

Investors allocate their assets into different classes both to reduce risk through portfolio diversification and to increase returns by changing these allocations. Financial assets have traditionally been divided into stocks, bonds and bills; non-traditional assets include housing, commodities, collectibles and other investments.

One of the primary questions the asset allocation process has raised is, what is the value of the Equity Risk Premium (ERP) as measured by the relative returns to equities against a risk-free investment, such as Treasury Bills in the short run and Government Bonds in the long run?

Risk and return are positively correlated. Equities are riskier than bonds and bills and should provide a higher rate of return to compensate investors for this risk. Over long periods of time, this has been true. Although risk is relative, the risk continuum starts at Government T-Bills (“cash”) and moves to Government Notes and Bonds, Corporate Bonds, Preferred Stocks and Common Stocks. The equity risk premium measures how much extra return investors should receive for the additional risk of moving up this risk continuum.

Most research has focused on determining the value of the ERP assuming it is a constant that could be directly related to the level of increased risk. Estimates of the equity risk premium are generally in the range of 3-7% depending upon the time period covered. However, the relative risk of stocks and bonds, as well as the perception of this risk changes over time. It is not fixed.

There is no agreement on the value of the ERP, primarily because historical comparisons of relative returns between stocks, bonds and bills vary greatly over time as well as between countries. Moreover, in some cases, as in Japan between 1989 and 2013, the total return to government bonds has exceeded the return to equities over a period of 20 years or more. So if the ERP is not constant, why does it change over time, or does it even exist?

It is the argument of this paper that a fixed value for the ERP may not even exist for two reasons. First, it is not possible to arbitrage the ERP, even when it significantly deviates from its long-term average. There is no historical evidence that it is possible to go long one asset class and short the other and profit from this arbitrage. The evidence for this is that the ERP can significantly differ from its long-term average for decades at a time. If the ERP could be arbitrated, such profitable opportunities would be eliminated more quickly than they are. The example of Japan in which the ERP was 11.14 between 1950 and 1989 and -5.92 from 1990 to 2013 is the best example of this.

The primary reason for this result is that equity returns are primarily driven by the growth in corporate profits and nominal bond yields by both inflation and the growth in the economy as a whole. Moreover, the business cycle driving equities is substantially shorter than the policy cycle driving bond yields. While a bull or bear market in equities may last two to five years, a bull or bear market in fixed income can last two or three decades. A fixed ERP assumes it is exogenous when in fact it may be endogenous and influenced by monetary and fiscal policy.

There is no fixed value for the Equity Risk Premium because both monetary and fiscal policy heavily influence the ERP over periods of a decade or less, primarily through the influence of monetary policy on fixed income returns, but also through the effect on equities. Expansionary

fiscal policy only has a short-run impact on GDP. Fiscal policy influences the ERP by generating deficits because of wars, economic and financial crises, or other factors which influence the economy. Monetary policy is used to redress the problems created by government deficits and economic and financial crises, and impacts the money supply, inflation and interest rates, and thus the ERP.

Changes in interest rates produce a wealth effect through changes in bond prices and an income effect through changes in yields. Falling interest rates, as in the US between 1981 and 2012 benefit fixed income investors through capital gains, but rising interest rates create capital losses. In extreme cases, government policies can completely wipe out an asset class, as happened with German Bonds in the 1920s. Hyperinflation can destroy the value of fixed income investments, or a currency change can wipe out savers by forcing them to convert to a new currency at an unfavorable rate, as happened in Germany in the 1940s. Monetary policy can and has negatively impacted investors, not only creating redistributions, but distorting returns to equities and to fixed income.

This paper argues that different monetary regimes have existed over the past 150 years in the United States that have distorted bond and equity returns and influenced the equity risk premium in different ways. Although fiscal and monetary policies can also distort and influence the price of and return on housing, commodities and other asset classes, these effects will not be addressed here. The analysis will be limited to purely financial assets.

There are two implications of this. At the micro level, investors should adjust the allocation of their portfolios to reflect the impact of monetary policy on asset class returns. At the macro level, different monetary regimes not only influence the ERP, but they create distributional and economic inefficiencies that impact not only investors, but the economy as a whole. Most monetary policy fails to recognize this, concentrating on the need to encourage investment and consumption through manipulating interest rates or the money supply in order to influence GDP and unemployment, while ignoring the impact on asset returns to investors. Distortions to the ERP may last for decades. The full distributional and efficiency costs of these monetary regimes are usually ignored.

