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Goldman Sachs

GS Global Economics Website
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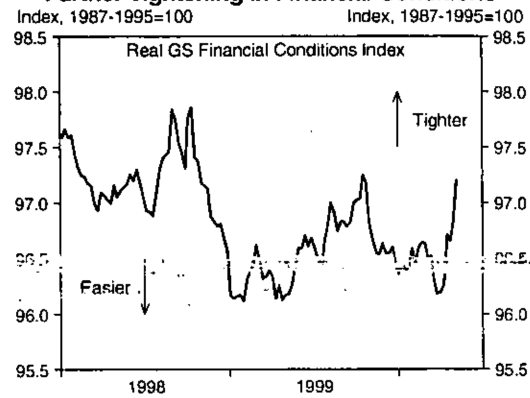
U.S. Economics Analyst

The Fed: Planning for the Worst, Hoping for the Best

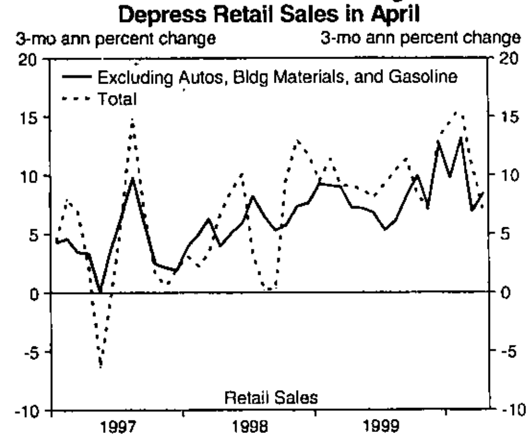
- We continue to anticipate that the FOMC will decide to tighten monetary policy by 50 basis points at the May 16 meeting. Although Chairman Greenspan would probably prefer to move more gradually, the case for a more aggressive posture is compelling given the recent evidence of above-trend growth and rising compensation cost and price inflation.
- Although a considerable amount of tightening is now discounted by market participants (to about a 7% federal funds rate target over the next 12 months), this would still be much less than what has occurred on a historical basis. This is one reason why we continue to believe that the monetary authorities will tighten monetary policy by more than expected over the next 12 months.
- Inflation in finished goods remains moderate, at about a 1% annual rate outside the volatile food and energy sectors. However, prices of goods part way through the production pipeline have come under increasing pressure, consistent with signs of bottlenecking from the monthly survey of purchasing managers. This will not go unnoticed at the FOMC meeting, where the focus will be on preventing the prices of final goods (as well as services) from following suit.
- The trend in consumer spending appears to have slowed, although not as much as implied by the 0.2% drop in retail sales reported for April. This decline came off of an upward-revised March base. Moreover, much of the slowing reflected lower gasoline prices and a weather-induced payback in outlays for items such as building materials. The report suggests that real spending is rising somewhat faster than the 3% annual rate we are projecting for this quarter.

Stock Price Weakness Leads to Further Tightening in Financial Conditions



Note: See page 7 for additional detail.
Source: Goldman Sachs.

Less Favorable Weather and Falling Oil Prices Depress Retail Sales in April



Source: Department of Commerce.

Trade Recommendations

- We would stay close to shore for the time being.

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I. Weekly Wrap-Up

Inflationary Pressure and Lack of Economic Slowdown Should Keep Fed Vigilant

Inflationary pressure continues to build gradually, and the slowdown in goods demand is not as large as suggested by the latest statistics on retail sales. Consequently, the FOMC will likely raise its federal funds rate target by 50 basis points on May 16, as discussed further below and in the center section. Concerns over Fed tightening kept the stock market jittery this week, though bond yields edged lower.

Inflation remains relatively stable at the finished goods level outside the volatile food and energy sectors. The core PPI rose by only 0.1% in April, bringing the year-over-year rate up to a modest 1.3%. The much larger swings in the total index have been caused primarily by energy costs (-4.1% in April following +5.8% in March) and have so far showed little signs of feeding through to other prices.

