sectors of the economy and to make those segments of the capital market more efficient and transparent.
credit bubbles (See Figure 4). Loans of various types, mortgage, credit card, auto and other were easy to obtain and consumers assumed an unprecedented debt load. The amount of mortgage-backed securities, which derive their value from mortgage payments and housing prices, greatly increased. Such financial innovation enabled institutions and investors around the world to invest in the U.S housing market. When housing prices started to decline in 2005-2006, many global financial institutions that had invested in MBS reported significant losses.

Real Value of the Dollar

Between 1 January and October 2008, stock equity holders in U.S. corporations suffered more than $8 trillion in losses, as their holdings declined in value from $20 trillion to $12 trillion. Losses in other countries have averaged about 40% (Duca, Muellbauer and Murphy 2010). Losses in the stock markets and housing value declines
place further downward pressure on consumer spending, a key economic engine
(Friedman 2008).

3.3. Causes of the Crisis

Like any other financial crisis, causes can be attributed to a number of factors
all interacting together and not just one specific cause. But we are certain that it ignited
in both housing and credit markets. Suggested causes include the inability of
homeowners to meet their mortgage payments due primarily to adjustable-rate
mortgages resetting on higher interest rates, borrowers overextending, speculation,
overbuilding, toxic mortgage products37, bad monetary and housing policies,
international trade imbalances, and inappropriate government regulation.

In its "Declaration of the Summit on Financial Markets and the World
Economy," dated 15 November 2008, leaders of the G-20 cited the following causes:

During a period of strong global growth, growing capital flows, and
prolonged stability earlier this decade, market participants sought
higher yields without an adequate appreciation of the risks and failed
to exercise proper due diligence. At the same time, weak underwriting
standards, unsound risk management practices, increasingly complex
and opaque financial products, and consequent excessive leverage
combined to create vulnerabilities in the system. Policy-makers,
regulators and supervisors, in some advanced countries, did not
adequately appreciate and address the risks building up in financial
markets, keep pace with financial innovation, or take into account the
systemic ramifications of domestic regulatory actions.

I think this statement summarizes the whole story of the financial crisis and
policy makers should now work on empowering regulator bodies to examine and
control financial markets. Another statement by the Financial Crisis Inquiry

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37 Part of financial assets whose value has fallen significantly and for which
there is no longer a functioning market, so that such assets cannot be sold at a price
satisfactory to the holder.
Commission in Jan 2011 concludes: “that the crisis was avoidable and was caused by: Widespread failures in financial regulation, including the Federal Reserve’s failure to stem the tide of toxic mortgages; Dramatic breakdowns in corporate governance including too many financial firms acting recklessly and taking on too much risk; An explosive mix of excessive borrowing and risk by households and Wall Street that put the financial system on a collision course with crisis; Key policy makers ill prepared for the crisis, lacking a full understanding of the financial system they oversaw; and systemic breaches in accountability and ethics at all levels.”

3.3.1. Boom and Bust in the Housing Market and Homeowners Speculation

As mentioned above, low interest rates in addition to large inflows of foreign funds induced an easy credit environment for a number of years prior to the crisis, fueling a housing market boom and encouraging debt-financed consumption. The U.S home ownership rate increased from 64% in 1994 to an all-time high of 69.2% in 2004 (The state of the nation's housing 2008). Subprime lending was a major contributor to this increase in home ownership rates and in the overall demand for housing, which drove prices higher and created a bubble (See Figures 5 and 13).

From the early years of 1997 until the year 2006, the price of the standard American house increased by 124%. From 1980 until about 2001, the national median home price ranged from 2.9 to 3.1 times median household income. This ratio rose to 4.0 in 2004, and 4.6 in 2006 (The state of the nation's housing 2008). This housing bubble resulted in quite a few homeowners refinancing their homes at lower interest rates, or financing consumer spending by taking out second mortgages secured by the

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38 The Financial Crisis Inquiry Commission is a ten-member commission appointed by the U.S government with the goal of investigating the causes of the financial crisis of 2007–2010
price appreciation. As a small comparison of what a bubble looks like, the U.S household debt as a percentage of annual disposable personal income was 127% at the end of 2007, versus 77% in 1990 (Jeffries 2008).

![Fig. 5. Total of New Privately Owned House V/S Percentage Change from 1994 to 2010](image1)

*Source:* Data taken from Bureau of Economic Analysis

![Fig. 6. Percentage of Savings from Disposable Product income in US](image2)

*Source:* Data taken from Bureau of Economic Analysis
Fig. 7. Change of GDP in Billions of Dollars from 1950 to 2011

Fig. 8. Percent Change of GDP from 1950 to 2011
Real GDP

Source: Bureau of Economic Analysis  http://www.dallasfed.org

Fig. 9. Percent Change of Real GDP by quarter from 2007 to 2011

Fig. 10. US Unemployment Rate from 1970 to 2012
Fig. 11. Short Term Interest Rates in US from 2007 to 2011

Fig. 12. U.S Imports and Exports from 1998 to 2011
While housing prices were increasing, consumers were saving less (See Figure 6) and both borrowing and spending more. Household debt grew from $705 billion in 1974, 60% of disposable personal income, to $7.4 trillion at in 2000, and finally to $14.5 trillion in 2008, 134% of disposable personal income (Bureau of Economic Analysis – Personal Saving Chart 2009).

During 2008, the typical USA household owned 13 credit cards, with 40% of households carrying a balance, up from 6% in 1970 (Zandi 2009). A report of the IMF shows that U.S. home mortgage debt relative to GDP increased from an average of 46% during the 1990s to 73% during 2008, reaching $10.5 trillion.

Increasing foreclosure rates increases the inventory of houses offered for sale. The number of new homes sold in 2007 was 26.4% less than in the preceding year. By January 2008, the inventory of unsold new homes was 9.8 times the December 2007
sales volume, the highest value of this ratio since 1981 (Liebowitz 2009). As prices declined, more homeowners were at risk of default or foreclosure. House prices are expected to continue declining until this inventory of unsold homes declines to normal levels. A report in January 2011 stated that U.S. home values dropped by 26 percent from their peak in June 2006 to November 2010, more than the 25.9 percent drop from 1928 to 1933 when the Great Depression occurred (Curnutte 2011).

Speculation in residential real estate is a major contributing factor to the subprime mortgage crisis. The Bureau of Economic Analysis reported that during 2006, 22% of homes purchased which count for more than 1.6 million units were for investment purposes, and another 14% which count for more than 1.07 million units purchased as vacation homes. In other words, a record level of nearly 35% of homes purchased was not intended as primary residences. David Lereah, National Association of Realtors’ (NAR) chief economist at the time, stated that the 2006 decline in investment buying was expected: "Speculators left the market in 2006, which caused investment sales to fall much faster than the primary market."