MONETARY REGIMES

A monetary regime is the general set of policies the government establishes toward the monetary side of the economy. The monetary regime can be based upon a gold standard or a fiat currency, on fixed or variable exchanges rates, on manipulating short-term and/or long-term interest rates, on controlling inflation or attempting to reduce unemployment, on manipulating reserves or the money supply, etc., or leaving these choices to the market.

The combination of policy choices that are made determines the monetary regime. As long as economic conditions remain favorable, providing economic growth, low unemployment and limited inflation, the monetary regime continues. If the economy falls into a recession or depression, a financial crisis can occur. When the existing monetary regime is no longer seen as a solution to the economy's problems, the monetary regime will change. Monetary regimes can also change in response to exogenous events, especially wars.

This paper assumes the United States has gone through seven monetary regimes during the past 150 years, and entered into an eighth monetary regime in 2008. Economic crises within each monetary regime led to dissatisfaction with each regime leading to the introduction of a new monetary regime. These monetary regimes are outlined below.

Free Banking (1836-1861, crisis in 1857)—The charter for the Second Bank of the United States expired in 1836. Between 1836 and 1913, the United States had no Central Bank, and until 1861, private banks were free to issue their own currency. The Panic of 1857 was the first world-wide financial crisis. Though the economy largely recovered by 1859, the end of free banking occurred more due to the Civil War than as a solution to the Panic of 1857.

Greenback Era (1861-1873, crisis in 1869)—During the Civil War, the era of Free Banking was replaced by the Greenback Era when paper currency was not convertible into gold. Although many feared a debasement of the currency similar to what happened during the Revolutionary War, the Federal Government eventually returned to the Gold Standard, though this was not the case with the Confederacy where investors lost everything. The principle crisis of this era was Black Friday in 1869 when Jay Gould and others tried unsuccessfully to corner the gold market.

Gold Standard (1873-1913, crisis in 1907)—The US de facto returned to the Gold Standard in 1873 after the “Crime of 1873.” The dollar was convertible into Gold during these years, but the Financial Crisis of 1907 led to the demand for a central bank that could offset the power of J. Pierpont Morgan and other private bankers. The Federal Reserve was created in 1913.

Federal Reserve Era (1913-1933, crisis in 1929)—It was not the creation of the Fed, but World War I that determined the fate of the global economy during those 20 years. World War I created excessive debt throughout the world. The resulting imbalances made a return to the pre-war Gold Standard virtually impossible. Countries were unable to resolve the dislocations created by the debt and inflation created by the war. Attempts to return to a Gold Standard and seek international solutions failed, leading to the Great Depression.

War Economy (1933-1951, post-war inflation)—Because of the lack of an international consensus, each country sought different solutions to the Great Depression, primarily through expanding the role of government. Under Roosevelt, monetary policy was made subservient to fiscal policy and interest rates were controlled as government debt exploded. This led to higher inflation in the US after the war, and to the Treasury Accord of 1951 which allowed the market to once again determine long-term interest rates.

Keynesianism (1951-1979, stagflation in the 1970s)—Expansionary, countercyclical fiscal policy was seen as a way of reducing the fluctuations in the business cycle and creating growth, but excessive monetary expansion combined with the problems of the OPEC crisis, led to stagflation and rising interest rates. This led to dissatisfaction with Keynesianism and attempts to control inflation through monetary policy.

Bubblicism (1979-2008, Great Recession of 2008)—Before 1979, the Fed generally targeted bank reserves in the financial system by setting the Fed Funds Rate. In October 1979, Volcker changed this policy to targeting the quantity of money, specifically, non-borrowed reserves;

however, primarily due to financial innovations, the Fed's ability to control non-borrowed reserves and thus the money supply was limited. In October 1982, the Fed once again targeted interest rates rather than the quantity of money. This monetary regime is referred to as **Bubblism** because the accommodating monetary policies of the Fed after 1982 (the Greenspan put) led to a series of financial bubbles and crises. Although Volcker's original Monetarist policies of 1979 drove down inflation by allowing interest rates to seek their own level, under Greenspan and Bernanke, low interest rates were used to offset financial recessions including the 1987 Stock Market Crash, the S&L crisis, the Internet Bubble, and 9/11.

Expansionism (2009-) After the financial crisis of 2008, short-term interest rates were driven down through the Fed's Zero Interest Rate Policy, while quantitative easing and other policies manipulated long-term interest rates. The Fed has committed itself to expanding its balance sheet by buying government and mortgage-backed securities while the federal government has run trillion-dollar deficits after 2008.

