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Special Report

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Historical Market Performance Under Various Deflation/Inflation Scenarios

How important is the level of deflation/inflation to the financial markets? This study examines historical market returns under various deflation/inflation scenarios.

Summary/Highlights of Results

Deflation/Inflation

This study uses monthly data that stretches back as far as 1801 – covering 2,532 months through December 2011. We break down this period into three different types of inflation periods.

Deflation was the norm 31.42% of the time. This breaks down into mild deflation periods (0% to –4% yoy CPI) 19.50% of the time and severe deflation periods (less than –4% yoy CPI) the other 11.92% of the time.

Inflation was present 55.42% of the time. This breaks down into mild inflation periods (0% to 4% yoy CPI) 35.69% of the time and severe inflation periods (more than 4% yoy CPI) the remaining 19.74% of the time.

Zero inflation was present 13.16% of the time.

In addition to the above periods, we also highlight **Disinflation.** This is a subgroup of inflation, in which yoy CPI is more than 0% and is lower than 1 year earlier. Disinflation was present 20.89% of the time.

Either coincident with, or because of, the creation of the Federal Reserve in 1913, the deflation/inflation environment changed dramatically.

Prior to 1913, deflation was present 47.29% of the time. Inflation was present only 29.89% of the time.

Since 1913, deflation was present only 14.66% of the time. Inflation has been a near constant, occurring 83.40% of the time.

Since World War II, inflation has been present 95.33% of the time. Disinflation accounted for 44.44% of these inflationary periods. Deflation has occurred only 4.55% of the time. The U.S. underwent its first month of deflation in over 50 years in December 2008. Prior to this, August 1955 (year-over-year CPI -0.37%) was the last period of deflation in the U.S.

The Total Return Of Stocks (Page 7)

In looking at the history of stock returns back to 1803, we find, not surprisingly, that stocks do poorly in deflationary periods. They average a total return of 4.19% during deflationary periods versus 9.43% for all periods.

Interestingly, the pre-1913 **deflation** was much harder on the stock market than the post-1913 deflation. During deflationary periods **before** the creation of the Federal Reserve, stocks returned 2.87% versus 7.29% for all periods. Volatility, however, was below average. During deflationary periods, the standard deviation of returns was 11.86% versus 16.01% for all pre-Fed periods.

During deflationary periods **after** the creation of the Federal Reserve (1913), returns and volatility changed. While stock returns did relatively better than during the pre-Fed period, they were still below the average of all periods. In the post-Fed period, they returned 8.86% versus 11.81% for all periods. Volatility changed dramatically as well. In the Pre-Fed period, volatility during deflationary scenarios was below average. Since the creation of the Fed, it has been well above average -- 33.96% during deflationary periods versus 21.21% for all periods.

Deflation before the creation of the Federal Reserve meant poor returns and low volatility. Deflation in the "Federal Reserve era" has meant higher returns, but still below average and very volatile.

Why the difference? One reason could be that deflation is now a rare event. Since 1913, it has occurred only 14.66% of the time versus 46.48% of the time before 1913. Since World War II, deflation has been almost non-existent, occurring 4.55% of the time.

In the Federal Reserve era, we believe the stock market interprets deflation as a "bottoming signal" and thus a buy. Since deflation is rare, its potential damage is minimal. So, the typical action of stocks is to bottom as deflation first hits and then soar as deflation begins to dissipate. This accounts for the very high volatility.

Interestingly, since the creation of the Federal Reserve, overall stock returns have fared much better. Prior to 1913, the stock market averaged an annualized total return of 7.29%. Since the creation of the Fed in 1913, stock returns have averaged 11.81%. As these are "nominal" returns (that is, not inflation-adjusted), the "inflation boom" that occurred with the creation of the Federal Reserve accounts for some of these excess returns. We will discuss this further in the next section.

The creation of the Fed has also significantly affected the returns during **disinflationary** periods. Prior to 1913, the worst period to own stocks was during periods of disinflation when they returned -1.32%. It was also a rare event, as it occurred only 7.12% of the time. Since 1913, disinflation has occurred 36.23% of the time and has been a great time to own stocks. During these disinflationary periods, they have returned an astounding 16.23%.

Why the difference? Deflationary periods since 1913 have been practically non-existent. This means that falling inflation rates (disinflation) have **not** been the warning sign that a "bad period" of deflation was coming like they were before the creation of the Fed. Therefore, the marketplace perceives a floor on the inflation rate near zero. This floor means reduced risk, which makes disinflation a good period in which to own stocks.

When deflation was a frequent event prior to 1913, there was no perceived floor near zero inflation. Since markets are supposed to be anticipatory, the worst returns occurred when the "warning sign" of deflation, that being disinflation, was flashing.

"Real" Total Stock Returns (Page 8)

As mentioned above, the "inflation boom" that followed the creation of the Federal Reserve has boosted the nominal total returns of stocks since 1913. However, what do these returns mean to investors after adjusting for inflation?

Prior to 1913, "real" total stock returns (that is, stock returns after inflation) averaged 7.53%. Since 1913, they have averaged 8.48%. At first look, it appears that "real" total stock returns have fared slightly better under the Federal Reserve.

However, upon considering volatility, the picture changes. Before 1913, "real" total stock returns had low volatility by today's standards (std. dev. 14.90%). Since 1913, volatility has spiked quite dramatically (std. dev. 21.96%). While "real" total stock returns have done marginally better in the post-1913 era, they have been accompanied by higher volatility.

Which is the better period? Dividing the "real" total stock returns, that is, returns in excess of inflation (our proxy for the risk-free rate), by the standard deviation of returns (volatility) gives us the "Sharpe Ratio." This ratio expresses in one number the tradeoff between returns in excess of inflation and volatility. The higher the ratio the better.

Prior to the creation of the Fed, the Sharpe Ratio was 0.5054. Since the creation of the Fed, it has been 0.3862. **When one applies this admittedly controversial measure to the inflation-adjusted returns, it suggests the pre-Fed period was better for stock investors.**

Similar to nominal stock returns, disinflation means something completely different before and after the creation of the Fed (1913) for "real" total stock returns. Prior to 1913, disinflation was the worst period to own stocks on an inflation-adjusted basis. Disinflation was a warning that deflation was coming. This is why stocks did so poorly on both a real and nominal basis. Since 1913, disinflation is one of the best periods to own stocks. The rarity of deflation and the belief in a floor at zero inflation is why "real" total stock returns perform so well during deflationary periods.

