

CAMBRIDGE ASSOCIATES LLC

U. S. MARKET COMMENT: A SHORT, SHARP EARNINGS RECOVERY?

February 2002

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A Short, Sharp Earnings Recovery? Possible, but Improbable

Despite the persistent fall in equity prices, analyst expectations of S&P 500 earnings remain quite optimistic. As near-term prospects for earnings growth have been diminishing, analysts have been ratcheting down earnings expectations for the first half of 2002, pushing their optimism forward to the second half of the year. The net result for 2002 is that earnings growth expectations have remained quite steady, decreasing slightly from 17.8% when they were first forecast in April 2001 to 16.7% at present. (See Table A.)

Expectations for the first quarter of 2002 have been slashed by nearly 30 percentage points, from 20.6% to -8.6%, and for the second quarter by 20 percentage points, from 28.7% to 8.2%. With the first and second quarters now expected to be weaker than initially anticipated, analysts forecast operating earnings to rebound sharply in the third and fourth quarters, 29.9% and 39.9%, respectively. The most dramatic revisions have taken place in the information technology sector, where first quarter expectations have plunged nearly 70 percentage points, from 51.8% to -29.1%, and for the second quarter 90 percentage points, from 135.8% to 46.3%. Expectations for information technology in the third and fourth quarters are quite aggressive, 163.1% and 80.3%.

Is the Expected Magnitude of Recovery Realistic?

How realistic is it to expect operating earnings of the S&P 500 to rise nearly 17% in 2002? Based on historical earnings growth, it seems very optimistic. Annual earnings growth has averaged 6.0% since 1927 and 6.5% since 1960, and has exceeded 16.7% in only 19 of the last 75 years, or 25% of the time. While above average earnings growth has been more common following periods of steep declines, the recent drop in operating earnings has not been extraordinary to date. In fact, the decline in operating earnings from its December 2000 peak to the current trough is only 20%—close to the post-1926 average peak-to-trough cumulative decline in earnings of 18.4% and the average real decline of 20.1%.\(^1\) (See Tables B and C.)

Similarly, the likelihood that S&P 500 operating earnings will rise 40% in the fourth quarter is also slim. In the 296 quarters from 1927, both nominal and real earnings growth has exceeded 30% only about 11% of the time. (See Tables D and E.) Precedent therefore suggests that 30%+ earnings growth is possible, but rare.

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¹ The much publicized decline in S&P 500 *reported* earnings is extraordinary—down an estimated 64.2% from September 2000 highs. However, Thomson Financial reports consensus earnings growth estimates for operating earnings, not reported (or GAAP) earnings.



Is the Expected Duration of Recovery Realistic?

Over the long term (defined as three to five years by I/B/E/S), analysts expect operating profits to grow 14.4% annually. This would result in operating earnings recovering to December 2000 peaks by third quarter 2003, or almost six quarters after the expected earnings trough at the end of the first quarter 2002.

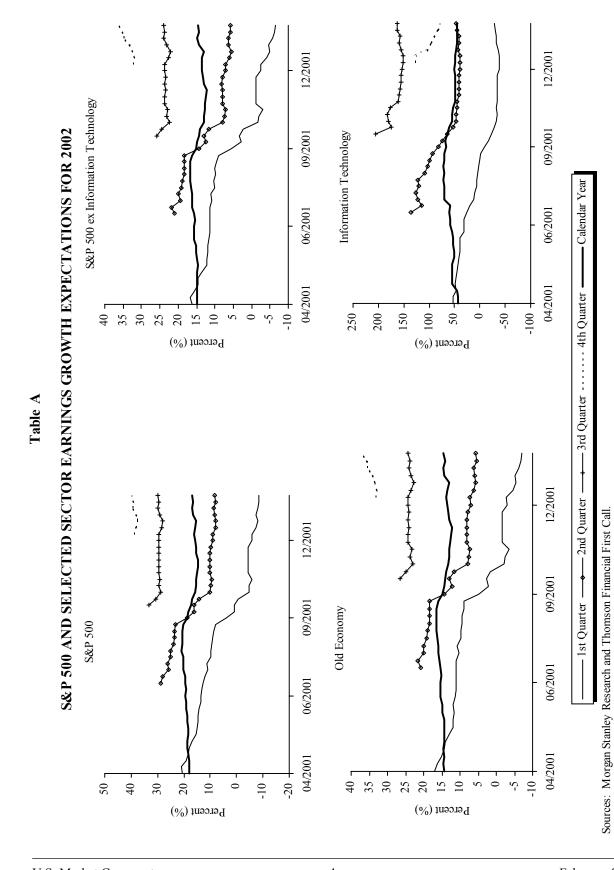
Based on the 25 peak-to-trough earnings declines since 1926 and subsequent recoveries, a six-quarter recovery period seems reasonable. The average duration of prior declines was ten quarters and the average duration of prior recoveries was 7.8 quarters. There was a very strong relationship between the severity of the decline and the length of time needed to recover. In the five periods since 1926 when earnings experienced relatively comparable declines (10% to 30%) to the current 20% operating earnings decline, the average time to recovery was about a year and a half, ranging from one quarter to 5.4 years. While this is a fairly wide range, it is clear that the six-quarter earnings recovery expected by analysts is faster than average, but would not be unprecedented. Adjusting for inflation, the average duration of recovery from earnings declines since 1926 was comparable, at 8.1 quarters. Similarly, an evaluation of comparable real declines—the eight periods with declines ranging from 13.2% to 27.6%—reveals that the average recovery period was two years, ranging from one quarter to 5.75 years.