Historically, housing prices have always appreciated at roughly the rate of inflation, however during the last decade from 2000 onward housing prices nearly doubled between 2000 and 2006, while US real wage has been falling since 1999. On another note, I noticed while I was reviewing 2004 and 2005 U.S news channels that the media played a speculative role by encouraging people to buy for a short time then sell with profit. For instance they have reported that condominiums are being purchased while under construction, then being sold for a profit without the seller ever having lived in them.

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39 NRA is North America's largest trade association involved in all aspects of the residential and commercial real estate industries. NAR also functions as a self-regulatory organization for real estate brokerage.
3.3.2. Financial Innovation and Complex Products

Traditionally, before the subprime era, prime U.S borrowers obtained their mortgages from banks, which in turn held the loans in portfolio and funded them with deposits, or alternatively from originators who sold conforming loans to Freddie Mac\textsuperscript{40} and Fannie Mac\textsuperscript{41}. These government sponsored enterprises (GSEs) packaged the loans into residential mortgage-backed securities by selling them to investors, whom the GSEs insured against mortgage default. Seeing the GSEs as backed by the U.S. government, investors viewed GSE issued debt and MBS\textsuperscript{42} as low default risk. On the other hand, nonprime borrowers obtained loans from the Federal Housing Administration\textsuperscript{43} (FHA) which imposes a smaller down-payment. However, owing to the FHA limits on loan size and debt service ratios, FHA loans were a small share of the mortgage market in the pre-subprime era. In recent years, private nonprime mortgages

\textsuperscript{40} The Federal Home Loan Mortgage Corporation known as Freddie Mac is a public GSE. The FHLMC was created in 1970 to expand the secondary market for mortgages in the U.S along with other GSEs. Freddie Mac buys mortgages on the secondary market, pools them, and sells them as a mortgage-backed security to investors on the open market.

\textsuperscript{41} The Federal National Mortgage Association known as Fannie Mae was founded in 1938 during the Great Depression as part of the New Deal. It is a public GSE. FNMA’s purpose is to expand the secondary mortgage market by securitizing mortgages in the form of mortgage-backed securities.

\textsuperscript{42} A mortgage-backed security (MBS) is an asset-backed security that represents a claim on the cash flows from mortgage loans through a process known as securitization. Securitization is the financial practice of pooling various types of contractual debt such as residential mortgages, commercial mortgages, auto loans or credit card debt obligations and selling said consolidated debt as bonds, or Collateralized mortgage obligation (CMOs), to various investors. The principal and interest on the debt, underlying the security, is paid back to the various investors regularly.

\textsuperscript{43} The Federal Housing Administration (FHA) is a United States government agency created as part of the National Housing Act of 1934. It insured loans made by banks and other private lenders for home building and home buying. The goals are to provide an adequate home financing system through insurance of mortgage loans, and to stabilize the mortgage market.
gained market shares peaking at 40 percent of home purchase mortgage originations in 2006, owing to their much more lax limits on loan-to-value\textsuperscript{44} and debt-service ratios (Duca et al. 2010).

If non-prime loans were packaged into homogenous securities it would expose many regulated banks and investors to uncertain default risk. So the problem was how to fund these nonprime loans.

The answer to this problem came with financial innovations and the creation of complex products. Two types of structured financial innovations were proposed: CDOs and CDSs.

The issuance of nonprime mortgage-backed securities were either packaged into collateralized debt obligations (CDOs) or had default insurance from credit default swaps (CDSs) which were assigned safe ratings by the credit rating agencies. The “innovation” comes in the tranches that the CDO was made up from; its structure divides income streams from mortgage payments into tranches assigned different credit ratings. The tranches for the first streams of income have the highest credit rating with the lowest default exposures, with the remaining tranches having successively weaker credit ratings. If default is perceived to be low, the highly rated tranches would make up the bulk of nonprime mortgage CDOs (Duca et al. 2010).

Another financial innovation is the interest-only adjustable-rate mortgage (ARM), which allows the homeowner to pay just the interest and not the principal during an initial period. In 2005, one out of 10 mortgage borrowers took out the ARM loans option, which meant they could choose to make payments so low that their

\textsuperscript{44} The loan-to-value (LTV) ratio expresses the amount of a first mortgage lien as a percentage of the total appraised value of real property. For instance, if a borrower borrows $150,000 to purchase a house worth $200,000, the LTV ratio is $150,000/$200,000 or 75\%
mortgage balances rose every month (Zandi 2009).

The use of automated loan approvals permitted loans to be made without appropriate review and supporting documentation. In 2007, 40% of all subprime loans resulted from automated underwriting (Liebowitz 2009). The chairman of the Mortgage Bankers Association claimed that mortgage brokers, while profiting from the home loan boom, did not do enough to examine whether borrowers could repay. Mortgage fraud by lenders and borrowers increased enormously.

3.3.3. Inaccurate Credit Ratings

The Financial Crisis Inquiry Commission submitted its final report in January 2011 mentioning that the three credit rating agencies were key enablers of the financial meltdown. They added that the mortgage-related securities at the heart of the crisis could not have been marketed and sold without the credit rating agencies seal of approval. Investors relied on them, often blindly. In some cases, they were obligated to use them, or regulatory capital standards were hinged on them. This crisis could not have happened without the rating agencies. Their ratings helped the market soar and their downgrades through 2007 and 2008 caused disorder across markets and firms. The report noticed that the ratings were inaccurate because of flawed computer models, the pressure from financial firms that paid for the ratings, the relentless drive for market share, the lack of resources to do the job despite record profits, and the absence of meaningful public oversight (Schapiro 2011).

Credit rating agencies are now under scrutiny for having given investment-grade ratings to MBS based on risky subprime mortgage loans. These high ratings enabled these MBS to be sold to investors, thereby financing the housing boom.

The credit rating agencies suffered from conflicts of interest, as they were paid
by investment banks and other firms to organize and sell structured securities to investors.

Rating downgrades of rating agencies lowered the stock prices of many financial firms following their decision, in 2007, to lower the credit ratings on $1.9 trillion MBS. Consequently financial institutions felt they had to lower the value of their MBS and acquire additional capital so as to maintain capital ratios which reduced the value of the existing shares.

3.3.4. Government Policies

Government and policy makers have passed and issued many Acts and laws that eventually led to the subprime crisis of 2007. Moreover, they were short-sighted in forecasting a possible crisis and have played a passive role when things were obviously deteriorating in 2005 and 2006.

Most notable acts were the repeal of the Glass-Steagall Act, the Alternative Mortgage Transaction Parity Act, the Community Reinvestment Act and many others. In 1982, Congress passed the Alternative Mortgage Transactions Parity Act (AMTPA), which allowed non-federally chartered housing creditors to write adjustable-rate mortgages. Among the criticisms of banking industry deregulation that contributed to the savings and loan crisis was that Congress failed to enact regulations that would have prevented exploitations by these loan types.