However, input cost pressures continue to mount. Import prices excluding petroleum rose by 0.1% in April, bringing the year-to-year trend up to 1.3%, the fastest since February 1996. The PPI for intermediate goods excluding food and energy rose by 0.4% in April, the third 0.4% increase in four months. This index is now 3.3% above its year-earlier level.

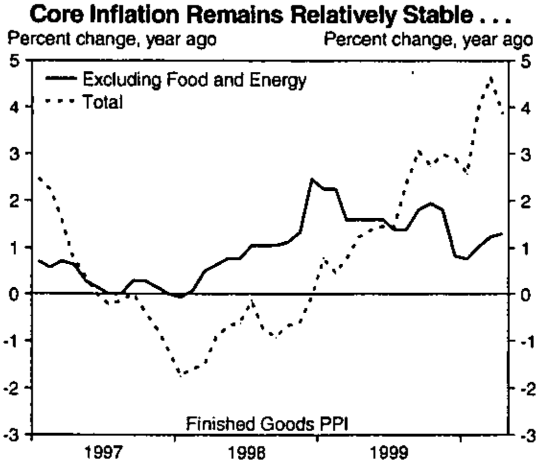
Moreover, there are few signs that the economy is slowing in a sustainable way from its recent torrid growth pace. Although retail sales fell by 0.2% in April, this was primarily the result of a payback for earlier weather-related strength and a fall in gasoline prices as demonstrated by sharp declines in sales for building materials (-1.6%) and gasoline (-2.3%). Excluding autos, building materials, and gasoline, retail sales posted a 0.4% rise in April. While this core measure of goods demand is rising less rapidly than in the first quarter, it is still growing at a sturdy 7.0% annualized rate thus far in the second quarter. Coupled with another drop in the inventory/sales ratio in the manufacturing sector to a record low 1.26 in March, this suggests that output of goods will remain quite strong in coming months.

Look for a 50-Basis-Point Rate Hike

The FOMC is likely to boost its federal funds rate target by 50 basis points when it meets on Tuesday, May 16, and the Board of Governors is apt to follow suit with a comparable increase in the discount rate. As discussed more fully in the center section, Fed officials worry that the economy is too strong and that the jobless rate may finally have dropped below the level consistent with stable inflation. They also believe that financial conditions have not tightened enough to slow growth despite recent setbacks in the stock and bond markets, in part because the increase in the federal funds rate to this point has been well below the standard of past tightening phases. Given these concerns, the FOMC is unlikely to be deterred from stepping up the pace of tightening by the benign April CPI that most analysts expect to be released just before the meeting gets underway.

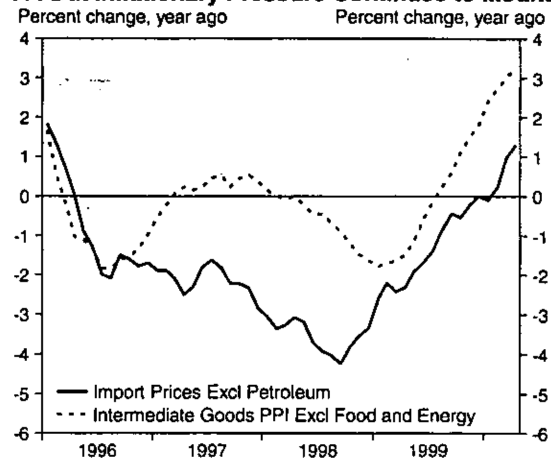
The statement announcing the decision will provide insights into how worried Fed officials have become about their prospects for managing the economy to a soft landing. The committee will surely keep the bias toward the potential for rising inflation. Beyond that, the wording of the statement—*e.g.*, whether inflation is seen as a potential or actual event and the focus

Core Inflation Remains Relatively Stable . . .



Source: Department of Labor.