Long-Term Interest Rates (Page 9)

The history of long-term interest rates and deflation/inflation has been fairly predictable. Interest rates fall during deflationary periods and rise during inflationary periods. Deviations from this pattern do occur around the creation of the Federal Reserve.

Before the creation of the Federal Reserve (1913), interest rates were in a secular downtrend. On average, long-term interest rates fell -.03% (3 bps) a year between 1802 and 1913. Since 1913, long-term interest rates have generally been unchanged. The creation of the Federal Reserve and the subsequent inflation boom (more on this below) has made periods of falling interest rates rare. No surprise here.

Similar to the stock returns discussed above, the bond market's reaction to disinflation since the creation of the Federal Reserve in 1913 has changed dramatically. Prior to 1913, disinflation was the worst period for bond investors as interest rates **increased** an average of 0.14% (14 bps) a year. Since 1913, disinflation has been the best period for bond investors as interest rates have **declined** an average of 0.20% (20 bps) a year. As we explained with stocks, we believe the realistic threat of deflation, and the lack of it since 1913, accounts for this difference.

This deflation/inflation study shows that the lowest volatility for bond investors is found with inflation at zero. As deflation/inflation moves significantly away from zero in either direction, volatility increases dramatically. Even though some other periods might show better returns on a "volatility adjusted" (Sharpe Ratio) basis, zero inflation appears to be the best period for bond investors. This is exactly how the economic textbooks say it should be.

"Real" Long-Term Interest Rates (Page 10)

The dogma on *Wall Street* is that "real" long-term interest rates (real rates) average 3.0% over extended time periods. In actuality, the average since 1801 has been 4.50%.

Not surprisingly, real rates are much higher during deflationary periods than inflationary periods. This makes sense since nominal long-term interest rates cannot go below zero (or, at least, they never have in recorded history). So, negative inflation rates (deflation) will produce very high real interest rates. This is what makes deflationary periods so punishing. Real rates can reach very high levels, which severely impairs economic activity. The only way to bring real rates down is for inflation to return. However, if real rates remain at high levels, stimulating the economy is very difficult.

Conversely, real rates can often go negative during inflationary periods. That is, the inflation rate is higher than nominal long-term interest rates. This is especially true during periods of severe inflation. This situation can feed the inflation cycle since negative real rates will encourage further economic expansion exactly when the economy does not need it.

The creation of the Federal Reserve has dramatically changed the real rate outlook. Prior to 1913, real rates averaged 6.84%. By current standards, this appears to be an unbelievably high rate. However, the frequent deflationary periods account for this high average. Since 1913, real rates have averaged only 1.85%. The lack of deflation and the frequency of severe inflation explain this low rate.

Finally, we have noted how markets have responded to disinflation before and after 1913. In the case of real rates, the difference has been rather small. Volatility (std. dev.) has been almost identical, and the lower average after 1913 can be explained by the emergence of inflation. While other markets have responded starkly to disinflation, real rates have not.

Short-Term Interest Rates (Page 11)

Much like long-term interest rates, short-term interest rates behave as expected – they fall during deflation and rise during inflation. Like other markets, the creation of the Federal Reserve has had an impact on the behavior of short-term interest rates. This impact, however, looks to be the most profound of all.

Prior to 1913, the average annual change in short-term interest rates was -0.02% (-2 bps). Since 1913, this change has been -0.05%.

If one looks at volatility, however, there has been a huge difference. Prior to 1913, a one standard deviation change in short-term interest rates was an incredible 4.36%. This means that the "average" year could see short-term interest rates vary in an 8.72% range (+/- 4.36%).

Since 1913, volatility has averaged 1.47% -- about one-third of the pre-1913 era. Economic history books tell us that a primary reason for creating the Federal Reserve was to smooth the volatility in interest rates associated with fluctuations of the agricultural cycle. Based on these statistics, it appears that the Fed has accomplished this directive. But, at what price? More about this below.

As was the case with stocks and long-term interest rates, the impact of disinflation has meant very different things on short-term rates before and after 1913. Prior to the Fed, disinflation resulted in high volatility (std. dev. 5.81%) and dramatically rising short-term interest rates (+1.82%). Since 1913, disinflation has resulted in lower volatility (std dev. 1.67%) and falling short-term interest rates (-0.45%).

Additionally, as is the case with long-term interest rates, volatility is the lowest around zero inflation and grows as deflation/inflation moves significantly away from zero in either direction. Therefore, the best "volatility-adjusted" (Sharpe Ratio) environment is when inflation is zero.

The CRB (Page 12)

The CRB, or commodity prices, have probably had the most predictable results of all the markets in this study. They do poorly in deflationary periods and well in inflationary periods. Not even the creation of the Federal Reserve has changed this rule of thumb.

Like all the other markets studied, disinflation has meant two different things to the CRB before and after the creation of the Federal Reserve. Prior to 1913, the CRB did well during disinflationary periods – rising at an 8.68% annual pace on high volatility. Since the creation of the Fed in 1913, however, the average annual rate of return has been -0.85% on lower volatility.

Why the difference? Frankly, we do not have an explanation. This is not what the economic textbooks would have told us to expect.

How Has The Creation Of The Federal Reserve In 1913 Affected Inflation?

There are two types of deflation: pre- and post- Federal Reserve. The pre-Federal Reserve period was one where deflation was common – occurring 47.29% of the time. Price stability defined the economy, and between 1801 and 1913, the year-over-year change in CPI **averaged** -0.36%. This helped to keep volatility substantially low in nearly all the markets we studied. With low volatility, returns were low as well. Less risk (low volatility) meant less reward (returns). **However, when these returns were adjusted for volatility**

(Sharpe Ratio), the pre-Fed period was a better environment than the post-Fed period.

Short-term interest rates were the major exception. Volatility was almost three times higher before 1913 than after. Economic history tells us that eliminating the volatility in short-term interest rates was a major reason for creating the Federal Reserve. However, in smoothing out this volatility, there might have been a cost – inflation.

We believe the large swings in short-term interest rates acted as a shock absorber for the economy, thus keeping prices (year-over-year CPI) stable.

In this pre-Federal Reserve environment, deflation occurred concurrent with financial bear markets. Severe inflation was a rarity, usually occurring around wars, and thus was not viewed as the persistent problem that it has become since 1913.

With the creation of the Fed in 1913, all this changed. Volatility of short-term interest rates decreased by two-thirds. So, the Fed accomplished one of its mandates. However, reducing short-term interest rate volatility did have a downside. **We believe it created inflation.**

The reduction in the volatility of short-term interest rates came from government mandate. Tools like the discount rate were used to **force** stability upon short-term interest rates. This locked up the economic shock absorber that short-term interest rates provided for the economy.