Breaking up the past 150 years into these eight monetary regimes is meant to reflect the spirit of each era. Each of them could be broken down into shorter periods when additional policy changes occurred. Moreover, each regime was marked by a significant financial crisis leading to a major change in monetary policy. During these financial crises, returns to financial assets were below average while the economy suffered slow growth and/or inflation. As will be seen below, asset class returns differed substantially under each of these regimes, bringing into question the idea of a constant equity risk premium.

Although fiscal and monetary policy measures are usually framed primarily in terms of how they impact the economy as a whole, these policies also have substantial impacts on returns to investors. Monetary policy that impacts interest rates changes not only the returns to fixed income investors, but impacts the ERP and consequently, the allocation of resources and economic efficiency. If individuals who are saving and investing for their retirement receive lower returns, their wealth and income are impacted.

Falling interest rates increase the wealth of fixed income investors through capital gains, but it reduces income from their wealth. Those who invest in bonds after interest rates fall are hurt by low returns, and do not benefit from the wealth effect. Similarly, when interest rates rise, there is a negative wealth effect, but a positive income effect. Monetary policy not only redistributes wealth and income through inflation and low interest rates, but impacts the allocation of resources and economic efficiency as well. Changes in the monetary regime create uncertainty as well as wealth and income effects.

The ideal monetary regime is one that allows the real side of the economy to allocate resources as efficiently as possible while minimizing the economic cost of the monetary side of the economy to the real economy. Ideally for investors, monetary regimes should change as little as possible. In reality, although central banks may have de jure independence, in practice their policies must accommodate politically-motivated fiscal policy, and consider both the political and economic trade-offs of accommodative monetary policy.

This paper argues that the equity risk premium not only measures the relative returns of stocks,

bonds and bills, but it also measures the endogenous distortions to the financial sector created by monetary and fiscal policy. Unfortunately, there are few opportunities to arbitrage these distortions successfully. Fluctuations in the ERP are a measure of the redistributions and inefficiencies created by monetary and fiscal policy. These distortions misallocate resources and may contribute to the severity of the financial and economic crises that occur.

ASSET CLASS RETURNS IN THEORY

The returns to stocks, bonds and bills depend upon different factors. Bills are cash instruments that provide return with no risk. They should compensate the investor for inflation, and their rate of return should equal the inflation rate in the long run with some allowance for the time value of money. The return on default-risk-free Government Bonds should equal the growth in nominal GDP since this is the opportunity cost of money over long periods of time. The return on corporate equities should depend on the growth in future corporate profits, allowing for the riskiness of the company and its securities. The value of a company, and thus its stock, is the present value of future cash flows to investors. Utility stocks provide different returns than do biotech companies, and corporate bonds, preferred stocks and common stocks all have different returns because of the risk of receiving the firm's future cash flows.

The optimal monetary regime is one that minimizes the cost to the real economy of the financial system. The Fed's directive is to control inflation while maintaining growth and minimizing unemployment. These goals cannot be achieved simultaneously, so the Fed must look at the trade-offs between controlling inflation and increasing economic output. Similarly, the Fed needs to consider the impact of its policies on the allocation of financial resources, the wealth and income effects that occur for investors and savers, and how the Fed's choices may lead to a financial crisis which imposes costs on the economy.

Monetary regimes impact inflation and thus the returns to bills. Investors try to predict future inflation rates, economic growth rates and future profits, and reallocate investments to reflect their expectations. Similarly, investors attempt to predict the present value of future cash flows to different corporations and change their investments in equities accordingly.

If fixed-income investors underestimate future inflation, as occurred in the 1970s, they receive negative returns. If the government artificially lowers interest rates, as in the 1940s and 2010s, bondholders have less income. Similarly, unwarranted expectations of economic growth, fueled by low interest rates or an expansive monetary regime, can lead to an expansion in the PE ratio for equities (as in the 1960s and 1990s), leading to excessive returns to shareholders in one decade, which can lead to a reversion to the mean in the decade that follows.

Different fundamental factors drive returns to equities and fixed income. Equity returns are primarily driven by GDP growth and nominal fixed income returns by inflation. Fiscal and monetary policy also impact returns to both in different ways, and different factors drive the wealth and income effects on returns to both. For these reasons, the time cycles of bull and bear markets in equities and fixed income differ, and this combination of factors makes it very difficult to arbitrage deviations from the average ERP, even when this persists for a decade or more. Consequently, it is important that investors understand how the existing monetary regime

impacts returns to equities and fixed income and the distortions and misallocations the existing monetary regime creates.

Asset Class Returns under Different Monetary Regimes

It is the argument of this paper that the monetary regime chosen by the government influences the relative returns to different asset classes. The table below illustrates this.