Conclusion

Historical precedent suggests that earnings could well rebound within the time horizon envisaged by analysts, but are unlikely to prove as robust as they expect. In general, analysts' projections are overoptimistic, exceeding actual earnings 80% in the past 15 years. As in years past, they will probably continue to reduce their estimates as the year progresses, and have already modified last year's predictions of a V-shaped, then U-shaped recovery, to the more modest expectation of a W-shaped rebound. The out-of-consensus bet is for low or negative earnings growth for a third consecutive year, which would exact a significant toll on equity prices, given current valuations.

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Note: The Old Economy sector consists of the S&P 500 excluding the Information Technology and Telecommunication sectors.



Table B

DURATION OF S&P 500 NOMINAL EARNINGS DECLINES AND RECOVERIES

Peak Date EPS		Trough Date EPS			Cumulative Decline	Duration of Decline (# of Quarters)	Duration of Recovery to Prior Peak (# of Quarters)	
Date		EFS		ate	Ers	Decille	(# 01 Quarters)	(# 01 Quarters)
Q1	1941	1.3	Q2	1941	1.2	-0.8%	1	1
Q3	1953	2.6	Q4	1953	2.5	-1.6%	1	2
Q1	1993	19.8	Q2	1993	19.3	-2.6%	1	1
Q2	1949	2.4	Q4	1949	2.3	-3.3%	2	2
Q3	1995	35.2	Q4	1995	34.0	-3.4%	1	3
Q1	1939	0.8	Q2	1939	0.8	-3.7%	1	2
Q4	1966	5.6	Q3	1967	5.3	-4.5%	3	3
Q1	1980	15.3	Q1	1981	14.6	-4.6%	4	3
Q2	1935	0.8	Q3	1935	0.8	-6.2%	1	2
Q3	1997	40.6	Q4	1998	37.7	-7.2%	5	2
Q4	1926	1.2	Q4	1927	1.1	-10.5%	4	2
Q3	1959	3.4	Q2	1961	3.0	-11.7%	7	4
Q3	1969	5.9	Q4	1970	5.1	-12.9%	5	6
Q4	1984	16.6	Q2	1987	14.4	-13.3%	10	2
Q2	1936	1.2	Q4	1936	1.0	-14.5%	2	1
Q3	1974	9.1	Q3	1975	7.8	-14.8%	4	3
Q1	1940	1.2	Q3	1940	1.0	-16.9%	2	2
Q4	1950	2.8	Q2	1952	2.3	-17.6%	6	11
Q4	1981	15.4	Q1	1983	12.4	-19.1%	5	5
Q1	1956	3.7	Q3	1958	2.9	-22.0%	10	18
Q3	1941	1.3	Q2	1946	0.8	-33.3%	19	3
Q2	1989	25.2	Q4	1991	16.0	-36.7%	10	11
Q2	1937	1.4	Q1	1938	0.6	-60.7%	3	37
Q3	2000	53.7	Feb.	2002	19.2	-64.2%	6	
Q4	1929	1.6	Q4	1932	0.4	-74.5%	12	61
Average					-18.4%	5	8	