Without a properly functioning shock absorber, price stability vanished. Additionally, the Federal Reserve most likely held short-term interest rates too low over this period. This helped to foster inflation, and the year-over-year change in the CPI jumped from –0.36% before 1913 to 3.39% since 1913. Volatility in the CPI also jumped as well (the std. dev was 4.95% before 1913 and it has been 5.26% since).

So, while the returns in most markets have been higher since 1913, so has volatility. The higher returns are supposed to be compensation for the riskier environment, but, as we have seen, these higher returns are not enough to offset the higher volatility (Sharpe Ratio) that resulted after the Fed was created.

What Does Deflation Mean Today?

In December 2008 CPI not-seasonally adjusted advanced by just 0.09%. Seasonally adjusted it was **down** 0.09%. This was the first negative year-over-year CPI (deflation) reading since August 1955. This deflationary period lasted 10 months as year-over-year CPI again turned above 0% in November 2009. At its worst point, deflation was measured at -2.1% in July 2009. How did the financial markets react to the first deflationary period in over 50 years?

First recall that financial markets reacted differently to deflation in the pre-Fed and post-Fed periods. As we noted in all the sections above, disinflation was the warning of impending deflation prior to 1913. Financial markets fared poorly in this environment. Since 1913, however, the threat of deflation was practically nonexistent up until recently, so disinflation has been greeted positively by the stock and bond markets.

The 2008/2009 deflation episode sparked a pre-Fed (1913) type of reaction from the markets. As disinflation sank to less than 1% and approached deflation, financial markets panicked and saw one of their worst periods since the Great Depression. When deflation actually occurred (December 2008 to October 2009), the markets were already rebounding. This was often the case in the pre-Fed period as well. In other words, the market took deflation very seriously and began their panic when disinflation sank to levels that made deflation look likely.

One of the lasting effects of the financial crisis since 2007 might be a change in the view about deflation. No longer is deflation viewed as an aberration as was often the case since 1913. During this crisis, it was viewed as devastating for financial markets.

Explaining The Tables

Charts and detailed explanations of this data used can be found on our website under "Long Term Charts". What follows is an abridged version.

Deflation/Inflation

The inflation data from 1801 to 1913 was compiled by the Bureau of Labor Statistics for publication in: *Historical Statistics of the Untied States, Colonial Times to 1970*, U.S. Department of Commerce, The Bureau of Census (1975).

1914 to date: The Consumer Price Index compiled by the Bureau of Labor Statistics.

Total Stock Returns

This data is shown in chart LTC-10. This is the price change of stocks plus dividends. Its sources are: Data from 1803 to 1925 was derived by G. William Schwert, Gleason professor of Statistics and Finance at the University of Rochester, William E. Simon Graduate School of Business Administration. It was first published in the July 1990 edition of the *Journal of Business*. Data from 1926 to date is the S&P 500's total return as calculated by Ibbotson and Associates and Standard & Poors.

"Real" Total Stock Returns

"Real" total stock returns are the total return of stocks minus the year-over-year change in CPI. Both series are described above.

Long-Term Interest Rates

This data is shown in chart LTC-1. The following monthly series have been spliced together:

- 1801 to 1831: 3% British Consols
- 1831 to 1919: High-Grade LT Railroad Bonds

1919 to date: LT Treasury constant maturity from the Federal Reserve (10-years or more).

The concept was to splice together the highest quality long-term interest rate available at that time.

"Real" Long-Term Interest Rates

"Real" Long-Term Interest Rates are long-term interest rates (chart LTC-1) minus the year-over-year change in CPI. Both series are described above and shown in chart LTC-4 on our website.

Short-Term Interest Rates

This data is shown in chart LTC-2. The following monthly series have been spliced together:

- 1831 to 1919: six-month commercial paper rates
- 1919 to date: U.S. 3-month Treasury Bills, secondary market average.

Like long-term interest rates, the concept was to splice together the highest quality short-term interest rate available at that time.

The CRB

From 1956 to date, this series is the CRB. From 1801 to 1956 several commodity series were spliced together and "normalized" to the CRB. A full description of all the series used prior to 1956 (a total of 18 were used) can be found on chart LTC-5 on our website under "Long Term Charts."

The Deflation/Inflation "Brackets"

We break down the deflation/inflation rate into several "brackets." They are:

"**All Deflation Periods**" – when year-over-year CPI is less than 0%. This period is broken down further:

"**Mild Deflation**" – when year-over-year CPI is less than 0% but more than -4%.

"**Severe Deflation**" – when year-over-year CPI is less than -4%.

"**Zero Inflation**" – when year-over-year CPI is *exactly* 0%.

"**All Inflation Periods**" – when year-over-year CPI is more than 0%. This period is broken down further:

"**Mild Inflation**" – when year-over-year CPI is more than 0% but less than 4%.

"**Severe Inflation**" – when year-over-year CPI is more than 4%.

"**Disinflation**" – when year-over-year CPI is *more* than 0% *and* is lower than 1 year earlier.

Periods Studied

The first period is the entire history in our database starting in 1801 (the start of our CPI data) and covers 2,532 months.

The next period revolves around what we believe is one of the most important events for the markets over this period – the creation of the Federal Reserve. We show the performance of the markets before (1,345 months) and after (1,187 months) the creation of the Federal Reserve in 1913.

Finally, we show the performance of the markets after World War II (792 months) since it is a popular benchmark to use when studying long-term data.

The Statistics Shown

The first three statistics in the attached tables show how many times the markets were in a particular scenario.

No. Of Months: This is the number of months that the deflation/inflation condition was true.
Total Months: This is the total number of months for the period studied.
% Of Total Months: "No. of months" as a percentage of "Total Months."

The next three statistics show return statistics.

Median: Median return for the period shown.
Average: Average return for the period shown.
Std. Dev: This is the Standard Deviation of the period shown. This is a measure of volatility.

Why show all three? They give a sense for the dispersion within a particular group. For instance, a large difference between the median and average return suggests returns are not normally distributed.

If the median and the average are close together, then the standard deviation calculation becomes important. It shows how wide the returns are around an average. The larger the standard deviation, the less meaningful is the average return.

The final three statistics show some extreme readings.

Highest: This shows the highest or largest levels reached.
Lowest: This shows the lowest or smallest levels reached.
% Negative: The percentage of the time that the results were below zero.