Table 1 Annual Nominal Asset Class Returns under Different Monetary Regimes

Regime	Years	S&P 500	Bonds	Portfolio	Bills	Inflation	CHF	GDP
Greenback	1861-1873	15.41	7.5	11.46	4.89	2.82	-0.05	3.3
Gold Standard	1874-1913	6.16	3.34	4.75	2.95	0.44	0.04	3.31
Federal Reserve	1914-1932	4.99	4.21	4.60	3.35	1.43	-0.02	0.74
War Economics	1933-1950	12.15	3.03	7.59	0.42	3.66	-1.05	5.97
Keynesianism	1951-1979	10.15	3.2	6.68	4.27	3.94	-3.36	3.69
Bubble	1980-2008	10.72	9.8	10.26	5.77	3.54	-1.38	2.83
Expansionism	2009-2014	17.22	2.81	10.02	0.09	1.86	-1.17	1.88
Pre-Federal Reserve	1871-1913	6.23	3.65	4.94	3.08	0.32	0.04	4.72
Federal Reserve Era	1914-2013	10.08	5.19	7.64	3.57	3.17	-1.63	3.17
All	1871-2013	8.92	4.73	6.77	3.42	2.31	-1.13	3.63

The table above shows the returns to stocks, bonds and bills during each of the Monetary Regimes discussed above. Although the Greenback Era is included, reliable dividend data are only available since 1871. The Portfolio consists of 50% Bonds and 50% Equities. Summary numbers for returns before the Federal Reserve in 1913, after 1913 and the entire period from 1871 to 2013 are also provided.

The first table shows nominal returns to different asset classes as well as GDP growth during each period and the change in the US Dollar against the Swiss Franc which has been the strongest global currency over the past 100 years. The table clearly shows differences in the returns to stocks, bonds and bills under the different monetary regimes.

The table below shows real returns to different asset classes as well as the Equity/Government

Bond Risk Premium, GDP and per capita GDP.

Two questions are paramount here: 1) Have the monetary regimes impacted the returns to different asset classes? 2) Have these returns differed under the Federal Reserve and the era before the creation of the Fed? The bar chart below shows clear differences in the returns under different monetary regimes.

Table 2 Annual Real Asset Class Returns under Different Monetary Regimes

Regime	Years	Stocks	Bonds	Portfolio	Bills	ERP	GDP	Per Capita
Greenback	1861-1873	12.24	4.55	8.39	2	7.35	3.3	0.84
Gold Standard	1874-1913	5.70	2.89	4.29	2.5	2.73	3.31	0.88
Federal Reserve	1914-1932	3.51	2.74	3.13	1.9	0.75	0.74	-0.59
War Economics	1933-1950	8.19	-0.61	3.79	-3.12	8.85	5.97	4.61
Keynesianism	1951-1979	5.97	-0.71	2.63	0.32	6.73	3.69	2.32
Bubblism	1980-2008	6.93	6.05	6.49	2.15	0.83	2.83	1.74
Expansionism	2009-2014	15.08	0.93	8.01	-1.74	14.02	2.05	3.09
Pre-Federal Reserve	1871-1913	5.89	3.32	4.6	2.75	2.49	4.72	2.57
Federal Reserve	1914-2014	6.69	1.96	4.32	0.39	4.64	3.17	2.05
All	1871-2014	6.45	2.36	4.41	1.09	4.00	3.63	2.20

AN OVERVIEW OF THE MONETARY REGIMES

The Greenback Era was marked by inflation during the Civil War and deflation after the war so the United States could eliminate the Gold Premium relative to paper dollars. The low inflation rate over this period masks the rise and fall in prices that occurred between 1861 and 1873. People remembered that the Continental Congress had defaulted on its obligations and created inflation making paper money almost worthless. Although the Federal Government returned to the Gold Standard after the Civil War, the Confederacy defaulted on its obligations wiping out holders of Confederate financial assets.

The strong returns to stocks and bonds during the Greenback Era reflect, in part, the fact that the stock market was at a low point when the war began and bond yields had peaked. The stock market rose continually during the war, peaking in 1873 while bond yields fell from 1861 until the

early 1900s (Figure 3). This pattern continued during the Gold Standard Regime with strong bull markets occurring between 1876 and 1881 and between 1896 and 1901, with stocks fluctuating within ranges during the rest of the period between 1878 and 1913. Despite the sharp break in 1907, the market immediately bounced back. The most notable fact about the period before 1913 was the stability of prices, the currency and of government spending, and the relative stability of the Equity Risk Premium.