In 1996, Housing and Urban Development\textsuperscript{45} set a goal for Fannie Mae and Freddie Mac that at least 42% of the mortgages they purchase to be issued to borrowers whose household income were below the median in their area. The target was increased

\textsuperscript{45} The United States Department of Housing and Urban Development, also known as HUD, is a Cabinet department in the Executive branch of the U.S federal government to develop and execute policies on housing and metropolises.
to 50% in 2000 and 52% in 2005 (Bush 2002). From 2002 to 2006, as the U.S. subprime market grew 292%, Fannie Mae and Freddie Mac combined purchases of subprime securities rose from $38 billion to around $175 billion per year before dropping to $90 billion per year, which included $350 billion of Alt-A\textsuperscript{46} securities (Simkovic 2011). When concerns arose in September 2008 regarding the ability of the GSE to secure their guarantees, the Federal government was forced to place the companies into a conservatorship.

The Financial Crisis Inquiry Commission reported in 2011 that Fannie Mae & Freddie Mac "contributed to the crisis, but were not a primary cause," GSE mortgage securities essentially maintained their value throughout the crisis and did not contribute to the significant financial firm losses that were central to the financial crisis.

The Glass-Steagall Act whose prime objective is to separate commercial banks and investment banks to avoid potential conflicts of interest between the two lending activities was repealed through the Gramm-Leach-Bliley Act\textsuperscript{47} in 1999. Economist Joseph Stiglitz criticized the repeal of the Act in an article published by Vanity Fair Magazine in January 2009 stating that: “the culmination of a $300 million lobbying effort by the banking and financial services industries...spearheaded in Congress by Senator Phil Gramm.” He believes it contributed to this crisis because the risk-taking culture of investment banking dominated the more conservative commercial banking culture, leading to increased levels of risk-taking and leverage during the boom

\textsuperscript{46} An Alt-A mortgage, short for Alternative A-paper, is a type of U.S. mortgage that is considered riskier than prime, and less risky than subprime. Alt-A interest rates tend to be between those of prime and subprime home loans.

\textsuperscript{47} The Gramm-Leach-Bliley Act repealed part of the Glass–Steagall Act of 1933, removing barriers in the market among banking companies, securities companies and insurance companies that prohibited any one institution from acting as any combination of an investment bank, a commercial bank, and an insurance company.
period.

In testimony before Congress, both the Securities and Exchange Commission (SEC) and Alan Greenspan claimed failure in allowing the self-regulation of investment banks.

3.3.5. Policies of Fed Reserve

Based on my analysis of Alan Greenspan’s testimony, I think the Fed was less concerned with avoiding asset price bubbles and the housing bubble and was instead concerned in keeping inflation rates low. The Fed’s reaction was passive in deflating the house and credit bubbles to prevent disastrous results on the economy and chose to react after the crisis erupted.

Some economists defend the Fed’s position and claim that Federal Reserve actions could give rise to moral hazard\textsuperscript{48} if intervened on every occasion. In 1998, when the Federal Reserve Bank of New York rescued Long Term Capital Management\textsuperscript{49}, some economists opposed the Fed’s action claiming that interventions would encourage other large financial institutions to believe that the Federal Reserve would intervene on their behalf because they were “too big to fail”

A contributing factor to the rise in house prices was the Federal Reserve’s lowering of interest rates early in the decade. From 2000 to 2003, the Federal Reserve lowered the federal funds rate target from 6.5% to 1.0%. This policy was taken to soften

\textsuperscript{48} A moral hazard is a situation where there is a tendency to take undue risks because the costs are not borne by the party taking the risk.

\textsuperscript{49} Long-Term Capital Management L.P. (LTCM) was a speculative hedge fund based that utilized absolute-return trading strategies such as fixed-income arbitrage, combined with high leverage. Initially successful in its first years, in 1998 it lost $4.6 billion in less than four months following the Russian financial crisis requiring financial intervention by the Federal Reserve Bank, and the fund closed in early 2000.
the effects of the collapse of the dot-com bubble and 9/11 2001 attacks. The Fed believed that interest rates could be lowered safely primarily because the rate of inflation was low. Richard W. Fisher, President and CEO of the Federal Reserve Bank of Dallas, said that the Fed's interest rate policy was misguided and that the monetary policy contributed to the housing bubble (Zandi 2009.) On the other hand, Ben Bernanke defends Fed’s actions saying that it was capital or savings pushing into the U.S, due to a worldwide "saving glut"\textsuperscript{50}, which kept long term interest rates low (Bernanke 2005). This is clear when we examine the U.S balance of payments for the years leading to the crisis, U.S imports were growing at an increasing rate signaling a huge inflow of foreign capital (See Figure 12).

The Fed then raised the Fed funds rate significantly between July 2004 and July 2006. This contributed to an increase in 1-year and 5-year ARM rates, making ARM interest rate resets more expensive for homeowners and many started to default on their mortgages. This has contributed to the deflating of the housing bubble because asset prices generally move inversely to interest rates as it becomes riskier to speculate in housing.

3.3.6. Financial Institution High Leverage and Irrational Investments

Many financial institutions, investment banks in particular, issued large amounts of debt during 2004–2007, and invested the proceeds in mortgage-backed securities (MBS), essentially betting that house prices would continue to rise, and those

\textsuperscript{50} Global saving glut is a term coined by Ben Bernanke in 2005. It describes a situation in which there are worldwide too many savings with respect to investment opportunities. On a national level a saving glut creates the tendency for savings to finance current account deficits instead of investments. This can be observed, according to Bernanke (2005), in both developing and industrial countries. The most important receiving country of these export surpluses financed by excess savings is the U. S that runs a current account deficit.
households would continue to make their mortgage payments.

When the SEC decided in 2004 to allow investment banks in the U.S to issue more debt allowing banks higher investment opportunities, the investment banks used the issued debt to purchase more MBS. The top five US investment banks each significantly increased their financial leverage, which increased their vulnerability to the declining value of MBSs.

During 2008 financial crisis, one of the largest U.S. investment banks, Lehman Brothers, went bankrupt, while Bear Stearns and Merrill Lynch were sold at fire sale prices to other banks. These failures augmented the instability in the global financial system. The remaining two investment banks, Morgan Stanley and Goldman Sachs opted to become commercial banks, thereby subjecting themselves to more stringent regulation.

In the years leading up to the crisis, the top four U.S. depository banks moved an estimated $5.2 trillion in assets and liabilities off-balance sheet into special purpose vehicles51. This enabled them to essentially bypass existing regulations regarding minimum capital ratios, thereby increasing leverage and profits during the boom but increasing losses during the crisis.

On another note, end of year company executives bonuses have created conflicting and agency problems with companies’ shareholders and objectives. The New York State Comptroller's Office has said that in 2006, Wall Street executives took home bonuses totaling $23.9 billion. "Wall Street traders were thinking of the bonus at

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51 A special purpose vehicle or SPV is a legal entity created to fulfill narrow, specific or temporary objectives. It is used by companies to isolate the firm from financial risk. They are also commonly used to hide debt (inflating profits), hide ownership, and obscure relationships between different entities which are in fact related to each other. They are commonly used to own a single asset and associated permits and contract rights (such as an apartment building or a power plant), to allow for easier transfer of that asset.
the end of the year, not the long-term health of their firm. The whole system from mortgage brokers to Wall Street risk managers seemed tilted toward taking short-term risks while ignoring long-term obligations. The most damning evidence is that most of the people at the top of the banks didn't really understand how those worked" (Duca et al. 2010).

