

# How Recessions & Payroll Levels Define *The Investment Sweet Spot* in U.S. Equity Markets

New York Zürich

**Alpha Plus**  
ADVISORS

Affiliated with RIM Group AG

Authors:

Marvin V. Bolt  
Frank Ramsperger



## SUMMARY

Recessions are the best time to make new allocations to broad equity indexes, but timing is crucial. If investments are made too early, severe market volatility can cause large drawdowns; too late and investors forgo lucrative gains from what is typically a sharp stock market recovery prior to the end of a recession. April 2008 marked the tenth time since 1950 when US private sector payrolls experienced a year-over-year decline. The prior 9 cycles were accompanied by an economic recession and stock market decline. Furthermore, there has not been a recession without associated job losses. Hence, the private-sector job market has a perfect correlation with recessions during the past 57 years.

Since payroll statistics are available on a more frequent and more timely basis than final readings of GDP growth, the job market is a useful recession indicator and a good guide to timing investments in equities. In the past, stock market bottoms have occurred by the end of the fourth month of consecutive declines in private sector payrolls. During months 5 through 9 (the so-called *investment sweet spot*), average gains of 7% and 15% have occurred in the US large cap and microcap indexes, respectively, with relatively low performance volatility.

In the present cycle, job losses started in April, indicating a stock market bottom should occur by the end of August, 2008. The investment sweet spot will be from the beginning of September through January 2009.

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## INTRODUCTION

Cycles are the essence of nature. Just like summer follows winter, the sun always rises. Likewise, economic recessions and the eventual recoveries are an inevitable part of the business cycle. And with recessions come investment opportunities. The challenge, however, is in the timing as stock market volatility is often the highest during economic downturns. In the months prior to a recession, rapid declines in the equity markets are common, so investments made too early can quickly lose value, even if only temporarily. There is also an opportunity cost of missing the

chance to buy at lower prices. Conversely, stock markets have a habit of rallying long before the eventual economic recovery, making it difficult to invest near the bottom if we first wait for signs of an upturn in business conditions before investing. Therefore, strategies to enhance the timing of new investments are especially important during recessions.

Determining the start- and end-dates of a recession is the job of the *Bureau of Economic Analysis*. Unfortunately for investors, the dates are usually

**Table 1. Private Sector Payroll Growth & Recessions**

Month	Date	Payroll Change																		
-12	Nov 52	1525	Sep 56	957	Nov 59	1392	Jun 69	2372	Oct 73	2642	May 79	3105	Dec 80	42	Nov 89	1838	May 00	2384	Apr 07	1312
-11		1619		982		1752		2252		2597		2963		41		1595		2486		1434
-10		1603		766		1522		2331		2370		2741		79		1446		2235		1420
-9		1627		662		1563		2120		2043		2464		179		1512		2221		1335
-8		1832		462		1013		2081		1744		2392		724		1419		2234		1184
-7		1709		453		1120		1772		1520		2263		1137		1203		1914		1155
-6		1843		382		687		1637		1477		1906		1674		1251		1828		1157
-5		2240		386		441		1441		1511		1734		2053		1266		1641		1084
-4		2432		307		314		1304		1339		1716		1824		1163		1408		939
-3		1524		186		700		1182		1339		1576		1629		1107		1343		723
-2		1022		857		567		830		1082		1168		1226		887		944		549
-1		696		234		540		433		880		807		714		584		372		258
0	Nov 53	169	Sep 57	102	Nov 60	70	Jun 70	95	Oct 74	561	May 80	148	Dec 81	183	Nov 90	103	May 01	430	Apr 08	155
1		-251		-250		-739		-69		-153		-450		-199		-117		-35		-134
2		-665		-497		-927		-425		-911		-646		-242		-470		-390		-394
3		-984		-849		-1275		-320		-1380		-359		-546		-985		-575		
4		-1363		-1022		-895		-946		-2013		-272		-914		-1240		-1084		
5		-1310		-1751		-1247		-1043		-2292		-43		-976		-1412		-1472		
6		-1620		-2098		-895		-840		-2509	Dec 80	42		-1462		-1451		-2030		
7		-1700		-2408		-573		-696		-2486				-1732		-1602		-2365		
8		-1826		-2373		-395		-862		-2620				-1975		-1582		-2377		
9		-1793		-2323		-225		-901		-2396				-2157		-1444		-2531		
10		-1628		-2237		-131		-566		-1981				-2368		-1326		-2514		
11		-1427		-2094	Oct 61	69		-152		-1752				-2315		-1198		-2296		
13		-922		-1665				-104		-1521				-2083		-1145		-2292		
14		-570		-1545				-88		-1001				-1587		-1060		-2185		
15		-178		-915			Aug 71	98		-78				-1681		-926		-2044		
16	Feb 55	77		-631					Jan 76	852				-1351		-635		-1917		
17			Jan 59	81										-783		-441		-1624		
18														-455		-16		-1150		
19											Jun 83	191	May 92	127				-819		
20																		-808		
21																		-597		
22																		-623		
23																		-705		
24																		-610		
25																		-503		
26																		-559		
27																		-490		
28																		-449		
29																		-267		
30																		-175		
31																		-100		
32																		Dec 03	137	

Payroll Change is the number of private-sector job gains (losses) vs. prior year, in thousands

Year-over-year payroll losses begin at Month 1

Recession months indicated by rectangles

determined long after the fact. Indeed, the pronouncements of the BEA can occur more than a year after a turn in the economy actually takes place, which is much too late to be of use when trying to anticipate the low in stock prices. The widely quoted rule-of-thumb that two consecutive quarters of negative GDP growth marks a recession is also of little use as the reporting lags are too long.