Although the Federal Reserve was created in 1913, the more important event was the start of World War I in 1914. The result in the U.S. was double-digit inflation from 1916 to 1919 and deflation through 1932. The inflation during and after the war created wild fluctuations for investors with strong losses through 1921, a huge bull market through 1929 and a sharp crash to 1932. Bond yields rose through 1921, then declined steadily until the 1940s.

The creation of the Fed coincided with the collapse of the Pound Standard, often referred to as the Gold Standard, after World War I. Britain was unable to bear the burden of the financial and economic costs of World War I, and was unable to return to their old parity in the 1920s. Financial and economic conditions in other countries were even worse with hyperinflation wiping out German investors. The inability or unwillingness of the United States to replace the Pound Standard with a Dollar Standard until Bretton Woods contributed to the economic problems of the 1930s.

The volatility of this period had more to do with the war and the fiscal policy resulting from the war and its consequences than with monetary policy. The inability of both American and European politicians to deal with the financial and economic problems that resulted from World War I have a parallel in the inability of American and European politicians to deal with the current economic crisis. It is difficult to get society to bear the costs of addressing a financial crisis when the economy is in a recession or suffering slow growth with high unemployment.

Even after Roosevelt was elected in 1933 and fiscal policy became paramount, stock market declines in 1937 and 1941 returned the market to the level it had been at in 1901. Once the war began, the US government made sure it didn't suffer the inflation of World War I by controlling prices, interest rates and spending. The stock market boomed during the war, paused during the post-war recession, and rose almost continually from 1948 to 1966. Interest rates were kept low throughout the war, and even though they were allowed to rise after the war, they remained low until the early 1960s.

Nevertheless, inflation gradually rose throughout the post-war era, pushing nominal interest rates higher and creating a slow-moving bear market in bonds that lasted until interest rates peaked in 1981. Between 1966 and 1981, the S&P 500 lost almost 75% of its value in real terms as long-term bond yields rose from 5% to 15%. With stocks, bonds and bills all suffering real losses, Volcker introduced policies designed to control inflation in 1979, even if it caused a recession. However, because of financial innovation, controlling the monetary aggregates proved difficult and monetary policy switched back to focusing on interest rates in 1982. For interest rates, the 1981-2014 period was a mirror image of the 1951-1981 period with interest rates making a round trip back to the levels of less than 2% levels of World War II by 2012 as illustrated by the graph above.

There is a certain irony in that the solutions that were laid down at the beginning of each monetary regime, and initially appeared to succeed, ultimately failed. The return to gold in 1873 ultimately led to the creation of the Fed which led to a fiat currency replacing gold. The financial crisis of 1907 which gave rise to the creation of the Fed led to a collapse in the money supply in the 1930s, contributing to the Great Depression. The government's control over interest rates and bond yields in the 1940s led to the Treasury Accord which allowed the market to determine long-term interest rates and eventually led to the highest interest rates in US history.

The failure of Keynesian policies in the 1970s led to the introduction of Monetarist policies in 1979, interest rate targeting after 1982, and the Bubbliism of the 1990s and 2000s. Although price inflation declined, asset inflation became a significant problem. Volcker allowed interest rates to seek their own level to control inflation, but Greenspan and Bernanke drove interest rates down to unprecedented levels to save the economy. Government deficits worsened creating further pressure on monetary policy.

In 2008, the worst economic crisis since the Great Depression occurred. Despite fiscal stimulus through trillion-dollar government deficits, and monetary stimulus through QE1, QE2, Operation Twist, expansion of the Fed's balance sheet, large purchases of government debt, and other measures, strong growth failed to return. To prevent the economy from falling into a deep recession, the government ran trillion-dollar deficits for several years, and the Fed expanded its balance sheet to over \$3 trillion by purchasing U.S. Government and mortgage-backed securities. This constitutes a new monetary regime, which we refer to as Expansionism because of the expansion in government spending, in the government deficit, and in the Fed's Balance Sheet. At this point, one can only wonder what financial crisis it is creating for the 2020s or 2030s.

RETURNS DURING CRISIS PERIODS AT THE END OF MONETARY REGIMES

Since each monetary regime covers long periods of time, the data can mask the large swings and returns that occur within each monetary regime. The change from the Gold Standard to the creation of a Central Bank, from 1930s deflation to Keynesian inflation, from the emphasis on Keynesian Fiscal Policy to Monetary Policy occurred because existing monetary regimes failed to provide growth to the economy at low inflation rates. It will be shown here that during each crisis period, investors suffered substantially, contributing to the demand for a change in monetary regimes.