3.3.7. Deregulation and the Collapse of the Shadow Banking System

In June 2008, the President of the Federal Reserve Bank of New York, Timothy Geithner blamed the shadow banking system, describing it as vulnerable because investment banks used it to borrow short-term in liquid markets to purchase long-term, illiquid and risky assets. This meant that disruptions in credit markets would make them subject to rapid deleveraging, selling their long-term assets at depressed prices. Assets held in hedge funds grew to roughly $1.8 trillion. The combined balance sheets of the five major investment banks totaled $4 trillion.

Krugman described the run on the shadow banking system as the kind of financial vulnerability that made the Great Depression. He said: "As the shadow banking system expanded to rival or even surpass conventional banking in importance, politicians and government officials should have realized that they were re-creating the kind of financial vulnerability that made the Great Depression possible—and they

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52 The shadow banking system is the collection of financial entities, infrastructure and practices which support financial transactions that occur beyond the reach of existing state sanctioned monitoring and regulation. It includes entities such as hedge funds, money market funds and structured investment vehicles (SIV). Investment banks may conduct much of their business in the shadow banking system (SBS), but they are not SBS institutions themselves. Investment banks used it to conduct many of their transactions in ways that don't show up on their conventional balance sheet accounting and so are not visible to regulators. Prior to the financial crisis, investment banks financed mortgages through off-balance sheet securitizations and hedged risk through off-balance sheet credit default swaps.
should have responded by extending regulations and the financial safety net to cover these new institutions. Influential figures should have proclaimed a simple rule: anything that does what a bank does, anything that has to be rescued in crises the way banks are, should be regulated like a bank" (Krugman 2009).

The securitization markets supported by the shadow banking system started to close down in the spring of 2007 and nearly shut-down in the fall of 2008.

In January 2011, The Financial Crisis Inquiry Commission confirmed that the regulator body has permitted the growth of the shadow banking system: "In the early part of the 20th century, we erected a series of protections—the Federal Reserve as a lender of last resort, federal deposit insurance, ample regulations—to provide a bulwark against the panics that had regularly plagued America’s banking system in the 20th century. Yet, over the past 30-plus years, we permitted the growth of a shadow banking system—opaque and laden with short term debt—that rivaled the size of the traditional banking system. Key components of the market—for example, the multitrillion-dollar repo lending market, off-balance-sheet entities, and the use of over-the-counter derivatives—were hidden from view, without the protections we had constructed to prevent financial meltdowns. We had a 21st-century financial system with 19th-century safeguards.’’(Schapiro 2011)

3.4. Economic Impact

Between June 2007 and November 2008, Americans lost more than a quarter of their net worth.
The IMF\textsuperscript{53} estimated that large U.S and European banks lost more than $1 trillion on toxic assets and bad loans between January 2007 and September 2009. These losses are expected to top $2.8 trillion from 2007 to 2010 (IMF 2009). Let’s examine the impact of the financial crisis on different stakeholders of the US economy.

3.4.1. Financial Institution and the US Stock Market

The US stock market peaked in October 2007 when Dow exceeded 14,000 points. After that, it started a steady decline until October 2008. By March 2009, the Dow Jones reached around 6,600 points more than 50\% drop.

At the start of the crisis in 2007, the companies affected were those directly involved in home construction and mortgage lending such as Northern Rock\textsuperscript{54} and Countrywide Financial\textsuperscript{55}, and the problem seemed to be a credit issue because they could no longer obtain financing through the credit markets. However in less than 3 month later over 100 mortgage lenders went bankrupt. The financial institution crisis hit its peak in September and October 2008. Several major institutions either failed or were acquired under pressure, or were subject to government takeover. These

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\textsuperscript{53} The International Monetary Fund (IMF) is an organization of 188 countries, working to foster global monetary cooperation, secure financial stability, facilitate international trade, promote high employment and sustainable economic growth, and reduce poverty around the world.

\textsuperscript{54} Northern Rock was best known for becoming the first bank in 150 years to suffer a bank run after having had to approach the Bank of England for a loan facility, to replace money market funding, during the credit crisis in 2007. Having failed to find a commercial buyer for the business, it was taken into public ownership in 2008, and was then bought by Virgin Money in 2012.

\textsuperscript{55} Countrywide Financial was a Mortgage Banking, which originates purchases, securitizes, and services mortgages. In 2008, Bank of America purchased the failing Countrywide Financial for $4.1 billion. In 2006 it had financed 20\% of all mortgages in the United States, at a value of about 3.5\% of United States GDP, a proportion greater than any other single mortgage lender.
included Lehman Brothers, Merrill Lynch, Wachovia, Citigroup, and AIG.

3.4.2. U.S Wealth

Economists have always claimed that there is a positive correlation between declines in wealth, and declines in consumption and business investment, which along with government spending represent the economic engine. In less than a year at the start of the crisis, Americans lost a huge amount of net worth. Housing prices had dropped 20% from their 2006 peak, with further drops of 30 and 40% in 2009 and 2010. Total home equity was valued at $13 trillion at its peak in 2006, had dropped to $8.8 trillion by 2008 and was still falling until 2009.

Further, U.S homeowners had extracted significant equity in their homes in the years leading up to the crisis, which they could no longer do once housing prices collapsed. U.S home mortgage debt relative to GDP increased from an average of 46% during the 1990s to 73% during 2008, reaching $10.5 trillion. Therefore with house prices falling below mortgage value, Americans were forced to reduce spending, use what's left from their savings and fear from investing any further. Bringing the U.S economy to a halt.

3.4.3. Real GDP and Unemployment

Gross domestic product decreased at an annual rate of approximately 2% in 2008 and another 3.5% in 2009, whereas real gross domestic product\(^\text{56}\) fell 2% in quarter 1, 3.5% in quarter 3 and more than 7% in quarter 4 in 2008 with a fall of 6% in quarter 1 in 2009. (See Figure 7, 8 and 9)

\(^{56}\) Real GDP measures the value of total goods and services produced in an economy in one year adjusted to price changes either CPI or GDP deflator index.
Money Supply: M2

Fig. 14. Monthly Percent Change Money Supply M2 in U.S from 2007 to 2011

Source: Federal Reserve Board
http://www.dallasfed.org

Consumer Confidence/Sentiment

Fig. 15. Consumer Confidence Sentiment in US from 1998 to 2011

Consumer Sentiment: Survey of Consumers, Survey Research Center, U. of Michigan
Consumer Confidence: The Conference Board
http://www.dallasfed.org
The Unemployment rate increased to 10.1% by October 2009, the highest rate since 1983, and has stayed at 10% for the duration of 2009 (See Figure 10). Additionally, those still employed have suffered decreased workloads as unpaid leave become more common, especially for state government employees.