Table C

DURATION OF S&P 500 REAL EARNINGS DECLINES AND RECOVERIES

	Peak			Trougl	h	Cumulative	Duration of Decline	Duration of Recovery to Prior Peak
Date		EPS	D	Date		Decline	(# of Quarters)	(# of Quarters)
				,				
Q2	1966	29.8	Q3	1966	29.8	0.0%	1	1
Q4	1976	30.2	Q1	1977	30.0	-0.5%	1	1
Q3	1953	16.8	Q4	1953	16.5	-1.6%	1	2
Q4	1977	31.1	Q2	1978	30.5	-1.8%	2	2
Q2	1933	5.9	Q3	1933	5.8	-2.1%	1	2
Q2	1949	17.8	Q4	1949	17.4	-2.1%	2	1
Q1	1993	24.5	Q2	1993	23.7	-3.1%	1	1
Q1	1939	10.4	Q3	1939	10.0	-3.8%	2	1
Q3	1995	40.6	Q1	1996	38.7	-4.7%	2	3
Q2	1935	10.5	Q3	1935	9.8	-6.2%	1	2
Q4	1926	12.4	Q4	1927	11.4	-8.4%	4	2
Q2	1997	44.8	Q4	1998	40.7	-9.0%	6	4
Q3	1959	20.7	Q3	1961	18.0	-13.2%	8	5
Q2	1936	15.0	Q4	1936	12.7	-15.8%	2	1
Q1	1940	14.9	Q3	1940	12.4	-16.9%	2	2
Q4	1984	28.0	Q2	1987	22.5	-19.6%	10	3
Q4	1973	31.3	Q3	1975	25.2	-21.1%	4	13
Q4	1950	20.1	Q2	1952	15.6	-22.3%	6	12
Q4	1966	29.9	Q4	1970	22.8	-23.6%	16	11
Q1	1956	24.4	Q3	1958	17.6	-27.6%	10	23
Q3	1979	34.7	Q2	1983	22.4	-35.5%	15	22
Q1	1989	36.1	Q4	1991	20.5	-43.3%	11	12
Q1	1941	15.6	Q3	1946	7.7	-50.4%	22	9
Q2	1937	17.2	Q1	1938	6.9	-59.9%	3	44
Q3	2000	54.8	Feb.	2002	19.2	-64.8%	6	
Q4	1929	16.6	Q4	1932	5.5	-66.6%	12	18
Average				-20.1%	6	8		



 $\label{eq:definition} \textbf{Table D}$ DISTRIBUTION OF S&P 500 NOMINAL QUARTERLY EARNINGS GROWTH