Although we are focusing on monetary regimes, it remains true that fiscal policy influences GDP growth and returns as well. Fiscal and monetary policy do not exist in a vacuum. Each of the crises at the end of each monetary regime was influenced by outside "real world" events which monetary policy could only react to.

The important point to recognize here is that during each crisis, the existing monetary regime was no longer able to solve the problems that existed. Whether each monetary regime laid the seeds of its own destruction, or if the results would have been different under a different

monetary regime is difficult to determine. Nevertheless, the crisis created a need for a “solution” to the existing economic problems and a change in monetary regimes.

The table below shows that returns to investors at the end of each monetary regime were substantially lower than the average for each period. Either equities or bonds provided negative returns during each of these crises save one. In four of the six periods, a portfolio invested half in equities and half in bonds generated negative returns during each crisis except for the Great Recession and the Black Friday Panic.

Table 3 Annual Real Asset Class Returns during Different Financial Crises

Crisis	Years	S&P 500	Bonds	Portfolio	Bills	Inflation
1869 Black Friday	1869-1873	7.08	5.69	6.38	4.93	-1.53
1907 Panic	1907-1913	-0.28	-1.10	-0.69	0.72	2.30
1929 Depression	1929-1932	-17.47	10.90	-3.29	9.22	-6.44
Post-War Inflation	1946-1950	2.65	-5.19	-1.27	-5.33	6.55
Stagflation	1973-1979	-2.64	-4.58	-3.61	-2.06	8.82
Bubble Recession	2000-2008	-5.96	5.94	-0.01	0.52	2.50

Given

this data, it is easy to see why there was dissatisfaction with the existing monetary regime and a demand for change.

Each crisis led to an important change in monetary policy that set the tone for the next few decades: returning to a *de facto* Gold Standard in 1873, creating the Federal Reserve in

1913, subordinating monetary policy to fiscal policy after the election of Roosevelt in 1933, allowing the market to set government bond yields after 1951, controlling inflation through activist monetary policy after 1979, and the combination of a Zero Interest Rate Policy and Quantitative easing after 2008.

Although the Bubble Recession provided high returns to fixed income, this was offset by the negative returns to equities. The severity of the Great Recession of 2008 produced a significant change in monetary policy, lowering interest rates to zero and using the Fed’s Balance Sheet as an important tool to combat slow growth. For this reason, we consider these policies a regime change within our paradigm.

THE CASE OF JAPAN

The United States remains mired in a period of slow growth and low job creation despite the activist monetary and fiscal policy that has occurred over the past five years. Under the new monetary regime of Expansionism, the United States Government has run trillion dollar annual

deficits, dramatically increased the money supply and liquidity and expanded the Fed's Balance Sheet, while pushing both short-run and long-run interest rates down to unprecedented levels.

These policies are very similar to the ones Japan has followed for the past two decades, so it is important to look at the impact these policies have had on investors in Japan. If the United States is following monetary policies similar to the ones Japan has followed, similar results may occur.

During the past two decades, Japan has suffered low growth and low or negative returns to investors. Japan's nominal GDP remains virtually unchanged since 1990 and the Japanese stock market in 2014 is at the same price levels it was at in 1986. Japanese interest rates have been the lowest in the world (the 10-year bond currently yields less than 1%) during the past 20 years, and Japan has had no inflation since 1990. The chart below illustrates the impact of this slow growth on Japanese investors.

The table below shows the returns to stocks, bonds and bills in Japan since 1950. The table reinforces the fact that the Equity Risk Premium can change dramatically. Between 1950 and 1989 when Japan was growing and went through its bubble in the 1980s, the Stock/Bond Premium averaged 10.41% per annum over a period of almost 40 years, but since 1989, equity returns have been negative, and the ERP has been -5.49%. Housing prices remain substantially below the levels that were at in 1989 as well. The average annual return to bonds and bills has been relatively consistent, but the return on equities has varied considerably. Japan's last two decades has generated negative returns for shareholders for over 20 years now.

Table 4 – Japan Real Asset Returns during Different Time Periods

Years	Stocks	Bonds	Bills	Portfolio	ERP	Inflation	Real
1950-1989	14.24	3.47	1.25	8.85	10.41	4.89	7.19
1990-2014	-2.04	3.64	0.71	0.80	-5.49	0.46	0.94
2000-2014	0.17	2.04	0.16	1.10	-1.83	0.05	0.78
1950-2014	7.68	3.54	1.04	5.61	4.00	3.16	4.80

Unfortunately, there are substantial parallels between Japan in the 1990s and the United States today. Despite five years of activist fiscal and monetary policy, economic growth remains slow and job creation remains subdued. Continuous government deficits in Japan have not resulted in a return to economic growth.