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Annualized Total Return of Stocks Under Various Deflation/Inflation Scenarios
Monthly Data From 1803 Through December 2011

	All Periods	All Deflation Periods (YOY CPI <0%)	Mild Deflation (YOY CPI 0% to -4%)	Severe Deflation (YOY CPI <-4%)	Zero Inflation (YOY CPI = 0%)	All Inflation Periods (YOY CPI >0%)	Mild Inflation (YOY CPI 0% to 4%)	Severe Inflation (YOY CPI >4%)	Disinflation (YOY CPI >0% & Lower Than 1 Year Earlier)
All Months (Back To 1803)									
No. Of Months	2,508	788	489	299	330	1,390	895	495	524
Total Months	2,508	2,508	2,508	2,508	2,508	2,508	2,508	2,508	2,508
% Of Total Mos.	100.00%	31.42%	19.50%	11.92%	13.16%	55.42%	35.69%	19.74%	20.89%
Median	***8.08%***	***4.66%***	***6.44%***	***0.08%***	***10.79%***	***9.95%***	***11.33%***	***7.50%***	***14.24%***
Average	***9.43%***	***4.19%***	***7.10%***	***-0.57%***	***12.98%***	***11.55%***	***12.40%***	***10.03%***	***13.09%***
Std Dev.	***18.79%***	***19.22%***	***17.54%***	***20.86%***	***17.49%***	***18.23%***	***17.20%***	***19.89%***	***18.25%***
Highest	162.88%	162.88%	73.88%	162.88%	83.83%	98.73%	73.91%	98.73%	73.91%
Lowest	-67.57%	-67.57%	-49.65%	-67.57%	-33.50%	-43.29%	-43.29%	-38.92%	-43.29%
% Negative	29.11%	36.68%	28.83%	49.50%	22.42%	26.40%	23.69%	31.31%	24.62%
Before 1913 (The Creation Of The Federal Reserve)									
No. Of Months	1,321	614	370	244	307	400	275	125	94
Total Months	1,321	1,321	1,321	1,321	1,321	1,321	1,321	1,321	1,321
% Of Total Mos.	100.00%	46.48%	28.01%	18.47%	23.24%	30.28%	20.82%	9.46%	7.12%
Median	***5.53%***	***4.13%***	***5.21%***	***1.70%***	***10.73%***	***5.22%***	***5.21%***	***5.26%***	***-2.97%***
Average	***7.29%***	***2.87%***	***4.10%***	***1.00%***	***12.37%***	***10.16%***	***8.48%***	***13.86%***	***-1.32%***
Std Dev.	***16.01%***	***11.86%***	***12.31%***	***10.92%***	***16.31%***	***19.23%***	***16.06%***	***24.49%***	***14.92%***
Highest	83.74%	54.52%	54.52%	34.72%	67.01%	83.74%	58.74%	83.74%	47.43%
Lowest	-39.25%	-39.25%	-34.81%	-39.25%	-25.30%	-26.22%	-25.58%	-26.22%	-26.22%
% Negative	30.51%	35.50%	29.46%	44.67%	22.15%	29.25%	31.27%	24.80%	61.70%
After 1913 (The Creation Of The Federal Reserve)									
No. Of Months	1,187	174	119	55	23	990	620	370	430
Total Months	1,187	1,187	1,187	1,187	1,187	1,187	1,187	1,187	1,187
% Of Total Mos.	100.00%	14.66%	10.03%	0.00%	1.94%	83.40%	52.23%	31.17%	36.23%
Median	***12.06%***	***12.49%***	***23.48%***	***-12.70%***	***17.57%***	***12.04%***	***14.52%***	***8.17%***	***16.15%***
Average	***11.81%***	***8.86%***	***16.44%***	***-7.53%***	***21.08%***	***12.12%***	***14.14%***	***8.73%***	***16.23%***
Std Dev.	***21.21%***	***33.96%***	***26.11%***	***42.48%***	***28.26%***	***17.79%***	***17.41%***	***17.94%***	***17.39%***
Highest	162.88%	162.88%	73.88%	162.88%	83.83%	98.73%	73.91%	98.73%	73.91%
Lowest	-67.57%	-67.57%	-49.65%	-67.57%	-33.50%	-43.29%	-43.29%	-38.92%	-43.29%
% Negative	27.55%	40.80%	26.89%	70.91%	26.09%	25.25%	20.32%	33.51%	16.51%
After 1945 (World War Two)									
No. Of Months	792	36	36	0	1	755	487	268	352
Total Months	792	792	792	792	792	792	792	792	792
% Of Total Mos.	100.00%	4.55%	4.55%	0.00%	0.13%	95.33%	61.49%	33.84%	44.44%
Median	***12.85%***	***19.72%***	***19.72%***	***NA***	***35.04%***	***12.76%***	***14.86%***	***8.07%***	***16.03%***
Average	***12.14%***	***14.18%***	***14.18%***	***NA***	***35.04%***	***12.02%***	***14.38%***	***7.73%***	***15.56%***
Std Dev.	***16.99%***	***30.33%***	***30.33%***	***NA***	***NA***	***16.10%***	***15.76%***	***15.84%***	***15.88%***
Highest	61.01%	52.62%	52.62%	NA	NA	61.01%	61.01%	43.36%	61.01%
Lowest	-43.29%	-38.61%	-38.61%	NA	NA	-43.29%	-43.29%	-38.92%	-43.29%
% Negative	22.98%	30.56%	30.56%	NA	NA	22.65%	16.84%	33.21%	15.06%

Annualized "Real" Total Return of Stocks Under Various Deflation/Inflation Scenarios
Monthly Data From 1803 Through December 2011