. . . But Inflationary Pressure Continues to Mount



Source: Department of Labor.

given to the influence of financial conditions on growth—will have a big effect on how markets respond.

Bush Set to Endorse Individual Social Security Accounts

Texas Governor George W. Bush, the presumptive GOP presidential nominee, will reportedly endorse the principle of creating separately managed individual Social Security accounts in a speech in Los Angeles on Monday, May 15. Such a move would draw a sharp distinction between Gov. Bush and his Democratic opponent, Vice President Gore, who flatly opposes any such plan. Although the political risk for Gov. Bush is therefore quite high, he apparently sees three reasons to run this risk. (1) The Social Security Trust Funds are currently running large surpluses; therefore, the plan would not require higher taxes or lower benefits. (2) The plan could draw support from younger voters, who are skeptical that they will receive the promised benefits from the current program. (3) Key Democrats have expressed support for the idea, thereby creating potential bipartisan cover.

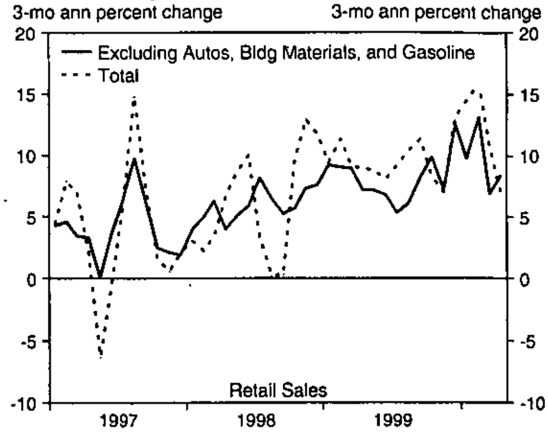
The importance of appealing to swing voters was highlighted in the May 9 meeting between Gov. Bush and Arizona Senator John McCain, his erstwhile rival in the primaries. Recent polls show that Sen. McCain would boost Republican chances for recapturing the White House measurably if he became the vice presidential nominee. However, Sen. McCain firmly ruled out that option. Although he endorsed the Bush candidacy and promised enthusiastic support in the fall campaign, in other respects the endorsement had a noticeably lukewarm tone.

Stay Close to Shore for Now

Note: The following comments reflect trading views and may differ from our longer-term interest rate forecast.

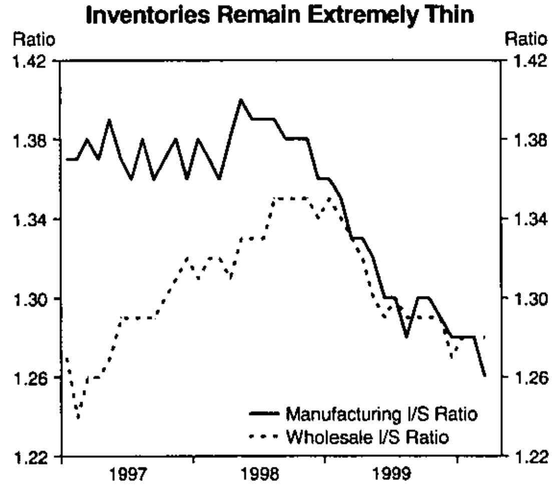
Over the near-term, we would stay close to shore because there are too many complex crosscurrents. On one hand, the forthcoming data are likely to be friendlier. On the other hand, the magnitude of monetary policy tightening is likely to be greater than anticipated over the next 12 months. Also, it is unclear how the equity market will react to the May 16 tightening step. If stocks rally, that could bother the bond market as such a rally would ease financial conditions. On balance, we expect the fixed income market to improve somewhat over the next few weeks. However, this is only likely to set the stage for a sizable rise in yields later. After all, financial conditions need to be tighter to restrain the economy to a sustainable growth pace.