Current Fed policy has followed Japan's example in driving long-term interest rates to unprecedented lows. This has benefited investors through capital gains on bonds which increase wealth, but this will reduce future income earned on bonds. This creates a dilemma for fixed-income investors similar to the one they faced in the United States in the 1940s. Either interest rates stay low and fixed-income

investors receive low returns over their investment horizon, or rising interest rates trap them in a bear

market that reduces wealth. Anyone saving for retirement or other future goals will find it difficult to obtain adequate returns from bonds. The equity risk premium can rise by default through low returns to fixed income, but the negative returns to shareholders in Japan during the past 20 years has meant that despite low bond yields, fixed income has outperformed equities.

The greatest fear is that as in Japan, the United States suffers two decades of inferior economic growth, slow

job growth, low interest rates which negatively impact investors, and low equity returns. The United States has

already lost one decade of growth during the 2000s despite massively accommodating fiscal and monetary policy. Is it doomed to a second lost decade?

THE FED'S FOUR FAILURES

Just as the nineteenth century was dominated by the Pound Standard with currencies linked to gold, the twentieth century was dominated by the Dollar Standard with fiat currencies controlled by Central Banks.

Before World War I, many countries still allowed private banks to print banknotes, but by World War II, this privilege had been almost completely eliminated.

In 2013, the Federal Reserve marked its hundredth anniversary, but it was a century in which the Fed failed four times.

The first failure occurred in the 1930s when the Fed allowed the money supply to collapse, contributing to the severity of the Great Depression in the United States. This was compounded by the inability and unwillingness of the United States to step in as the primary Central Bank in the global financial system after the United Kingdom failed to maintain its role after it failed to return to the pre-war exchange rate parity in the 1920s. The Fed failed both domestically and internationally, making the Great Depression worse than it might have otherwise been.

The second failure occurred in the 1970s when the Fed failed to contain the inflation that built up through increases in the money supply. This led to the highest inflation rates in US history, outside of the Revolutionary and Civil Wars, and the highest interest rates in U.S. history. Paul Volcker had to dramatically change Fed policy in order to defeat the inflation that appeared to have become endemic in the American economy.

The third failure occurred in the 2000s, when the Greenspan put finally failed. The Bubbliism of the 1990s and 2000s led to the Great Recession of 2008 and a new monetary regime of Expansionism. The failure to contain asset price bubbles, and the consequences that they created for the economy, contributed to the magnitude of the financial collapse when it occurred. The collapse of the housing market after 2006 created problems which could take a decade to undo.

The fourth failure has been the cost to investors over the long run of Fed policies. As illustrated in this paper, the manipulation of interest rates, directly on short-term interest rates through control of the Fed Funds Rate and the Discount Rate, or on long-term bonds through Quantitative Easing, or indirectly through higher interest rates caused by higher inflation, has imposed costs on investors. Both interest rates themselves, as well as the Equity Risk Premium, have been more volatile since the creation of the Fed than they were before 1913. Similarly, the Fed has allowed the U.S. Dollar to depreciate dramatically against the Swiss Franc, Deutschemark/Euro and other currencies, also imposing costs on U.S. investors as well as on foreigners who have held American financial assets.

The fourth failure, though perhaps the least recognized of the four, has also had high economic costs and has created redistributions of income and wealth over time. The Fed is required by law to both

control inflation and promote economic growth, and has done so primarily through the manipulation of short-term interest rates. But this policy has come at an often unrecognized cost to investors through the wealth effects caused by rising and falling interest rates and thus bond prices, through the income effect resulting from changing interest rates, from the uncertainty caused by the changes in interest rates, through the impact this has had on the Equity Risk Premium, and through the redistributions and distortions caused by the mispricing of financial assets caused by the Fed's intervention.

HOW WILL EXPANSIONISM IMPACT INVESTORS?

Expansionism describes the current fiscal and monetary policy that the United States has pursued since 2008. It is a combination of massive stimulus from fiscal policy, combined with various types of Quantitative Easing and negative real interest rates through the Fed's Zero Interest Rate Policy. The United States ran trillion dollar deficits between 2008 and 2012. Monetary policy has accommodated fiscal policy through the expansion of the Fed's Balance Sheet, driving short-term interest rates close to zero and manipulating long-term interest rates through the purchase of Federal government bonds.