3.4.4. Global Economy

On November 3, 2008, the ECB\textsuperscript{57} forecasted a 2009 GDP growth rate of 0.1%, for the countries of the Euro zone and even contraction for the UK, Ireland and Spain. On November 6, the IMF predicted a worldwide economic contraction of -0.3% for 2009 (IMF 2009). On the same day, the Bank of England and the ECB reduced interest rates from 4.5% to 3% and from 3.75% to 3.25% respectively. The crisis rapidly developed into a global economic shock, resulting in a number of bank failures, declines in various stock indexes, and large reductions in the market value of equities and commodities. The liquidity crisis accelerated and caused a decrease in international trade.

The Brookings Institution\textsuperscript{58} reported in June 2009 that U.S consumption accounted for more than a third of the growth in global consumption between 2000 and 2007. “The US economy has been spending too much and borrowing too much for years

\textsuperscript{57} The European Central Bank (ECB) administers the monetary policy of the 17 EU Eurozone member states. It is thus one of the world's most important central banks. The primary objective of the European Central Bank is to maintain price stability within the Eurozone keeping inflation at the rate of 2%.

\textsuperscript{58} The Brookings Institution is an American nonprofit public policy organization. One of Washington's oldest think tanks, Brookings conducts research and education in the social sciences, economics, metropolitan policy, governance, foreign policy, and global economy and development. Its mission is to provide innovative and practical recommendations that advance three broad goals: strengthen American democracy; foster the economic and social welfare, security and opportunity of all Americans; and secure a more open, safe, prosperous, and cooperative international system.
and the rest of the world depended on the U.S consumer as a source of global demand.”

With a recession in the U.S and the increased savings rate of U.S consumers after 2008, declines in growth elsewhere have been dramatic. Looking at some of the largest trading partners of the U.S, the first quarter of 2009 annualized rate of decline in GDP was 14.4% in Germany, 15.2% in Japan, 7.4% in the UK, 9.8% in the Euro area and 21.5% for Mexico (Duthel).

The Arab world had lost $3 trillion by early 2009 due to the crisis and the fall in oil prices (IMF 2009). Much of the loss occurred in oil producing Middle-Eastern states and in May 2009, the United Nations reported a drop in foreign investment in Middle-Eastern economies due to a slower rise in demand for oil. By the end 2009, Arab banks reported losses of nearly $4 billion since the beginning of the crisis (IMF 2009).
CHAPTER 4

THE GREAT DEPRESSION VERSUS THE GREAT RECESSION, SIMILARITIES AND DIFFERENCES

4.1. Introduction

As Karl Marx\textsuperscript{59} famously said, history repeats itself "the first time as tragedy, the second as farce," a criticism that also fits the current condition.

The one concern of policy makers of the world is to avoid a repeat of the policy errors that contributed to the severity of the downturn in the 1930s, The Great Depression. The lesson from the great depression for monetary policy seems clear: deflation must be avoided. The recent experience of the crisis of 2007-2008 suggests that the lesson has been successfully learnt.

However when it comes to fiscal policy, there is not clear consensus on the assessment of the experience of the 1930s. As I will describe in this chapter, some economists argues that fiscal policy, in particular the new deal announced by President Roosevelt played a minor role and was not key to the recovery. On the other hand, as Chapter II suggested, the new deal, although resulted in large budget deficits, has built a very strong economy that lasted until the 1970s.

As far as the banking sector is concerned, almost all economists agree on the passive role of the Federal Reserve to avoid banks default and that contributed to the degeneration of the crisis into depression. Having said this, we can safely claim that bank defaults can turn into economic disruption.

\textsuperscript{59} Karl Heinrich Marx was a German philosopher, economist, historian, and revolutionary socialist in 19\textsuperscript{th} century. His ideas played a significant role in the development of social science and the socialist political movement. He published various books during his lifetime, with the most notable being \textit{The Communist Manifesto} and \textit{Capital}. 

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In conclusion, what can we learn from the 1930s experience that will help us to end the worst recession since the Great Depression?

Economists have always tried to link the Great Depression to other economic downturns and to closely monitor their severities. However since 1930s until few years back they failed to grant the word “great” to all past recessions. The one and only conqueror of this title was the 2008 financial crisis of 2008 or better known as the Great recession. This doesn’t mean that past recessions were less severe than that of 2008 but their impact on the global economy and their propagation was limited and brief. In contrast, the recent crisis had a global and lasting impact even stronger than that of the Great Depression itself.

So now it is acceptable to compare both recessions and examine the similarities and differences that governed the two periods. I will also examine the conditions that marked both periods. What is now that was not available back then and what was then that it is now not applicable? With much confidence I can answer that one major difference is the obliteration of the gold standard.

In the eighteenth century, philosopher and economist David Hume60 explained how currencies valued in gold remain stable relative to each other. If, for instance, a shock to one country decreased its exports, the result would be an outflow of gold, which would lower prices in the exporting country. Lower prices would encourage exports and decrease imports, leading to an inflow of gold. Prices would rise again, re-creating the previous equilibrium (Temin 1991). So in other words, despite its stability utility, the gold system was real a deadlock monetary system.

60 David Hume, born in the 16th century, was a Scottish philosopher, historian, and economist, known especially for his philosophical empiricism and skepticism. He was one of the most important figures in the history of Western philosophy and the Scottish Enlightenment.
Nevertheless, after World War I, policymakers could think of no better way to reorganize the international economy than to restore the gold standard. Freezing exchange rates in this fashion reduced countries' ability to adapt to new conditions. When the U.S took over the position of leading international lender from the U.K, it exported massive amounts of capital to Germany to help maintaining the gold value of its currency and aided Germany to pay reparations owed to France and Britain in World War I which in their turn are able to import more U.S goods. Economic troubles appeared in Germany and the United States in the late 1920s. Germany’s consumption growth produced a boom in municipal expenditures that began to spark, and in the U.S both housing and stock market booms eventually crashed. As recession spread to other countries, international trade decreased, but prices did not fall rapidly enough to equilibrate markets in the fashion Hume described. Prices were sticky, and rather than deflation, a lack of foreign reserves led to unemployment. When all countries found their exports falling, the processes of deflation and depression chased a moving target.

A similar international imbalance developed after 2000. The U.S as the world lender traded roles with China who became the U.S primary lender. Just as the inflow of capital to Germany had fueled expansion, the inflow of capital from China financed a consumption boom in the United States that developed into a housing boom.

Was it expected that these economic expansions would eventually end badly? According to the economist Hyman Minsky\(^1\), people become less anxious with prosperity and more willing to take on risks they often know they are highly inflated.

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\(^1\) Hyman Minsky was an American economist and professor of economics. His research attempted to provide an understanding and explanation of the characteristics of financial crises. Minsky was sometimes described as a post-Keynesian economist because, in the Keynesian tradition, he supported some government intervention in financial markets and opposed some of the popular deregulation policies in the 1980s and argued against the accumulation of debt.
More recently, economists Carmen Reinhart\textsuperscript{62} and Kenneth Rogoff\textsuperscript{63} analyzed historical evidence and reached a similar conclusion that booms typically precede financial crises, just as pride goes before a fall (Reinhart and Rogoff 2009).