	All Periods	All Deflation Periods (YOY CPI <0%)	Mild Deflation (YOY CPI 0% to -4%)	Severe Deflation (YOY CPI <-4%)	Zero Inflation (YOY CPI = 0%)	All Inflation Periods (YOY CPI >0%)	Mild Inflation (YOY CPI 0% to 4%)	Severe Inflation (YOY CPI >4%)	Disinflation (YOY CPI >0% & Lower Than 1 Year Earlier)
All Months (Back To 1803)									
No. Of Months	2,508	788	489	299	330	1,390	895	495	524
Total Months	2,508	2,508	2,508	2,508	2,508	2,508	2,508	2,508	2,508
% Of Total Mos.	100.00%	31.42%	19.50%	11.92%	13.16%	55.42%	35.69%	19.74%	20.89%
Median	***7.33%***	***8.02%***	***8.34%***	***7.82%***	***10.79%***	***5.40%***	***8.61%***	***-0.40%***	***10.28%***
Average	***7.98%***	***7.83%***	***8.99%***	***5.93%***	***12.98%***	***6.88%***	***10.17%***	***0.94%***	***9.53%***
Std Dev.	***18.58%***	***18.59%***	***17.36%***	***20.32%***	***17.49%***	***18.65%***	***17.27%***	***19.57%***	***18.38%***
Highest	169.49%	169.49%	77.56%	169.49%	83.83%	94.01%	73.18%	94.01%	73.18%
Lowest	-57.63%	-57.63%	-48.95%	-57.63%	-33.50%	-50.87%	-43.49%	-50.87%	-43.49%
% Negative	31.26%	25.89%	24.34%	28.43%	22.42%	36.40%	28.16%	51.31%	31.49%
Before 1913 (The Creation Of The Federal Reserve)									
No. Of Months	1,321	614	370	244	307	400	275	125	94
Total Months	1,321	1,321	1,321	1,321	1,321	1,321	1,321	1,321	1,321
% Of Total Mos.	100.00%	46.48%	28.01%	18.47%	23.24%	30.28%	20.82%	9.46%	7.12%
Median	***6.76%***	***7.65%***	***6.97%***	***9.34%***	***10.73%***	***1.96%***	***3.31%***	***-1.35%***	***-5.72%***
Average	***7.53%***	***6.44%***	***6.14%***	***6.89%***	***12.37%***	***5.48%***	***6.30%***	***3.67%***	***-4.57%***
Std Dev.	***14.90%***	***11.64%***	***12.18%***	***10.78%***	***16.31%***	***17.27%***	***16.10%***	***19.56%***	***13.22%***
Highest	67.01%	54.82%	54.82%	39.80%	67.01%	60.41%	57.08%	60.41%	26.31%
Lowest	-34.75%	-34.75%	-31.52%	-34.75%	-25.30%	-34.13%	-28.39%	-34.13%	-30.26%
% Negative	29.30%	23.62%	23.78%	23.36%	22.15%	43.50%	37.45%	56.80%	72.34%
After 1913 (The Creation Of The Federal Reserve)									
No. Of Months	1,187	174	119	55	23	990	620	370	430
Total Months	1,187	1,187	1,187	1,187	1,187	1,187	1,187	1,187	1,187
% Of Total Mos.	100.00%	14.66%	10.03%	4.63%	1.94%	83.40%	52.23%	31.17%	36.23%
Median	***8.41%***	***18.77%***	***24.13%***	***-3.25%***	***17.57%***	***7.96%***	***12.02%***	***0.17%***	***12.49%***
Average	***8.48%***	***12.72%***	***17.83%***	***1.67%***	***21.08%***	***7.45%***	***11.88%***	***0.01%***	***12.61%***
Std Dev.	***21.96%***	***32.57%***	***26.06%***	***41.63%***	***28.26%***	***19.15%***	***17.50%***	***19.52%***	***17.91%***
Highest	169.49%	169.49%	77.56%	169.49%	83.83%	94.01%	73.18%	94.01%	73.18%
Lowest	-57.63%	-57.63%	-48.95%	-57.63%	-33.50%	-50.87%	-43.49%	-50.87%	-43.49%
% Negative	33.45%	33.91%	26.05%	50.91%	26.09%	33.54%	24.03%	49.46%	22.56%
After 1945 (World War Two)									
No. Of Months	792	36	36	0	1	755	487	268	352
Total Months	792	792	792	792	792	792	792	792	792
% Of Total Mos.	100.00%	4.55%	4.55%	0.00%	0.13%	95.33%	61.49%	33.84%	44.44%
Median	***8.90%***	***21.80%***	***21.80%***	***NA***	***35.04%***	***8.66%***	***12.57%***	***1.30%***	***12.60%***
Average	***8.20%***	***15.24%***	***15.24%***	***NA***	***35.04%***	***7.82%***	***12.03%***	***0.18%***	***12.24%***
Std Dev.	***18.01%***	***30.20%***	***30.20%***	***NA***	***NA***	***17.16%***	***15.89%***	***16.77%***	***16.31%***
Highest	58.43%	53.37%	53.37%	NA	NA	58.43%	58.43%	39.00%	58.43%
Lowest	-50.87%	-38.45%	-38.45%	NA	NA	-50.87%	-43.49%	-50.87%	-43.49%
% Negative	29.67%	30.56%	30.56%	NA	NA	29.67%	20.12%	47.01%	20.74%

Annual Changes In Long-Term Interest Rates Under Various Deflation/Inflation Scenarios
Monthly Data From 1801 Through December 2011