Less Favorable Weather and Falling Oil Prices Depress Retail Sales in April



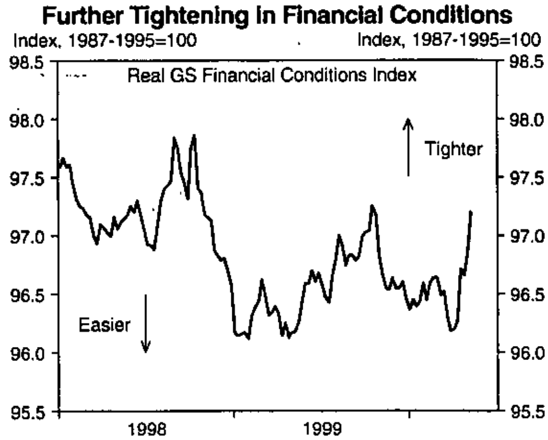
Source: Department of Commerce.

Inventories Remain Extremely Thin



Source: Department of Commerce.

Stock Price Weakness Leads to Further Tightening in Financial Conditions



Note: See page 7 for additional detail.
Source: Goldman Sachs.

II. The Fed: Planning for the Worst, Hoping for the Best

We anticipate that the Federal Open Market Committee's federal funds rate target will climb to 6½% next week and to 7½% within the next 12 months. The strength of the economy, evidence of rising compensation cost and price inflation, and the fact that financial conditions remain accommodative continue to point to a quickened pace of monetary policy tightening. Assuming the equity market proves resistant to higher interest rates, the main risk is that the cumulative amount of tightening proves to be greater than what market participants expect and possibly even more than what is embodied in our current interest rate forecast.

Why the Fed Has to Tighten Monetary Policy More Aggressively

The case for a tighter monetary policy is compelling:

1. **The economy remains much stronger than anticipated.** On a year-over-year basis, the growth rates of both consumer spending and overall domestic demand growth are still climbing. Although domestic demand is likely to slow sharply in the second quarter, this will mainly represent a temporary weather effect, rather than be the start of a sustained slowdown.
2. **The unemployment rate continues to decline.** In the debate about how fast the economy can grow, the unemployment rate is the ultimate arbitrator. Growth sufficient to tighten labor market conditions further is too fast for comfort.
3. **The tightness of U.S. labor markets is leading to a rise in compensation cost inflation.** Thus, the unemployment rate may already be too low. If that is the case, then Fed officials will have to engineer a more pronounced slowdown in order to push up the unemployment rate.
4. **Financial conditions have still not tightened much.** For example, in the latest week, the Goldman Sachs Financial Conditions Index has averaged 97.21, up about one percentage point in the past six weeks. Everything else equal, this could be expected to cut less than one percentage point from the annualized growth pace in 2001.
5. **Headwinds from the foreign sector and from fiscal policy should subside.** Growth abroad has picked up and this should diminish the trade sector's drag on U.S. growth. Moreover, the burgeoning budget surplus should erode the support for continued fiscal stringency. These developments suggest that financial conditions will need to be tighter.

Fed Tightening in a Historical Context

Financial conditions have tightened considerably within the past few weeks as expectations have shifted towards a view that the Federal Open Market Committee would push up its federal funds rate target more quickly and to a higher level than earlier expected. This shift in expectations has contributed to a rise in bond yields, a fall in equity prices, and a firmer dollar (see chart below and table on page 7). As a result, the Goldman Sachs Financial Conditions Index has increased to 97.21 in the latest week, up about one percentage point in just the past six weeks.

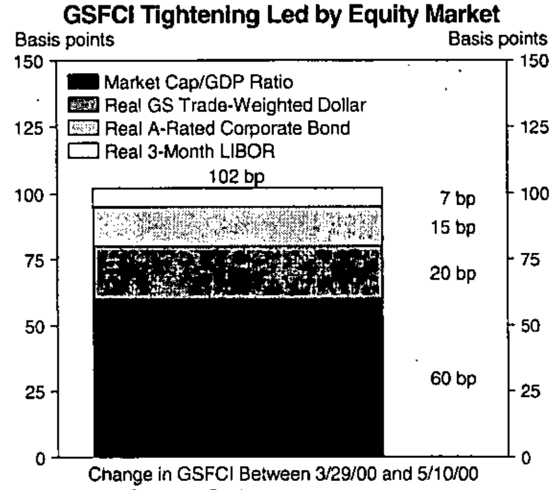
Although expectations about the path of the federal funds rate have become more pessimistic, it is important to recognize that these expectations are actually quite optimistic when judged versus the standard of what has actually taken place during past tightening episodes.