As long as countries set policies to maintain the value of their currency, their banks were at risk; bank failures were a damaging outcome of the depression, not its cause. Governments and central bankers and not commercial banks led the way into depression in country after country. This process is illustrated clearly in the United States' experience. Banks continued to fail as the government hanged to the gold standard.

Apparent in American and European financial markets by summer 2007 were the deleterious effects of the inability to sell these toxic assets. Pressure continued during the fall, and the Fed lowered its discount rate by more than a percentage point between September 2007 and January 2008. Fed Chairman Ben Bernanke, Treasury Secretary Henry Paulson\textsuperscript{64}, and President of the New York Fed Timothy Geithner\textsuperscript{65} rescued the New York investment house Bear Stearns at the point of collapse with Fed funds and purchase by another investment house in March 2008. Even at this late date,

\begin{itemize}
\item \textsuperscript{62} Carmen Reinhart was a Professor of Economics and Director of the Center for International Economics at the University of Maryland. She is a Research Associate at the National Bureau of Economic Research.
\item \textsuperscript{63} Kenneth Rogoff is a Professor of Public Policy and Professor of Economics at Harvard University. His most recent book \textit{This Time Is Different: Eight Centuries of Financial Folly}, of which he was a co-author with Carmen Reinhart, released in October 2009.
\item \textsuperscript{64} Henry Paulson is an American banker who served as the 74th United States Secretary of the Treasury. He previously served as the Chairman and Chief Executive Officer of Goldman Sachs.
\item \textsuperscript{65} Timothy Geithner is an American economist and central banker. He is the 75th and current United States Secretary of the Treasury. He was previously the president of the Federal Reserve Bank of New York.
\end{itemize}
the Fed and other public figures argued that the pressure was largely limited to the housing sector and that the measures taken up to that point were sufficient to maintain financial health (Temin 1991).

The epidemic had escaped the mortgage market and infected the whole financial system. Nearly a year earlier, the global financial system had entered into what Frederic Mishkin had called an "adverse feedback loop" (Mishkin 2009). One failure induced another; and a worldwide domino effect erupted. The U.S dragged the world down faster than it had seventy years ago.

Luckily we are still now in the limits of a Great Recession, not a repeat of the Great Depression. 10% unemployment and unemployment insurance compares favorably to 25% unemployment without a safety net. The primary reason for this divergence is the rapid change of the American political cycle. Voters in 2008 had the opportunity to vote for new public policy just months after the financial crisis began. The similarity between now and then is that it took a new group of leaders to change policy.

Roosevelt opened most banks quickly after their holiday; he took the United States off gold a month later. He introduced the National Industrial Recovery Act (NIRA) and the Agricultural Adjustment Act (AAA), pillars of the New Deal, shortly thereafter. These actions signaled a clear new direction in government policy, or what economists call a new policy regime. Investment rose and consumption began to recover; the long economic decline had ended.

Economic growth progressed rapidly during Roosevelt's first term and may not have been able to occur any faster because of shortage in the supply of raw materials and production. Faster growth, even if possible, likely would have led to inflation despite high unemployment. In fact, the recovery was so fast that both the Fed and the
government decided to reverse policy and rein in demand through both monetary and fiscal policies. The result was the recession of 1937\textsuperscript{66}, which increased unemployment and delayed the return to full employment for several more years.

Reforms to the financial system produced a half-century free from financial crises. The Federal Deposit Insurance Corporation\textsuperscript{67} (FDIC) gave most people faith in the safety of their bank accounts. Deposit insurance was complemented by bank regulation to substitute for critical investors and depositors. The Glass-Steagall Act separated commercial and investment banks. The Securities and Exchange Commission (SEC) was created to regulate financial investments. Banking became a safe industry, and more people invested securely in the stock market.

Nothing lasts forever, and prosperity generated a desire for more independent financial dealings. Economic turmoil in the 1970s accelerated the transition. The Glass-Steagall Act was repealed, and the SEC'S regulation relaxed. Americans urged the rest of the world to follow suit and deregulate both domestic and foreign capital movements. The distribution of income widened, the size of the financial sector rose, and patterns of a new financial crisis developed (Temin 2010).

\textsuperscript{66} The recession of 1937 was an economic downturn that occurred during the Great Depression. By the spring of 1937, production, profits, and wages had regained their 1929 levels. Unemployment remained high, but it was slightly lower than the 25\% rate seen in 1933. The American economy took a sharp downturn in mid-1937, lasting for 13 months through most of 1938. Industrial production declined almost 30 percent and production of durable goods fell even faster. Unemployment jumped from 14.3\% in 1937 to 19.0\% in 1938. Manufacturing output fell by 37\% from the 1937 peak and was back to 1934 levels.

\textsuperscript{67} The Federal Deposit Insurance Corporation (FDIC) was created by the Glass–Steagall Act of 1933. It provides deposit insurance, which guarantees the safety of deposits in member banks, up to $250,000 per depositor per bank as of January 2012. As of November 18, 2010, the FDIC insured deposits at 7,723 institutions. The FDIC also examines and supervises certain financial institutions for safety and soundness, performs certain consumer-protection functions, and manages banks in receiverships.
Even Bernanke did not see chaos ahead during most of 2008; he realized what was happening by the start of 2009. Not to let the Fed duplicates its mistakes of the Great Depression, standing by as banks failed and supporting the gold standard instead of the domestic economy. It was an outstanding performance, but monetary policy lost its effectiveness as banks used the Fed's services to rebuild their depleted reserves as the value of toxic assets went to zero, and they loaned only to the safest of customers.

There are two lessons to be drawn from this comparison. The first is that the open American economy is prone to collapse every once in a while. The second lesson is that there are strong pressures for unregulated capitalism that only abate in the face of sharp economic downturns like the Great Depression.

Let’s examine these differences and similarities more closely by detailing each of the economic patterns.

4.2. Monetary Policy

A series of monetary policy mistakes between 1928 and 1933 resulted in a contractionary monetary policy and hence contributed to transform a crisis into the great depression. First, the tightening between 1928 and October 1929 to fight speculation and high stock prices led to the stock market crash. Second, in 1931 the Fed's decision to choose saving the gold standard over local banks ignoring troubles of the banking system in order to stabilize the dollar under attack after the collapse of the pound by raising interest rates sharply. Third, the Fed gives conflicting signals to the market, under the pressure of the Congress decided to ease monetary policy in March 1932, but in July of the same year the policy was reversed following the argument that the excesses of the pre-1929 period needed to be eliminated. Four, banking sector liquidity problems were not yet resolved and the liquidationist theory as Andrew Mellon
claimed that wiping out weak banks was a necessary step. Between 1929 and 1933, prices fell in the US by a cumulative total of over 25 per cent which prevailed that the true problem was not the nominal interest rate but the real one. Deflation did not stop until 1934 when Roosevelt suspended the gold standard and devaluated the dollar.