The potential problems with Expansionism are several-fold. First, the policies have yet to generate sustainable long-term economic growth. If anything, the United States remains in a Japanese lost decade. Second, the manipulation of interest rates creates redistributions of income and misallocations of resources that impose costs on the economy as a whole. Fixed income investors face low returns either through low interest rates or capital losses if high inflation raises nominal interest rates. Third, trillion dollar deficits raise the Government Debt/GDP ratio. The current Government Debt/GDP ratio is sustainable because of low interest rates, but should interest rates rise, the United States could run into problems as higher interest costs impact the federal budget.

The costs to the economy of Expansionism in terms of rising government debt, low returns to investors and a declining dollar could at some point lead to an even worse financial crisis. At best, Expansionism is a way of buying time until the economy recovers on its own, but if the economy fails to recover, these policies could lay the foundations of an even worse financial crisis during which

the United States would be forced to deleverage its debt.

Deleveraging involves reducing the debt levels that have built up over time in order that a deeper financial crisis does not occur. Although deleveraging may be beneficial in the long-run, in the short-run it can reduce aggregate demand and GDP. The goal of deleveraging is to lower the debt/GDP ratio. This can be done either through fiscal policy via austerity measures, or through monetary policy via inflation.

Deleveraging through fiscal policy can occur either by running government budget surpluses or by running deficits that are lower than the rate of economic growth. The United Kingdom was able to reduce its Napoleonic War debt, and the United States its World War II debt when their rates of GDP growth exceeded government deficits.

Failure to deleverage can lead to rioting by the financial markets. This can lead to higher yields on government debt and either default or reliance on international lenders who enforce austerity programs in exchange for the loans the private market is unwilling to provide.

Deleveraging can also occur through inflation, reducing the real debt burden by inflating out of it. France suffered constant financial crisis during the 1930s in part because of its high government debt/GDP ratio. After the war, its debt was substantially reduced by inflation (Germany used a currency conversion to reduce its debt after World War II and then renegotiated its existing international debts). Although investors paid a high price for the deleveraging, it did allow France to concentrate more of its resources on investment and growth after World War II.

Deleveraging through inflation imposes substantial costs on debt-holders, but it provides an alternative when political paralysis prevents the country from restructuring its fiscal policy to address the problems of rising government debt. Given the Federal government's current inability to reduce its large budget deficits, the possibility that the United States government might deleverage through inflation should not be rejected. If this were to occur, fixed-income investors would suffer, while equities would increase in value as the nominal assets that underlie equities rose in value.

CONCLUSION

There are two conclusions to be drawn from the evidence presented above. First, investors cannot ignore the influence of monetary policy on the returns to stocks, bond and bills, both in absolute and in relative terms. The differences in the returns to fixed income securities between 1878 to 1933, 1933 to 1981 and 1981 to 2014 are best explained by changes in monetary policy that drove interest rates up from 1933 to 1981 and down from 1981 to 2014. These policies not only distorted returns to financial assets, but also created misallocations in the economy that may have contributed to

the financial crises that occurred. Central Bank policy has generally subordinated the impact of monetary policy on investor returns to economic policy goals such as stable-long run growth and low unemployment.

Second, the evidence here raises the question of whether the different monetary regimes that have existed in the past, even assuming that they have produced net benefits to the economy as a whole, have created distortions and misallocations whose costs to investors exceed their benefits. Since 2008, the Fed has pursued a policy of Expansionism that has reduced short-term interest rates, and manipulated long-term interest rates through the purchase of government securities.

As stated earlier, the ideal monetary regime is one that allows the real side of the economy to allocate resources as efficiently as possible while minimizing the economic cost of the monetary side of the economy. The Fed has worked to achieve this goal by controlling inflation, but the other policy goals imposed upon or chosen by the Fed, to increase growth, reduce unemployment or absorb government debt impose real costs to the economy. The Fed has subjugated important goals on the monetary and financial side of the economy, such as controlling credit expansion, limiting asset bubbles, and the impact of monetary policy on returns to investors to achieving goals in the real economy which it may not be able to attain.

Expansionism is the current monetary regime of the United States. This regime could continue for several decades as it has in Japan, or as has occurred with other monetary regimes. Expansionism can, and probably will, sow the seeds of its own destruction, leading to another financial crisis at some point in the future.

Investors should be aware of the costs of monetary policy, not only in terms of the macroeconomic impact of monetary policy, but the impact on investor returns. The current activist policies of the Fed continue to impose costs, reallocate and misallocate financial and real resources, just as previous monetary regimes have. The failure of Activist policies in Japan to provide high returns to investors over the past two decades is a cause for deep concern to investors in both the United States in Europe where similar policies are being pursued.