In evaluating the current degree of tightening that is anticipated, we consider three benchmarks:

1. The magnitude of the rise in the nominal federal funds rate.
2. The magnitude of the rise in the real federal funds rate.
3. The degree of tightening of financial conditions.

Currently, financial market participants are discounting a rise in the federal funds rate to about 7%-7¼% on a 12-month time horizon. This would imply a cumulative rise in the nominal federal funds rate of 262 basis points (using a 7¼% fed funds rate). As can be seen in Table 1, this is considerably less than what Fed officials have engineered historically.

GSFCI Tightening Led by Equity Market



Source: Goldman Sachs.

Table 1: Benchmarking Fed Tightening:
Funds Rate, Trough to Subsequent Peak

Trough to Peak Dates	Trough Rate	Subsequent Peak	Increase (bp)
1954 Oct - 1957 Oct	0.90	3.50	260
1958 May - 1959 Nov	0.63	4.00	337
1961 Jul - 1969 Aug	1.16	9.19	803
1972 Feb - 1974 Jul	3.29	12.92	963
1977 Jan - 1980 Apr	4.61	17.61	1300
1980 Jul - 1981 Jun	9.03	19.10	1007
1983 Feb - 1984 Aug	8.51	11.64	313
1986 Oct - 1989 Mar	5.85	9.85	400
1993 Dec - 1995 Apr	2.96	6.05	309
Average			632
Excl 1977-1981 period (a)			484
Current episode:			
1999 Jan - Present	4.63	6.00	137
Market expectation	4.63	7.25	262

(a) High-inflation cycles affected by monetary tightening.

Source: Federal Reserve Board.

Of course, to the extent that the monetary authorities have become more preemptive, this should reduce the magnitude of the rise in the nominal federal funds rate needed to cool off the economy.

However, when one uses the real federal funds rate as a benchmark, which should help adjust for the degree of preemption, one reaches the same conclusion: The degree of tightening that is anticipated is less than what has occurred historically. Using the Blue Chip consensus estimate for the GDP chain-weight deflator for 2001, a 7¼% nominal federal funds rate target would imply about a 186-basis-point rise in the real federal funds rate (see Table 2 below). This is considerably less than the average rise of more than 400 basis points during past tightening episodes.

Finally, if one focuses instead on the impact of Fed policy on financial conditions, the conclusion is unchanged: Unless the stock or bond markets react much more to the Fed tightening than they have up to now, the degree of tightening of financial conditions will be modest by historical standards.

For the week ending Wednesday, May 10, the GSFCI had climbed to about 97.21, up nearly one percentage point from the first quarter of 1999. If the FOMC behaves as anticipated, the major impact on the index will be to push up the level of the real 3-month LIBOR. In principle, the other variables in the index—the real A-rated corporate bond yield, the market capitalization of the stock market to GDP ratio, and the Goldman Sachs real trade-weighted dollar index—should not be affected by the rise in short-term rates as this expectation should already be embodied in current prices.

If this is the case, a rise in the nominal 3-month LIBOR rate to 7.50% would only tighten the GSFCI by about an additional 0.30 percentage points. Thus, barring some further adjustment in bond and stock prices and the foreign exchange value of the dollar, the cumulative degree of tightening would be only about 1.20 percentage points, much less than what has occurred historically. As can be seen in Table 3, the monetary authorities have typically tightened the GSFCI by about 3 percentage points on average, and by more than 2 percentage points when the 1975-1982 period is excluded.