The situation at the crisis of 2007-2008 is completely different which indicates that a lesson was learnt. In 2007, since the earliest stage of the crisis it was recognized that deflation had to be avoided. In 2007, the Fed aggressively cut its policy target rate: the monetary policy reaction was swift and effective (See Figure 11). Similar monetary policy decisions have been taken also by the European Central Bank (ECB) and other central banks across the world. As the crisis intensified, the reactions of the central banks were unprecedented by taking unconventional measures including increasing liquidity provision to financial institutions, purchase of government bonds and some bad debts in addition to support specific institutions deemed to be too big to fail.

It is important to underline that the main objective of the non-standard monetary policy measures was to prevent pricing from falling but also to stabilize the financial sector and the economy. The conclusion for monetary policy was clear: the errors of the 1930s should not be repeated.

4.3. Fiscal Policy

Debates about fiscal policy effective role still linger until today and many asked did fiscal policy play a central role in stopping the recession in the 1930s? In particular, did the New Deal mark a clear turning point? Let’s us examine the literature of two opposite views. Smithies (1946) argued that fiscal policy was what made possible the

\[\text{\textsuperscript{68}}\text{Andrew William Mellon was an American banker, industrialist, philanthropist, art collector, and Secretary of the Treasury from March 4, 1921 until February 12, 1932}\]
recovery after the crisis (Blanchard et al. 2009). On the other hand, more recently Romer has argued that fiscal policy was not the key engine of the recovery because even Roosevelt's fiscal action was small compared to the size of the problem (Romer 2003; Romer 1993).

Whatever was the size of the fiscal policy or as we now economists like to call it the stimulus package, the sure thing is that the New Deal engaged all Americans into one objective to stop economic depression. The New Deal had expansionary effect and contributed to generate inflation expectations, which lowered real interest rates and resulted in stimulating private spending.

Let’s not forget that in 1930s the size of the economy was much smaller than the current one and a fairly small stimulus is equal to today’s $800 Billion stimulus. Additionally it is worth mentioning that the U.S government entered the crisis with a sizeable public debt incurred mostly during the First World War. Debt service accounted for about 15% of revenues in 1930 and to more than 30% as tax revenues plummeted and debt service costs increased along with the debt. By contrast in 2010, debt service accounted for only about 10 per cent of revenues (Temin 2010).

4.4. The Banking System

The monetary policy and its actions vis-à-vis the banking system in the 1930s is listed by Friedman and Schwartz (1963) in the monetary history of the US, and today policy makers of the Fed give much attention. As I mentioned earlier, Andrew Mellon the Secretary of Treasury until 1932 was among the so-called “liquidationist” theorists believed that a prerequisite of the banking sector recovery was the elimination of its weak elements. This firm decision from government prevented the Fed from interventions in favor of the troubled banks. However, Bernanke blamed the Fed and
not the government for not saving the banks. He emphasizes that the lack of action by
the Fed was, in facts, dictated by the choice it made to save the gold standard and to
defend the dollar from speculative attacks. Accordingly, rather than lending cash to the
banks, the Fed increased the interest rate hoping to support the dollar but with disastrous
effect for the banking system and the lending activity (Bernanke 1983).

Today there is a general consensus that we must avoid large scale bank failures
opposed to what happened during the 1930s. Another key reason why policy makers
want to avoid bank failures was that in 1930 the top three banks had about 11 per cent
of the total assets of the industry, whereas in 2008, the equivalent share was about 40
per cent.

The misconception that the Fed made during the Great Depression is very
important to highlight. The fragmentation of the banking sector in small and tiny banks
let the Fed to think that the failure of any of the numerous small banks could not be
systematic and thus it did not arouse particular concerns and little was done to prevent
it. This is in one part true but the Fed missed an important concept “Bank runs”. Given
the absence of a federal deposit insurance system, risk of a bank failure undermined the
confidence of the public and the functioning of the banking system largely exposed to
the danger of potential withdrawal of deposits. People ran on banks and withdrew their
deposits regardless of their bank financial soundness, a situation that amplified Bank
failures.

The creation of the Federal Deposit Insurance system, as part of the new deal,
was one key lesson learn and it certainly contributed to the restore confidence in the
banking system and hence in the recovery.

The lesson that confidence of depositors in the banking system is crucial has
been extended to Europe as well when EU governments extended the existing deposit
insurance systems to cover Northern Rock deposits.

4.5. The Learnt Lessons of the Great Depression

The American Recovery and Reinvestment Act\textsuperscript{69}, or commonly known as The Stimulus, signed by President Obama, is simply the biggest and boldest countercyclical fiscal action in history. The nearly $800 billion fiscal stimulus is roughly equally divided between tax cuts, direct government investment spending, and aid to the states and people directly hurt by the recession. The fiscal stimulus’ primary objective was to save and create jobs almost immediately. Secondary objectives were to provide temporary relief programs for those most impacted by the recession and invest in infrastructure, education, health, and green energy. Americans expect this fiscal expansion to be extremely important to countering the terrible job loss that The Great Depression has brought.

The other lesson we can draw from the recovery of the 1930s is that financial recovery and real recovery move together. The strengthening real economy improved the health of the financial system. Bank profits moved from large and negative in 1933 to large and positive in 1935, and remained high through the end of the Depression. Real stock prices rose robustly. Business failures and home foreclosures fell sharply and almost without interruption after 1932. This virtuous cycle continued as the financial recovery led to further narrowing of interest-rate spreads and increased willingness of banks to lend.

\textsuperscript{69} The American Recovery and Reinvestment Act of 2009 commonly referred to as the Stimulus, is an economic stimulus package enacted in February 2009 to respond to the 2008 financial crisis. The approximate cost of the economic stimulus package was estimated to be $787 billion at the time of passage, later revised to $831 billion between 2009 and 2019.
The Financial Stabilization Plan, a recovery plan, is another lesson that policymakers sought to raise from the early beginning of the crisis. It involves evaluating the capital needs of financial institutions, as well as crucial programs to directly increase lending putting the financial system back to work. Together with the Administration’s housing plan, these financial rescue measures should provide the lending and stability needed for economic growth.

The final lesson we drew from the Great Depression is that worldwide expansionary policy shares the burdens and the benefits of recovery. History shows that going off the gold standard and increasing the domestic money supply was a key factor in generating recovery and growth across a wide range of countries. Importantly, these actions worked to lower world interest rates and benefit other countries, rather than to just shift expansion from one country to another. In this regard, the aggressive fiscal action in China and the reduction in interest rates in Europe and the U.K were a good example paving the way for a worldwide end to this worldwide recession.

4.6. Conclusion

To end with this chapter, it is important to note that lessons from Great Depression have been learnt, deflation has successfully been avoided and bank failures were very limited. The now fragile financial system can be restored whenever confidence is restored driven by tighter regulation and monitoring from regulatory body.