	All Periods	All Deflation Periods (YOY CPI <0%)	Mild Deflation (YOY CPI 0% to -4%)	Severe Deflation (YOY CPI <-4%)	Zero Inflation (YOY CPI = 0%)	All Inflation Periods (YOY CPI >0%)	Mild Inflation (YOY CPI 0% to 4%)	Severe Inflation (YOY CPI >4%)	Disinflation (YOY CPI >0% & Lower Than 1 Year Earlier)
					All Months (Back To 1801)				
No. Of Months	2,532	810	495	315	330	1,392	897	495	524
Total Months	2,532	2,532	2,532	2,532	2,532	2,532	2,532	2,532	2,532
% Of Total Mos.	100.00%	31.99%	19.55%	12.44%	13.03%	54.98%	35.43%	19.55%	20.70%
Median	***-0.03%***	***-0.11%***	***-0.10%***	***-0.11%***	***-0.12%***	***0.04%***	***0.00%***	***0.19%***	***-0.01%***
Average	***-0.02%***	***-0.05%***	***-0.06%***	***-0.03%***	***-0.11%***	***0.02%***	***-0.10%***	***0.24%***	***-0.14%***
Std Dev.	***0.66%***	***0.60%***	***0.52%***	***0.70%***	***0.42%***	***0.74%***	***0.68%***	***0.79%***	***0.87%***
Highest	3.42%	2.38%	2.38%	2.32%	1.89%	3.42%	2.45%	3.42%	3.22%
Lowest	-3.83%	-3.04%	-3.04%	-1.92%	-2.20%	-3.83%	-3.83%	-3.62%	-3.83%
% Negative	52.84%	61.60%	61.62%	61.59%	66.67%	44.47%	49.50%	35.35%	50.95%
				Before 1913 (The Creation Of The Federal Reserve)					
No. Of Months	1,345	636	376	260	307	402	277	125	94
Total Months	1,345	1,345	1,345	1,345	1,345	1,345	1,345	1,345	1,345
% Of Total Mos.	100.00%	47.29%	27.96%	19.33%	22.83%	29.89%	20.59%	9.29%	6.99%
Median	***-0.04%***	***-0.07%***	***-0.05%***	***-0.09%***	***-0.12%***	***0.07%***	***0.07%***	***0.07%***	***0.19%***
Average	***-0.03%***	***-0.02%***	***-0.03%***	***0.00%***	***-0.11%***	***0.03%***	***0.06%***	***-0.03%***	***0.14%***
Std Dev.	***0.58%***	***0.65%***	***0.57%***	***0.74%***	***0.42%***	***0.55%***	***0.50%***	***0.64%***	***0.47%***
Highest	2.45%	2.38%	2.38%	2.32%	1.89%	2.45%	2.45%	0.86%	1.80%
Lowest	-3.04%	-3.04%	-3.04%	-1.92%	-2.20%	-2.40%	-2.40%	-1.84%	-1.24%
% Negative	54.28%	58.02%	56.65%	60.00%	67.10%	38.56%	36.46%	43.20%	23.40%
				After 1913 (The Creation Of The Federal Reserve)					
No. Of Months	1,187	174	119	55	23	990	620	370	430
Total Months	1,187	1,187	1,187	1,187	1,187	1,187	1,187	1,187	1,187
% Of Total Mos.	100.00%	14.66%	10.03%	4.63%	1.94%	83.40%	52.23%	31.17%	36.23%
Median	***-0.02%***	***-0.17%***	***-0.16%***	***-0.26%***	***-0.05%***	***0.02%***	***-0.05%***	***0.21%***	***-0.06%***
Average	***-0.01%***	***-0.14%***	***-0.13%***	***-0.16%***	***-0.07%***	***0.01%***	***-0.17%***	***0.33%***	***-0.20%***
Std Dev.	***0.75%***	***0.35%***	***0.29%***	***0.45%***	***0.29%***	***0.80%***	***0.74%***	***0.81%***	***0.92%***
Highest	3.42%	0.82%	0.47%	0.82%	0.37%	3.42%	2.10%	3.42%	3.22%
Lowest	-3.83%	-1.66%	-1.66%	-0.93%	-0.99%	-3.83%	-3.83%	-3.62%	-3.83%
% Negative	51.22%	74.71%	77.31%	69.09%	60.87%	46.87%	55.32%	32.70%	56.98%
					After 1945 (World War Two)				
No. Of Months	792	36	36	0	1	755	487	268	352
Total Months	792	792	792	792	792	792	792	792	792
% Of Total Mos.	100.00%	4.55%	4.55%	0.00%	0.13%	95.33%	61.49%	33.84%	44.44%
Median	***0.07%***	***-0.16%***	***-0.16%***	***NA***	***-0.54%***	***0.09%***	***-0.03%***	***0.30%***	***-0.06%***
Average	***0.02%***	***-0.18%***	***-0.18%***	***NA***	***-0.54%***	***0.03%***	***-0.18%***	***0.41%***	***-0.23%***
Std Dev.	***0.88%***	***0.41%***	***0.41%***	***NA***	***NA***	***0.90%***	***0.82%***	***0.92%***	***1.01%***
Highest	3.42%	0.47%	0.47%	NA	NA	3.42%	2.10%	3.42%	3.22%
Lowest	-3.83%	-1.66%	-1.66%	NA	NA	-3.83%	-3.83%	-3.62%	-3.83%
% Negative	45.20%	77.78%	77.78%	NA	NA	43.58%	52.77%	26.87%	55.97%

The Level Of "Real" Long-Term Interest Rates Under Various Deflation/Inflation Scenarios
Monthly Data From 1801 Through December 2011

	All Periods	All Deflation Periods (YOY CPI <0%)	Mild Deflation (YOY CPI 0% to -4%)	Severe Deflation (YOY CPI <-4%)	Zero Inflation (YOY CPI = 0%)	All Inflation Periods (YOY CPI >0%)	Mild Inflation (YOY CPI 0% to 4%)	Severe Inflation (YOY CPI >4%)	Disinflation (YOY CPI >0% & Lower Than 1 Year Earlier)
All Months (Back To 1801)									
No. Of Months	2,532	810	495	315	330	1,392	897	495	524
Total Months	2,532	2,532	2,532	2,532	2,532	2,532	2,532	2,532	2,532
% Of Total Mos.	100.00%	31.99%	19.55%	12.44%	13.03%	54.98%	35.43%	19.55%	20.70%
Median	***4.34%***	***9.77%***	***8.10%***	***12.77%***	***4.64%***	***2.22%***	***2.76%***	***-0.63%***	***2.82%***
Average	***4.50%***	***10.03%***	***7.90%***	***13.39%***	***5.47%***	***1.05%***	***3.06%***	***-2.58%***	***2.18%***
Std Dev.	***5.85%***	***3.62%***	***2.35%***	***2.57%***	***1.63%***	***4.90%***	***1.99%***	***6.33%***	***3.69%***
Highest	21.23%	21.23%	15.20%	21.23%	10.09%	9.03%	9.03%	8.78%	8.86%
Lowest	-21.22%	2.73%	2.73%	6.99%	2.48%	-21.22%	-1.42%	-21.22%	-15.11%
% Negative	11.85%	0.00%	0.00%	0.00%	0.00%	21.55%	3.90%	53.54%	15.08%
Before 1913 (The Creation Of The Federal Reserve)									
No. Of Months	1,345	636	376	0	307	402	277	125	94
Total Months	1,345	1,345	1,345	0	1,345	1,345	1,345	1,345	1,345
% Of Total Mos.	100.00%	47.29%	27.96%	13.39%	22.83%	29.89%	20.59%	9.29%	6.99%
Median	***7.17%***	***10.38%***	***8.70%***	***2.57%***	***4.72%***	***2.77%***	***3.88%***	***0.03%***	***3.67%***
Average	***6.84%***	***10.65%***	***8.80%***	***15.96%***	***5.60%***	***1.76%***	***3.96%***	***-3.11%***	***2.92%***
Std Dev.	***5.38%***	***3.05%***	***1.85%***	***10.81%***	***1.59%***	***5.48%***	***2.12%***	***7.25%***	***3.84%***
Highest	21.23%	21.23%	15.20%	21.23%	10.09%	9.03%	9.03%	4.10%	8.48%
Lowest	-20.80%	4.62%	4.62%	8.48%	3.71%	-20.80%	-0.01%	-20.80%	-15.11%
% Negative	4.68%	0.00%	0.00%	0.00%	0.00%	15.67%	0.36%	49.60%	11.70%
After 1913 (The Creation Of The Federal Reserve)									
No. Of Months	1,187	174	119	55	23	990	620	370	430
Total Months	1,187	1,187	1,187	1,187	1,187	1,187	1,187	1,187	1,187
% Of Total Mos.	100.00%	14.66%	10.03%	4.63%	1.94%	83.40%	52.23%	31.17%	36.23%
Median	***2.48%***	***5.66%***	***5.10%***	***13.98%***	***4.19%***	***1.96%***	***2.51%***	***-0.86%***	***2.66%***
Average	***1.85%***	***7.78%***	***5.04%***	***13.71%***	***3.71%***	***0.76%***	***2.65%***	***-2.40%***	***2.02%***
Std Dev.	***5.20%***	***4.55%***	***1.22%***	***3.26%***	***0.85%***	***4.62%***	***1.79%***	***5.98%***	***3.64%***
Highest	21.21%	21.21%	7.89%	21.21%	4.59%	0.00%	8.86%	8.78%	8.86%
Lowest	-21.22%	2.73%	2.73%	6.99%	2.48%	0.00%	-1.42%	-21.22%	-13.66%
% Negative	19.97%	0.00%	0.00%	0.00%	0.00%	0.00%	5.48%	54.86%	15.81%
After 1945 (World War Two)									
No. Of Months	792	36	36	0	1	755	487	268	352
Total Months	792	792	792	792	792	792	792	792	792
% Of Total Mos.	100.00%	4.55%	4.55%	0.00%	0.13%	95.33%	61.49%	33.84%	44.44%
Median	***2.48%***	***3.54%***	***3.54%***	***NA***	***2.48%***	***2.37%***	***2.64%***	***0.58%***	***2.88%***
Average	***1.87%***	***3.94%***	***3.94%***	***NA***	***2.48%***	***1.77%***	***2.92%***	***-0.33%***	***2.80%***
Std Dev.	***3.50%***	***1.02%***	***1.02%***	***NA***	***NA***	***3.55%***	***1.81%***	***4.78%***	***2.82%***
Highest	8.86%	6.56%	6.56%	NA	NA	8.86%	8.86%	8.78%	8.86%
Lowest	-17.48%	2.73%	2.73%	NA	NA	-17.48%	-1.42%	-17.48%	-9.15%
% Negative	16.16%	0.00%	0.00%	NA	NA	16.95%	4.72%	39.18%	9.38%