		March 31,	1927 - Decen		Į		
				Sep-28			
			Jun-28	Sep-29			
			Mar-30	Dec-29			
			Dec-33	Sep-34			
			Mar-34	Dec-34			
			Jun-34	Jun-37			
			Dec-38	Jun-41			
			Mar-41	Jun-43			
			Dec-42	Sep-43			
		Mar-28	Mar-43	Dec-46			
		Sep-33	Mar-45	Sep-49			
		Dec-40	Jun-45				
				Sep-50			
		Dec-41	Sep-45	Mar-51			
		Dec-43	Dec-45	Dec-54			
		Dec-44	Dec-49	Mar-55			
		Mar-46	Jun-50	Jun-56			
		Mar-50	Jun-51	Jun-59			
		Sep-51	Mar-53	Sep-59			
		Sep-52	Jun-53	Dec-59			
		Dec-52	Sep-53	Jun-62			
		Dec-56	Dec-53	Sep-62			
		Mar-57	Mar-54	Dec-62			
		Jun-57	Jun-54	Mar-63			
		Dec-57	Sep-54	Jun-63			
		Mar-58	Sep-56	Sep-63			
		Mar-59	Sep-57	Mar-64			
			-				
		Jun-60	Mar-60	Jun-64			
		Sep-60	Mar-62	Sep-64			
		Dec-60	Dec-63	Dec-64			
		Mar-61	Dec-66	Mar-65	Dec-28		
		Jun-61	Mar-67	Jun-65	Mar-29		
		Sep-61	Jun-68	Sep-65	Jun-29		
		Dec-61	Sep-68	Dec-65	Mar-36		
		Jun-67	Dec-68	Mar-66	Dec-36		
		Sep-67	Mar-69	Jun-66	Sep-37		
	Jun-30	Dec-67	Jun-69	Sep-66	Sep-40		
	Jun-33	Mar-68	Sep-69	Dec-71	Sep-41		
	Mar-42	Mar-70	Dec-69	Mar-72	Jun-48		
	Mar-44	Jun-70	Sep-71	Jun-72	Jun-49		
	Jun-44	Sep-70	Dec-74	Sep-72	Dec-50		
		-		Dec-72	Jun-55		
Com 20	Sep-44	Mar-71	Mar-75				
Sep-30	Jun-46	Jun-71	Mar-76	Mar-73	Mar-56		
Dec-30	Sep-46	Jun-75	Dec-77	Sep-74	Jun-73		
Mar-31	Dec-51	Dec-80	Mar-78	Jun-76	Sep-73		
Jun-31	Mar-52	Mar-81	Jun-78	Mar-77	Dec-73		Mar-35
Sep-31	Jun-52	Jun-82	Sep-78	Jun-77	Mar-74		Jun-35
Dec-31	Jun-58	Sep-83	Jun-80	Sep-77	Jun-74		Sep-35
Mar-32	Sep-58	Jun-85	Sep-80	Dec-78	Sep-76		Dec-35
Jun-32	Dec-58	Sep-85	Jun-81	Mar-80	Dec-76		Jun-36
Sep-32	Dec-70	Jun-86	Sep-81	Dec-83	Mar-79	Jun-39	Sep-36
Dec-32	Sep-75	Sep-86	Dec-81	Dec-84	Jun-79	Dec-39	Mar-37
Mar-33	Dec-75	Dec-86	Mar-82	Jun-89	Sep-79	Jun-40	Mar-39
Dec-37	Sep-82	Jun-87	Mar-85	Dec-92	Dec-79	Mar-48	Sep-39
Mar-38	Dec-82	Dec-89	Mar-87	Jun-93	Mar-84	Sep-48	Mar-40
Jun-38	Mar-83	Sep-90	Sep-87	Sep-93	Jun-84	Mar-49	Mar-47
Sep-38	Jun-83	Dec-90	Sep-89	Dec-93	Sep-84	Sep-55	Jun-47
Jun-42	Dec-85	Mar-91	-	Mar-94	Dec-87	Dec-55	Sep-47
			Sep-92				
Sep-42	Mar-86	Jun-91	Mar-96	Dec-95	Mar-88	Dec-88	Dec-47
Dec-91	Mar-90	Mar-98	Jun-96	Dec-96	Mar-93	Mar-89	Dec-48
Mar-92	Jun-90	Jun-98	Sep-96	Mar-97	Sep-95	Jun-94	Jun-88
Jun-01	Sep-91	Sep-98	Dec-97	Jun-97	Dec-99	Sep-94	Sep-88
Sep-01	Jun-92	Dec-98	Jun-99	Sep-97	Jun-00	Jun-95	Dec-94
Dec-01	Mar-01	Mar-99	Dec-00	Sep-99	Sep-00	Mar-00	Mar-95
< (20)%	(20)% - (10)%	(10)% - 0%	0% - 10%	10% - 20%	20% - 30%	30% - 40%	40% +
22	28	54	62	63	34	14	19
7.4	9.5	18.2	20.9	21.3	11.5	4.7	6.4
7.7	7.3	10.2	20.7	∠ 1 .J	11.3	7./	0.7

No. of Quarters Percent (%)

Note: Growth represents year-over-year change in trailing earnings.



 $\label{eq:table E} \textbf{DISTRIBUTION OF S\&P 500 REAL QUARTERLY EARNINGS GROWTH}$