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70 The Financial Stabilization Plan or The Emergency Economic Stabilization Act of 2008 commonly referred to as a bailout of the U.S. financial system, is a law enacted in response to the subprime mortgage crisis authorizing the U.S Secretary of the Treasury to spend up to $700 billion to purchase distressed assets, especially mortgage-backed securities, and give cash directly to banks. Both foreign and domestic banks are included in the program.
What we really need in addition to all what we have cited in this chapter is real policy coordination. Given today’s globalization and the ease of capital mobility among nations, any shock being positive or negative will affect the entire globe. This is why, policy coordination among local players as first line and across the borders as second line will avoid any coming Great Depression. In the next chapter I will present a set of recommendations which were drawn from extensive comparison between the two important events. Some of these recommendations have been already tested and successfully implemented in the U.S while others are still suggestions that once tested will tell us if they are efficient or not.
CHAPTER 5

RECOMMENDATION FOR THE FUTURE, HOW TO AVOID FALLING IN SEVERE RECESSIONS?

What lessons can modern policymakers learn from all past experiences that could help them make the recovery faster and stronger in the future? A question that all economists are trying to answer. In this chapter, I will propose a series of recommendations that I hope it can avoid long recessions and dampen its severity. Recessions are healthy for the economy’s reform and stability therefore it would be a conceptual mistake to say that we need to avoid falling into the next recession.

Overall the analysis of the previous chapters has revealed two important concepts: Policy coordination and the roles of regulatory bodies. As mentioned at the end of Chapter IV, some of the recommendations that I will cite now have been implemented or partially implemented and therefore it is necessary to revisit them:

- Policy coordination in-country is very important and needs to be led by the President, in the case of U.S, and key people to make sure they are all working toward the same objectives. In other countries, this could be led by the council of ministers or the Prime Minister. Also policy coordination between nations is as equally important as in-country to lessen the unwanted competition and war trade that led to Great Depression. G-20 and other summits are a good example of policy coordination among nations. Paul Krugman in his “Third Depression” paper describes the 2008 economic crisis as a failure of policy (Krugman 2010). He adds that governments are obsessing about inflation when the real threat is deflation, governments preaches the need for belt tightening when the real problem is inadequate spending. Coordination of policies
among global players lacked effective international leadership. Most central banks of the 1920s and 1930s devoted little effort to supporting the overall stability of the international system and focused instead on conditions within their own countries. Under the gold standard, the need to maintain a fixed exchange rate among currencies forces countries to adopt similar monetary policies. When the Federal Reserve raised interest rates in 1928 to fight stock market speculation, it inadvertently forced tightening of monetary policy in many other countries as well. This tightening abroad weakened the global economy, with effects that fed back to the U.S. economy and financial system.

- Avoid declines in wealth and production and offer assistance to companies as early as possible. This was obvious in the last crisis where we saw the government bailing out big banks and companies especially in the car industry. In the 1930s, the collapse of production and wealth led to bankruptcies and the vanishing of American financial institutions. This, in turn, had two devastating consequences: a collapse of the money supply, as stressed by Milton Friedman and Anna Schwartz, and a collapse in lending, as stressed by Ben Bernanke.

- We need the Fed or Central Banks to improve the safety and soundness of the financial system, by placing necessary "speed bumps" to limit borrowing and fight speculation as early as possible. Historically, rapid expansion of lending has been responsible for almost all crises. It is true that before 2008, central banks around the world facilitated borrowing and in fact encouraged more borrowing and speculation but one cannot deny the fact that after 2008 central banks placed aggressive rules and regulation vis-à-vis borrowing and lending.

- We need to make sure that stock markets do not crash because it will worsen the economic situation, hurting consumer and business confidence and
contributing to a deeper downturn than 1930. Unfortunately losses in stock markets around the world were huge in 2008, and I think that the recessions would have been milder if crashes were smaller.

- Increase Federal Deposit Insurance to assure depositors and avoid any bank runs during recessions. This was exactly the case in U.S and some other countries where governments rushed to increase deposit insurances to maintain confidence and avoid bank runs.

- Fight deflation by lowering the real short term interest rate. It is true that nominal interest rates were very low during the depression but the ongoing deflation meant that the real cost of borrowing was very high because any loans would have to be repaid in dollars of much greater value. The Fed, the ECB, and other Central Banks have done their job in this regard.

There are some other actions that governments and central banks have taken so far to balance and reverse the effects of the recessions but I have cited the most important ones to leave a space for what I personally recommend to try. These recommendations can be summarized as:

- Give the Fed or Central Bank a decisive role both as a regulator and in the conduct of monetary policy. Central Banks need not to overflow liquidity (money made available to borrow at low interest rates) and to know when to lax or tight regulations.

- Look for the right type of governors to lead the Central Bank because the governor needs to be a real regulator as past experiences have showed. Some governors encouraged unmonitored activities describing them as financial innovation that essentially transferred risk from those who have great difficulty in absorbing it to those who have the capital to absorb losses if when they occur. Key regulators like Alan Greenspan didn't really believe in regulation; when the excesses of the financial system
were noted, they called for self-regulation.

- We need to create a commission that protects financial product safety, to make sure that products bought and sold by banks and pension funds are safe for trading. Some may worry that this may limit innovation. What we need is more innovation addressing the needs of the people, so they can stay in their homes when economic conditions change.

- Revival of a new Glass-Steagall Act that separates banking activities and prevents people’s deposits from being invested in toxic assets. The last financial crisis has concluded that normal banking operations strengthens the case for a separation of commercial and investment banking activities. But to prevent future crisis of this type one should make sure that losses from the investment banking arms cannot impair commercial banking operations.

- Companies that are considered as too big to fail should be constantly closely monitored. When they mess up, if bail out is not possible or costly, to do a fragmentation. Fragmenting companies into sub-companies that other smaller firms can afford.

- We need to reconsider incentives of executives, reducing the scope for conflicts of interest and improving shareholder information about dilution in share value as a result of stock options. We should mitigate the incentives for excessive risk-taking and the short-term focus that has so long prevailed, for instance, by requiring bonuses to be paid on the basis of, say, five-year returns, rather than annual returns. Executives were amply rewarded, presumably for managing risk and allocating capital, which was supposed to improve the efficiency of the economy so much that it justified their generous compensation. But they misallocated capital; they mismanaged risk they created risk. They did what their incentive structures were designed to do: focusing on
short-term profits and encouraging excessive risk-taking.

Of course the list of recommendation can include more actions such as laws and regulation that protect consumers, households, businesses, government and other stakeholders. But I have tried to sum up most important points that I concluded from the research about past recessions and what really harmed the U.S consumer and the economy as a whole. We need to implement effective regulation and close-up monitoring actions for central banks in order to ensure capital adequacy in the banking system, stress-testing of portfolios, increased transparency in accounting and disclosure practices, improved financial literacy, greater care in the process of financial liberalization, and a willingness to play the role of lender of last resort when needed.

We need at the end to agree that markets are not efficient, information are not complete and therefore to expect other future market failures. Adam Smith’s invisible hand in market theory is really a myth.
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