Annual Changes In Short-Term Interest Rates Under Various Deflation/Inflation Scenarios
Monthly Data Through From 1832 Through December 2011

	All Periods	All Deflation Periods (YOY CPI <0%)	Mild Deflation (YOY CPI 0% to -4%)	Severe Deflation (YOY CPI <-4%)	Zero Inflation (YOY CPI = 0%)	All Inflation Periods (YOY CPI >0%)	Mild Inflation (YOY CPI 0% to 4%)	Severe Inflation (YOY CPI >4%)	Disinflation (YOY CPI >0% & Lower Than 1 Year Earlier)
All Months (Back To 1832)									
No. Of Months	2,160	604	396	208	289	1,279	832	447	524
Total Months	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160
% Of Total Mos.	100.00%	27.96%	18.33%	9.63%	13.38%	59.21%	38.52%	20.69%	24.26%
Median	***0.00%***	***-0.10%***	***-0.10%***	***-0.70%***	***0.00%***	***0.10%***	***0.04%***	***0.30%***	***0.00%***
Average	***-0.03%***	***-0.44%***	***-0.46%***	***-0.40%***	***-0.15%***	***0.18%***	***0.04%***	***0.45%***	***-0.05%***
Std Dev.	***3.12%***	***3.76%***	***2.93%***	***4.98%***	***2.05%***	***2.95%***	***3.00%***	***2.82%***	***3.01%***
Highest	29.50%	26.00%	9.00%	26.00%	9.00%	29.50%	29.50%	17.50%	29.50%
Lowest	-29.50%	-29.50%	-29.50%	-21.00%	-10.00%	-27.00%	-27.00%	-15.00%	-10.00%
% Negative	44.35%	54.97%	53.79%	57.21%	48.79%	37.92%	40.87%	32.44%	45.80%
Before 1913 (The Creation Of The Federal Reserve)									
No. Of Months	973	636	376	260	307	402	277	125	94
Total Months	973	973	973	973	973	973	973	973	973
% Of Total Mos.	100.00%	65.36%	38.64%	26.72%	31.55%	41.32%	28.47%	12.85%	9.66%
Median	***0.00%***	***0.00%***	***0.00%***	***0.00%***	***0.00%***	***0.00%***	***0.10%***	***0.00%***	***0.20%***
Average	***-0.02%***	***-0.27%***	***-0.41%***	***-0.07%***	***-0.13%***	***0.49%***	***0.51%***	***0.45%***	***1.82%***
Std Dev.	***4.36%***	***3.61%***	***2.96%***	***4.39%***	***1.98%***	***4.69%***	***4.85%***	***4.33%***	***5.81%***
Highest	29.50%	26.00%	9.00%	26.00%	9.00%	29.50%	29.50%	17.50%	29.50%
Lowest	-29.50%	-29.50%	-29.50%	-21.00%	-10.00%	-27.00%	-27.00%	-15.00%	-10.00%
% Negative	45.73%	34.91%	38.03%	30.38%	42.02%	23.38%	23.83%	22.40%	20.21%
After 1913 (The Creation Of The Federal Reserve)									
No. Of Months	1,187	174	119	55	23	990	620	370	430
Total Months	1,187	1,187	1,187	1,187	1,187	1,187	1,187	1,187	1,187
% Of Total Mos.	100.00%	14.66%	10.03%	4.63%	1.94%	83.40%	52.23%	31.17%	36.23%
Median	***0.00%***	***-0.20%***	***-0.10%***	***-1.50%***	***-0.10%***	***0.09%***	***0.00%***	***0.30%***	***-0.10%***
Average	***-0.05%***	***-0.54%***	***-0.24%***	***-1.17%***	***-0.11%***	***0.04%***	***-0.17%***	***0.39%***	***-0.45%***
Std Dev.	***1.47%***	***1.29%***	***1.08%***	***1.46%***	***0.89%***	***1.50%***	***1.21%***	***1.83%***	***1.67%***
Highest	7.70%	1.90%	1.90%	1.40%	1.70%	7.70%	2.70%	7.70%	7.70%
Lowest	-6.80%	-3.40%	-3.40%	-3.10%	-1.80%	-6.80%	-5.40%	-6.80%	-6.80%
% Negative	43.22%	63.22%	58.82%	72.73%	52.17%	39.49%	44.19%	31.62%	51.40%
After 1945 (World War Two)									
No. Of Months	792	36	36	0	1	755	487	268	352
Total Months	792	792	792	792	792	792	792	792	792
% Of Total Mos.	100.00%	4.55%	4.55%	0.00%	0.13%	95.33%	61.49%	33.84%	44.44%
Median	***0.10%***	***-0.10%***	***-0.10%***	***NA***	***-1.10%***	***0.10%***	***0.02%***	***0.40%***	***-0.30%***
Average	***-0.01%***	***-0.39%***	***-0.39%***	***NA***	***-1.10%***	***0.01%***	***-0.18%***	***0.37%***	***-0.56%***
Std Dev.	***1.62%***	***0.93%***	***0.93%***	***NA***	***NA***	***1.64%***	***1.32%***	***2.07%***	***1.79%***
Highest	7.70%	1.00%	1.00%	NA	NA	7.70%	2.70%	7.70%	7.70%
Lowest	-6.80%	-3.00%	-3.00%	NA	NA	-6.80%	-5.40%	-6.80%	-6.80%
% Negative	43.81%	61.11%	61.11%	NA	NA	42.91%	46.82%	35.82%	56.53%