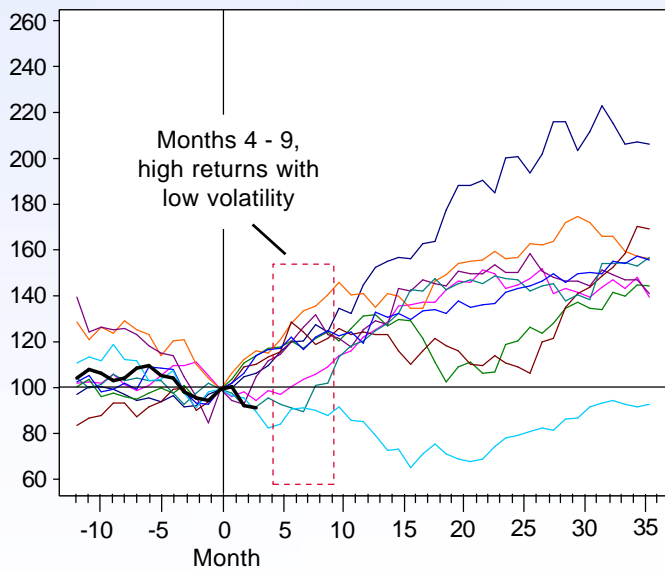
**ANALYSIS**

Insights from a *New York Times* business columnist (*Ref. 1*) provided the initial inspiration for the strategies discussed here. We built on those ideas to search for ways to optimize the timing of new investments during a recession. As noted in the *Times*, a category of the

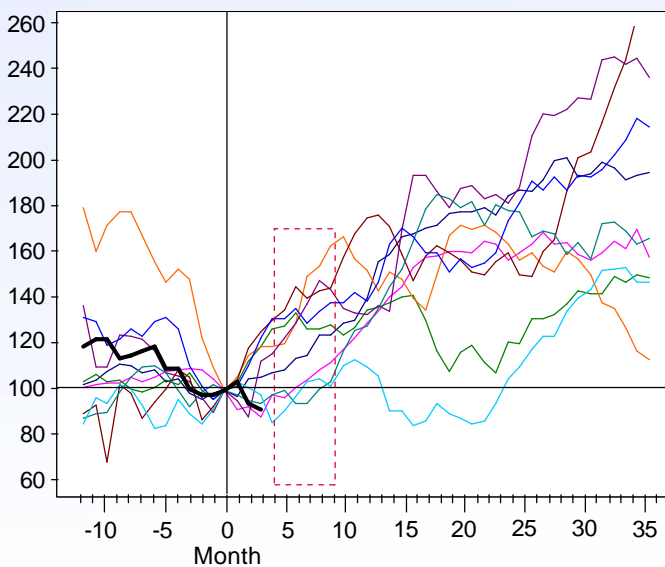
US government’s monthly employment report, called private sector payrolls, provides a timely signal for the direction of the economy. The private sector accounts for all jobs in the economy excluding government workers.

As shown in *Table 1*, before 2008 there were 9 times since 1950 when the number of workers employed by the private sector declined compared to the same month from the prior year. In every occurrence, the decline was accompanied by a recession. There were no false signals, and no recessions without an associated decline in employment. Ergo, the *perfect recession indicator*. While 9 data points does not inspire strong confidence from a statistical perspective, the history is compelling nonetheless.

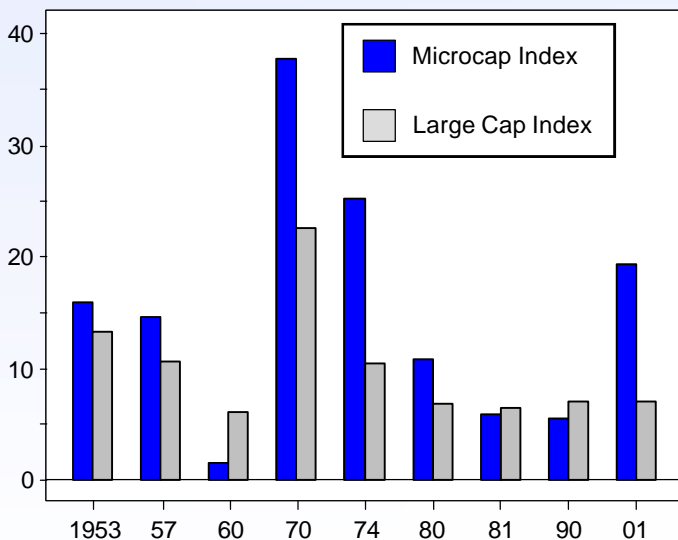
**Figure 1. Large Cap Index Performance**<sup>1</sup>