Given that the monetary authorities have not done much to tighten monetary policy and financial conditions, it should not be surprising that those areas of the economy that might be affected by greater stringency have, as yet, shown little evidence of any impact. For example, as shown in Table 4, housing starts, motor vehicle sales, consumer confidence, and the equity market are all close to their business cycle peaks.

Table 2: Benchmarking Fed Tightening:
Real Funds Rate, Trough to Subsequent Peak (a)

Trough to Peak Dates	Trough Rate	Subsequent Peak	Increase (bp)
1956:Q3 - 1957:Q4	-1.07	0.52	159
1958:Q2 - 1959:Q4	-1.19	3.26	445
1961:Q2 - 1969:Q4	0.61	3.75	314
1971:Q1 - 1973:Q3	-1.22	4.48	570
1975:Q1 - 1980:Q1	-4.72	6.03	1075
1980:Q3 - 1981:Q3	0.77	8.29	752
1982:Q4 - 1984:Q3	4.06	7.67	361
1987:Q1 - 1989:Q2	3.52	5.69	217
1993:Q4 - 1995:Q2	0.57	3.77	320
Average			468
Excl 1975-1981 period (b)			341
Current episode:			
1999:Q2 - Present	3.29	3.92	63
Market expectation	3.29	5.15	186

(a) Federal funds rate less year-ago percent change in the GDP chain-weight price deflator.

(b) High-inflation cycles affected by monetary tightening.

Source: Federal Reserve Board.

Table 3: Benchmarking Fed Tightening:
GSFCI, Trough to Subsequent Peak

Trough to Peak Dates	Trough GSFCI	Subsequent Peak	Increase (bp)
1961:Q1 - 1962:Q2	97.26	98.74	148
1968:Q4 - 1970:Q2	95.91	99.19	328
1972:Q1 - 1973:Q1	96.32	97.62	130
1975:Q2 - 1976:Q3	94.35	98.31	396
1977:Q2 - 1978:Q4	97.48	99.77	229
1980:Q3 - 1982:Q2	98.94	106.65	771
1983:Q2 - 1984:Q3	103.98	107.53	355
1987:Q1 - 1987:Q4	101.01	102.43	142
1993:Q4 - 1994:Q4	97.68	99.79	211
Average			301
Excl 1975-1982 period (a)			219
Current episode:			
1999:Q1 - Present	96.31	97.21	90
Market expectation	96.31	97.51	120

(a) High-inflation cycles affected by monetary tightening.

Source: Federal Reserve Board.

Table 4: Economic Indicators of Monetary Restraint

Indicators	Peak Value (a)	Latest High	Current Value (a)	Percent Change
Housing Starts (thousands)	1773	2000 Feb	1718	-3.1
Motor Vehicle Sales (millions)	18.1	2000 Mar	18.1	0.0
S&P 500 Price Index (1941-1943=10)	1430.8	2000 Apr	1430.8	0.0
U of Michigan Cons Conf Index (1966=100)	110.1	2000 Mar	109.2	-0.8
Conference Bd Cons Conf Index (1985=100)	142.4	2000 Feb	138.3	-2.9
GS Real Td-Wtd Dollar Index (1990=100) (b)	117.8	1999 Nov	122.1	3.7

(a) Data refer to 3-month moving averages.

(b) Refers to trough.

Source: Department of Commerce. Standard and Poor's. University of Michigan. Conference Board. Federal Reserve.