March 31, 1927 - December 31, 2001									
				Sep-28					
				Jun-29					
				Sep-29					
				Dec-29					
				Dec-34					
				Jun-37 Dec-38					
				Jun-41					
			Jun-28	Jun-43					
		Mar-28	Mar-30	Sep-43					
		Sep-33	Dec-33	Sep-49					
		Dec-40	Mar-34	Sep-50					
		Dec-41	Jun-34	Dec-50					
		Dec-43	Sep-34	Mar-51					
		Dec-44	Mar-41	Dec-54					
		Mar-46	Dec-42	Mar-55					
		Mar-50	Mar-43	Jun-56					
		Sep-51	Mar-45	Jun-59					
		Sep-52	Jun-45	Sep-59					
		Dec-52	Sep-45	Dec-59					
		Sep-56	Dec-45	Jun-62					
		Dec-56	Dec-46	Sep-62					
		Mar-57	Dec-49	Dec-62					
		Jun-57	Jun-50	Jun-63					
		Sep-57	Jun-51	Sep-63					
		Dec-57	Mar-53	Mar-64					
		Mar-58	Jun-53	Jun-64					
		Mar-59 Jun-60	Sep-53 Dec-53	Sep-64 Dec-64					
		Sep-60	Mar-54	Mar-65					
		Dec-60	Jun-54	Jun-65					
		Mar-61	Sep-54	Sep-65					
		Jun-61	Mar-60	Dec-65					
		Sep-61	Mar-62	Mar-66					
		Dec-61	Mar-63	Jun-66					
		Jun-67	Dec-63	Dec-71					
		Sep-67	Sep-66	Mar-72					
	Jun-30	Dec-67	Dec-66	Jun-72					
	Jun-33	Mar-68	Mar-67	Sep-72	Dec-28	1			
	Mar-42	Dec-69	Jun-68	Dec-72	Mar-29				
	Mar-44	Mar-70	Sep-68	Mar-73	Mar-36				
	Jun-44	Jun-70	Dec-68	Jun-73	Dec-36				
	Sep-44	Sep-70	Mar-69	Mar-74	Sep-37				
	Jun-46	Mar-71	Jun-69	Jun-74	Sep-40				
a 20 I	Sep-46	Jun-71	Sep-69	Sep-74	Sep-41				
Sep-30	Dec-51	Mar-75	Sep-71	Jun-76	Jun-48				
Dec-30	Mar-52	Sep-80	Dec-74	Mar-77	Jun-49				
Mar-31 Jun-31	Jun-52	Dec-80	Mar-76 Dec-77	Jun-77	Jun-55				
Sep-31	Jun-58	Mar-81 Jun-81	Mar-78	Sep-77 Dec-78	Sep-55 Mar-56				
Dec-31	Sep-58 Dec-58	Jun-82	Jun-78	Mar-79	Sep-73				
Mar-32	Dec-70	Sep-83	Sep-78	Dec-79	Dec-73		Mar-35		
Jun-32	Jun-75	Jun-85	Jun-80	Mar-80	Sep-76	Sep-36	Jun-35		
Sep-32	Sep-75	Sep-85	Sep-81	Dec-83	Dec-76	Jun-39	Sep-35		
Dec-32	Dec-75	Jun-86	Dec-81	Dec-84	Jun-79	Sep-39	Dec-35		
Mar-33	Sep-82	Sep-86	Mar-82	Jun-89	Sep-79	Dec-39	Jun-36		
Dec-37	Dec-82	Dec-86	Mar-85	Dec-92	Mar-84	Jun-40	Mar-37		
Mar-38	Mar-83	Jun-87	Mar-87	Jun-93	Jun-84	Mar-47	Mar-39		
Jun-38	Jun-83	Dec-89	Sep-87	Sep-93	Sep-84	Mar-48	Mar-40		
Sep-38	Dec-85	Dec-90	Sep-89	Dec-93	Dec-87	Sep-48	Jun-47		
Jun-42	Mar-86	Mar-91	Sep-92	Mar-94	Mar-88	Dec-55	Sep-47		
Sep-42	Mar-90	Jun-91	Mar-96	Dec-95	Mar-93	Dec-88	Dec-47		
Dec-91	Jun-90	Mar-98	Jun-96	Dec-96	Jun-94	Mar-89	Dec-48		
Mar-92	Sep-90	Jun-98	Sep-96	Mar-97	Sep-95	Sep-94	Mar-49		
Jun-01	Sep-91	Sep-98	Dec-97	Jun-97	Dec-99	Dec-94	Jun-88		
Sep-01	Jun-92	Dec-98	Jun-99	Sep-97	Jun-00	Jun-95	Sep-88		
Dec-01	Mar-01	Mar-99	Dec-00	Sep-99	Sep-00	Mar-00	Mar-95		
< (20)%	(20)% - (10)%	(10)% - 0%	0% - 10%	10% - 20%	20% - 30%	30% - 40%	40% +		
22	30	58	59	67	29	15	16		
7.4	10.1	19.6	19.9	22.6	9.8	5.1	5.4		
adard & Poor's and Standard & Poor's Compustat.									

No. of Quarters Percent (%)

Note: Growth represents year-over-year change in trailing earnings.