Annual Changes In The CRB Under Various Deflation/Inflation Scenarios
Monthly Data From 1801 Through December 2011

	All Periods	All Deflation Periods (YOY CPI <0%)	Mild Deflation (YOY CPI 0% to -4%)	Severe Deflation (YOY CPI <-4%)	Zero Inflation (YOY CPI = 0%)	All Inflation Periods (YOY CPI >0%)	Mild Inflation (YOY CPI 0% to 4%)	Severe Inflation (YOY CPI >4%)	Disinflation (YOY CPI >0% & Lower Than 1 Year Earlier)
					All Months (Back To 1801)				
No. Of Months	2,532	810	495	315	330	1,392	897	495	524
Total Months	2,532	2,532	2,532	2,532	2,532	2,532	2,532	2,532	2,532
% Of Total Mos.	100.00%	31.99%	19.55%	12.44%	13.03%	54.98%	35.43%	19.55%	20.70%
Median	***0.00%***	***-4.39%***	***-1.92%***	***-9.99%***	***0.99%***	***3.73%***	***1.90%***	***8.76%***	***-0.36%***
Average	***1.81%***	***-5.26%***	***-2.47%***	***-9.65%***	***0.94%***	***6.13%***	***2.51%***	***12.71%***	***0.86%***
Std Dev.	***14.33%***	***12.54%***	***11.62%***	***12.70%***	***8.69%***	***14.70%***	***10.28%***	***18.70%***	***12.17%***
Highest	84.86%	40.91%	40.91%	39.13%	33.33%	84.86%	45.30%	84.86%	84.86%
Lowest	-53.36%	-53.36%	-45.98%	-53.36%	-16.02%	-48.73%	-48.73%	-21.80%	-48.73%
% Negative	48.30%	70.00%	59.80%	86.03%	44.24%	36.64%	42.59%	25.86%	50.76%
					Before 1913 (The Creation Of The Federal Reserve)				
No. Of Months	1,345	636	376	260	307	402	277	125	94
Total Months	1,345	1,345	1,345	1,345	1,345	1,345	1,345	1,345	1,345
% Of Total Mos.	100.00%	47.29%	27.96%	19.33%	22.83%	29.89%	20.59%	9.29%	6.99%
Median	***-1.13%***	***-4.15%***	***-1.74%***	***-8.58%***	***0.99%***	***5.37%***	***2.94%***	***13.99%***	***5.12%***
Average	***0.45%***	***-4.16%***	***-1.42%***	***-8.12%***	***0.80%***	***7.47%***	***3.50%***	***16.25%***	***8.68%***
Std Dev.	***12.21%***	***9.89%***	***9.69%***	***8.78%***	***8.63%***	***14.31%***	***9.61%***	***18.54%***	***18.64%***
Highest	84.86%	40.91%	40.91%	19.25%	33.33%	84.86%	45.30%	84.86%	84.86%
Lowest	-39.02%	-39.02%	-39.02%	-31.12%	-15.04%	-15.64%	-15.64%	-10.71%	-11.83%
% Negative	52.19%	68.71%	56.38%	86.54%	44.95%	31.59%	36.46%	20.80%	38.30%
					After 1913 (The Creation Of The Federal Reserve)				
No. Of Months	1,187	174	119	55	23	990	620	370	430
Total Months	1,187	1,187	1,187	1,187	1,187	1,187	1,187	1,187	1,187
% Of Total Mos.	100.00%	14.66%	10.03%	4.63%	1.94%	83.40%	52.23%	31.17%	36.23%
Median	***1.82%***	***-8.06%***	***-3.28%***	***-20.62%***	***1.25%***	***3.07%***	***1.46%***	***6.82%***	***-1.01%***
Average	***3.36%***	***-9.29%***	***-5.78%***	***-16.87%***	***2.84%***	***5.59%***	***2.06%***	***11.51%***	***-0.85%***
Std Dev.	***16.27%***	***18.87%***	***15.90%***	***22.43%***	***9.56%***	***14.83%***	***10.54%***	***18.62%***	***9.42%***
Highest	80.65%	39.13%	37.48%	39.13%	31.95%	80.65%	41.16%	80.65%	28.55%
Lowest	-53.36%	-53.36%	-45.98%	-53.36%	-16.02%	-48.73%	-48.73%	-21.80%	-48.73%
% Negative	43.89%	74.71%	70.59%	83.64%	34.78%	38.69%	45.32%	27.57%	53.49%
					After 1945 (World War Two)				
No. Of Months	792	36	36	0	1	755	487	268	352
Total Months	792	792	792	792	792	792	792	792	792
% Of Total Mos.	100.00%	4.55%	4.55%	0.00%	0.13%	95.33%	61.49%	33.84%	44.44%
Median	***0.96%***	***-7.25%***	***-7.25%***	***NA***	***-1.19%***	***1.76%***	***-0.04%***	***5.38%***	***-2.41%***
Average	***3.36%***	***-13.81%***	***-13.81%***	***NA***	***-1.19%***	***4.19%***	***1.59%***	***8.91%***	***-1.70%***
Std Dev.	***14.63%***	***16.13%***	***16.13%***	***NA***	***NA***	***14.06%***	***10.73%***	***17.72%***	***9.51%***
Highest	79.95%	7.04%	7.04%	NA	NA	79.95%	37.39%	79.95%	28.55%
Lowest	-48.73%	-45.98%	-45.98%	NA	NA	0.00%	0.00%	0.00%	0.00%
% Negative	46.59%	91.67%	91.67%	NA	NA	0.00%	0.00%	0.00%	0.00%