**Figure 2. Microcap Index Performance**<sup>2</sup>



**Figure 3. Percentage Returns in Months 4 Through 9**



**Table 1** aligns the data so that “Month 1” represents the first month of payroll declines. Based on how the economy, job market, and stock prices performed from this common starting point during each past cycle we can forecast what might happen in the current environment. If the extremes of the past cycles hold true,

- 1) The current recession will end by March 2009 at the latest;
- 2) The number of jobs lost will range between 0.6 million and 2.5 million; and
- 3) The private sector will start adding new jobs between July 2008 and February 2009.<sup>3</sup>

**Figures 1** and **2** show the development of stock prices during the past 9 recessions. If the present cycle follows patterns within the bounds of past recessions, US equity indexes will bottom no later than the fourth month of job losses. This indicates a bottom should be in place by the end of August 2008, if not earlier. The bear market that began in 2000 was the only cycle that showed negative stock returns after 36 months. Here, the loss was only in large cap stocks as the microcap index was up almost 50% in the same period. The best recession recovery for microcaps was in the 1981-84 period, which returned 160% after three years. In general, the period from the end of month 4 through month 9 appears to be a kind of “sweet spot” where investors enjoy the most reliable gains with the smallest market volatility. As shown in **Figure 3**, the large cap index produced a median gain of 7%, while the microcap index averaged 15% performance during this 5-month period.

<sup>1</sup> Based on Ibbotson large company stocks total return index.

<sup>2</sup> Based on Ibbotson small company stocks total return index. Comprised of stocks that make up the 5<sup>th</sup> quintile of US companies listed on the New York Stock Exchange, American Stock Exchange, and Nasdaq National Market System. Presently, the weighted-average market cap is approximately \$450 million.

<sup>1,2</sup> Each line represents the equity index performance associated with every recessionary cycle since 1950. Month 0 = last month of positive year-over-year private sector job growth for the given cycle as shown in **Table 1**. Performance Index = 100 at Month 0.

<sup>3</sup> It is reasonable to assume that the resumption of private sector job growth is a key ingredient for the stabilization of housing prices, and therefore the US banking system, as consumers are more likely to buy houses if they are comfortable with their outlook for employment. Consequently, this forecast could be particularly important for the recovery of the entire economy.

Alpha Plus Advisors, LLC

419 Lafayette Street, 6th Floor, New York, N.Y. 10003  
Tel. +1 212 796 6577  
Fax +1 208 439 4996

Holbeinstrasse 31, CH-8008 Zürich  
Tel. +41 43 244 8074  
Fax +41 43 244 8079

[www.alphaplus-advisors.com](http://www.alphaplus-advisors.com)

New York Zürich

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ADVISORS

Affiliated with RIM Group AG



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3. *Ibbotson/Morningstar 2008 Stocks, Bonds, Bills & Inflation (SBBBI) Yearbook Valuation Edition*

## ABOUT THE AUTHORS

Marvin V. Bolt is President of Alpha Plus Advisors, LLC. From 2001 until 2006 Mr. Bolt developed systematic, quantitative investment strategies used to manage client assets at Thieme Securities, Inc., a FINRA registered broker/dealer, where he served as Financial & Operations Principle. Since 1994, he worked at various asset management firms, first as research analyst and later portfolio manager. Prior to that, he was an aerospace engineer in the conceptual aircraft design group at General Dynamics Corporation (now a division of Lockheed Martin Corporation). Mr. Bolt earned the Master of Science Degree in Aerospace Engineering from the University of Texas and the MBA Degree in Finance from New York University. He holds the NASD Series 7, 27 & 63 licenses.

Frank Ramsperger is Managing Partner of Alpha Plus Advisors, LLC. Mr. Ramsperger has 18 years of investment management experience. He was Member of the Executive Board responsible for Asset Management and Trading at Bank Hofmann, a Credit Suisse Group Company in Zürich, where he launched the first pure quant fund in Switzerland. Prior to that he was Chief Investment Officer at Bank Julius Baer and Fund Manager with UBS Asset Management in Zürich. Mr. Ramsperger earned the MBA Degree at the University of Hohenheim, and is a Certified European Financial Analyst.

## ABOUT THE COMPANY

Alpha Plus Advisors, LLC is an investment advisory firm with offices in New York, and Zürich. Using a variety of quantitative, systematic strategies the firm manages accounts for individual clients as well as the Manhattan Systematic Fund (Bloomberg Symbol: MANSYSA KY). The Fund has a track record approaching 4 years with approximately 20% annual returns and is available to sophisticated non-US investors.

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