Predicting Recessions

Recessions tied to the traditional economic cycle appear to have relatively little impact on the performance of the stock market—at least during the recession.

Investment strategists spend time and effort addressing issues related to predicting recessions. They ask questions such as: Is there a recession coming? If one is coming, how soon? Will it be deep or mild? Will there be a soft landing?

Metrics used to predict recessions include: leading economic indicators (LEI), yield curve models,[1] models of financial markets, and macro-econometric models. This Viewpoint examines the performance of the U.S. stock market before, during and after recessions. It shows that while stocks' performance during recessions was worse than between recessions, two of the eleven recessions dominated the statistics. We argue that investors anticipate recessions and the recession's subsequent impact on the economy and corporate earnings are already reflected in stock prices. As a result, market timing based on anticipating recessions is likely to add value only if the investor's forecast is reliably superior to the market's, and investors are able to get the timing right.

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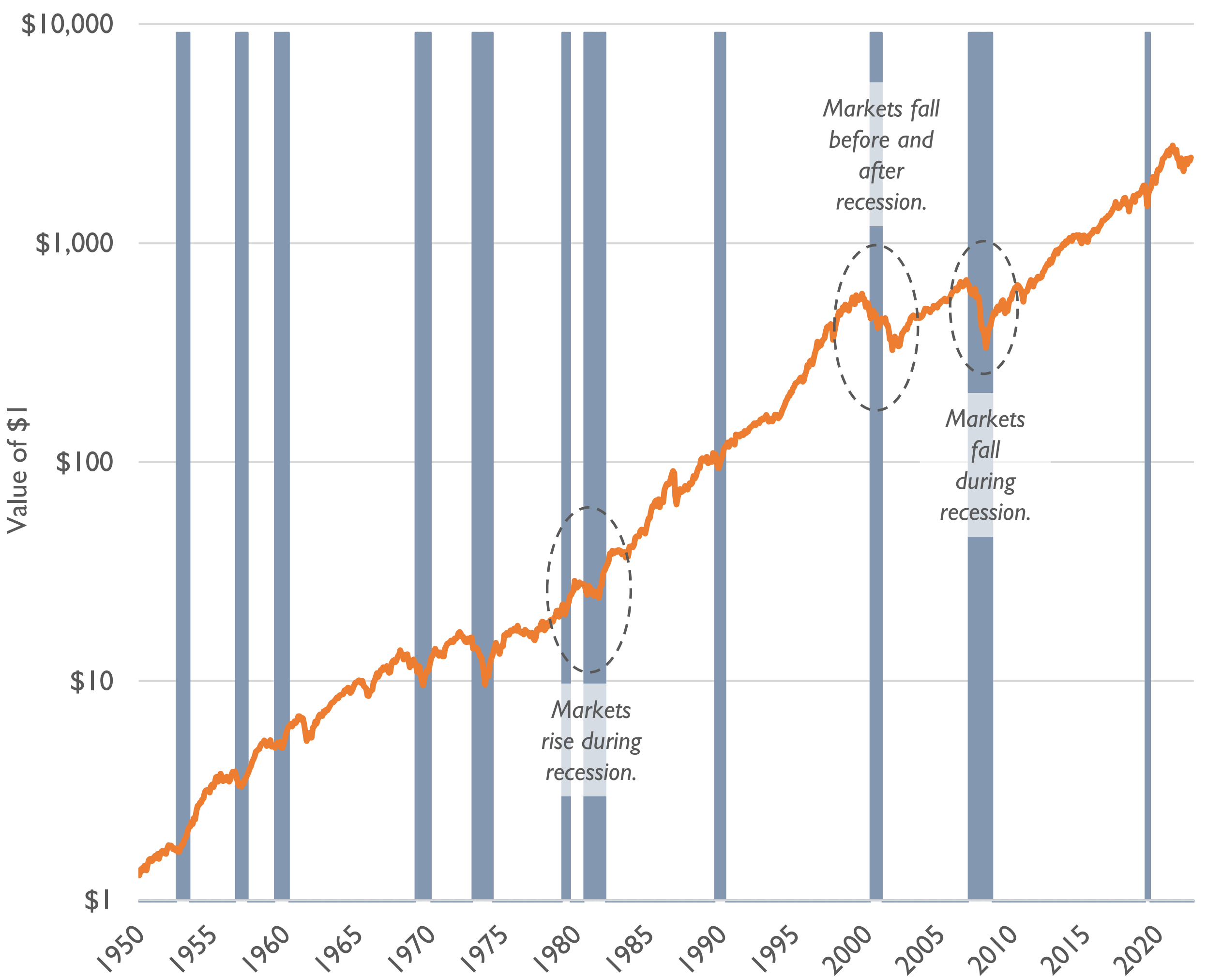
Discussion

Chart 1 below shows the cumulative performance of the US stock market overlayed on recession periods.[2] It demonstrates why investors worry about recessions. For some of the recessions, such as the one triggered by the 2008 Global Financial Crisis (GFC), the stock market had a significant draw-down. For other recessions such as the one that coincided with the deflation of the late 1990s Dot-Com Bubble, the stock market started falling before the start of the recession, then fell more during the recession, and continued to fall after the recession's end. However, for several of the recessions, the stock market was higher at the end of the recession than it was at the start.

Chart 1: Stock Market Performance During Recessions



Data Sources: Bloomberg L.P., Alan Biller and Associates.

Table 1 describes the stock market's performance before, during and after each of the 11 recessions since 1950. Table 2 shows summary statistics.

- It is important to look at the periods leading up to recessions because it may be that investors' forecasts of an upcoming recession resulted in the stock market falling before the recession began.
- It is also informative to look at the periods after the recession ended because it is unlikely that the investor would reenter the market exactly when the recession ended.

Considering the former, a forecast of the likelihood of a looming recession would be valuable only if it is better than the average investor's forecast. Considering the latter, the stock market fell during only 6 of the 11 recessions. When we include the 3 months before and after the recession, the stock market was down for only 3 of the 11 periods.

The worst stock market performance came during the Global Financial Crisis. The stock market fell 35.5% during that recession. It was up 1% during the prior three months, suggesting that few investors anticipated the Global Financial Crisis or its impact on the economy. Another indication that the Global Financial Crisis came as a surprise was that the OECD Composite Leading Indicator (CLI) was at 101.5 at its start, indicating an expectation of continued, above-trend, economic growth.

The next worst period was during the inflationary period of the early 1970s. Looking at the recessions of the early 1980s, even though the Volker rate increases of the late 1970s and early 1980s triggered a recession, the stock market rose during those recessions because investors believed that the longer-term benefits from lower inflation would more than offset the recession's damage to near-term economic growth.

The stock market's annualized return for the 120 months when the economy was in a recession was -2.8%. Avoiding those losses and earning the non-recessionary period return would assume that the investor timed the recessions perfectly.[3] A less heroic, but still optimistic, view might be that a skilled market timer would get out of the stock market 3 months before the start of each recession, and get back in 3 months after it ended.

- The annualized returns for those 186 months[4] was 4.6%.
- The median return of those 11 periods was +9.3% and the annualized return was +7.9%. As evidenced by the median return, the value-add from market timing was heavily affected by two of the recessions – the Global Financial Crisis and inflationary spike of the mid-1970s.
- If we omit those two recessions from the calculations, the average return for the other 9 periods was 12.9%, and the median return was 14%, and the annualized return was 9.7%.
- The annualized return is less than the 11% annualized return for the entire 72 years in the study, but is still significantly more than the investors would have earned if they had shifted their portfolios to cash.

Table 1: Performance During Recessions

Recession Period	Recession Length in Months	During the Recession	3 Mths Prior	3 Mths After	3 Mths Prior Thru End	3 Mths Prior Thru 3 Mths After
Jul-53 - Apr-54	10	23.2%	-3.7%	9.6%	18.6%	30.0%
Aug-57 - Apr-58	9	-6.1%	4.2%	10.2%	-2.2%	7.7%
Apr-60 - Feb-61	11	19.4%	-6.5%	6.2%	11.7%	18.6%
Dec-69 - Nov-70	12	-4.0%	-0.2%	11.8%	-4.2%	7.1%
Nov-73 - Feb-75	16	-20.1%	0.9%	12.9%	-19.3%	-8.9%
Jan-80 - Jun-80	6	8.8%	0.1%	11.2%	9.0%	21.2%
Jul-81 - Nov-82	17	14.5%	-2.3%	8.1%	11.9%	21.0%
Jul-90 - Feb-91	8	5.1%	6.3%	7.1%	11.7%	19.6%
Mar-01 - Nov-01	9	-7.2%	-5.4%	-2.5%	-12.2%	-14.4%
Dec-07 - Jun-09	19	-35.5%	1.0%	15.6%	-34.8%	-24.7%
Feb-20 - Apr-20	3	-9.3%	6.7%	12.9%	-3.2%	9.3%

Data Sources: Bloomberg L.P., Alan Biller and Associates.

Table 2: Performance During Recessions vs Non-Recessionary Periods

	During the 11 Recessions			*+3 Months Before and 3 Months After*		
	Annualized	Average	Median	Annualized	Average	Median
During Recessions	-2.8%	-1.0%	-4.0%	4.6%	7.9%	9.3%
Non-Recession	13.4%			12.8%		
Jan 1951 – March 2023	11.0%			11.0%		

Data Sources: Bloomberg L.P., Alan Biller and Associates.

Summary

Economists struggle when attempting to predict recessions. The question for investors is whether to use those predictions to time the market (i.e., sell if they see a recession in the near future). From the average investor’s perspective, the use of an economic model that ‘reliably’ predicts recessions would be relatively limited. The evidence instead suggests that recessions tied to the traditional economic cycle appear to have relatively little impact on the performance of the stock market—at least during the recession. Recessions triggered by exogenous shocks such as the Global Financial Crisis have a larger impact, but they are difficult to predict. To profit from timing markets, investors’ proprietary forecasts of the economy must provide superior forecasts of the likelihood of a recession and/or the magnitude of its impact on future corporate earnings.

Endnotes

1. There has been much discussion recently about the implications of the inverted yield curve.
2. Based on NBER classifications.
3. Note that the recessions with the largest drawdowns would have been the most difficult to predict because they were due to economic shocks rather than a more traditional economic cycle.
4. 186 = 120 months while in a recession + 3 months before X 11 recessions + 3 months after X 11 recessions.

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