Table 5: Hard to Achieve Soft Landings from Below*

Unemployment Rate Trough	Trough Rate	Point by Which Rate Had Risen 0.3% or More	Business Cycle Outcome	Recession Began
1948 Q2	3.70 %	1949 Q1	Recession	1948 Dec
1953 Q2	2.61	1953 Q4	Recession	1953 Aug
1957 Q1	3.96	1957 Q4	Recession	1957 Sep
1959 Q2	5.12	1959 Q4	Recession	1960 May
1969 Q1	3.39	1970 Q1	Recession	1970 Jan
1973 Q4	4.79	1974 Q1	Recession	1973 Dec
1979 Q2	5.71	1980 Q1	Recession	1980 Feb
1981 Q3	7.39	1981 Q4	Recession	1981 Aug
1989 Q1	5.21	1990 Q3	Recession	1990 Aug

*Episodes of 0.3% or greater rise in unemployment rate from business-cycle low point (based on quarterly average unemployment rates).

Source: Department of Labor. Our calculations.

What to Look For

Two issues will largely determine the magnitude of Fed tightening:

1. How much Fed officials need to slow growth.
2. How much help they get via higher bond yields and lower stock prices.

The first issue depends mainly upon whether the unemployment rate is already too low. This remains an open question. Some rise in compensation cost inflation was virtually inevitable given the uptick in headline inflation. Thus, it is difficult to discern from the compensation cost trends whether a too-tight labor market is also a culprit and whether compensation cost trends will stabilize on their own once the uptrend in headline inflation ends.

Despite this uncertainty, Fed officials must plan for the worst (while hoping for the best). That is because it historically has been very difficult to push up the unemployment rate significantly and avoid a hard landing. As shown in Table 5, whenever the monetary authorities have pushed up the unemployment rate by more than 0.2 percentage points on a quarterly average basis from the cycle low, the outcome has been recession. The lower the unemployment rate falls, the greater the risk that Fed officials will have to tighten monetary policy aggressively and that this will lead to a hard landing.

The second key issue is the degree of help Fed officials get from financial markets in restraining the pace of the U.S. economy. The risks to our interest rate forecast are clearly on the upside in light of our equity market strategists' view that the stock market will continue to advance and our expectation that the dollar will weaken over time. Should both occur, this would actually tend to ease financial conditions, all else equal, putting the burden even more squarely back on Fed officials.

With respect to the equity market, the historical record suggests that the stock market is generally quite insensitive to higher interest rates. What is anathema for equities is a rise in inflation. As long as Fed officials keep inflation bottled up, then the equity market should be well-supported. With respect to the dollar, the risks of higher inflation and the potential for a hard landing indicate the dollar should weaken over time. A rising current account deficit at a time that the gap between the performance of the U.S. economy and the rest of the world is likely to narrow also points in the same direction.

So why not get more negative about the interest rate outlook now? First, a lot of bad news about the Fed is priced into the market already. Second, the economic news is likely to soon turn more supportive, at least temporarily. Not only is the trend of domestic demand growth likely to slow as the weather-assisted strength of the first quarter unwinds, but also the inflation news is likely to improve. Although the underlying inflation trend is probably gently higher, the process should be a gradual one. In the past, whenever there has been a very bad reading on inflation such as the March consumer price index report, it almost always has been followed by a relatively good reading the following month.

However, if market participants were to take such news as evidence that the Fed tightening process is nearly complete, we would take the opposite view. After all, any resultant bond and stock market rally would ease financial conditions. It is unlikely to be so simple. A sustained slowdown is likely to require tighter financial market conditions.

Bill Dudley

Goldman Sachs Financial Conditions Index

	Latest Week*	Apr	Mar	Feb	Contribution to GSFCI Change 3 mo	6 mo	12 mo
GSFCI (index 1987-1995=100)	97.21	96.52	96.37	96.58	0.76	0.55	1.03
3-month LIBOR (%)	6.69	6.31	6.20	6.10	0.13	0.07	0.41
A-Rated Corporate Bond Yield (%)	8.50	8.07	8.07	8.06	0.16	0.19	0.33
Real GS Trade-Weighted $ (index 1990=100)	125.75	121.67	120.71	120.82	0.22	0.32	0.29
Market Cap**/GDP (%)	182.58	188.48	198.66	189.30	0.26	-0.03	0.00

* Ending Wednesday ** Wilshire 5000

Key U.S. Economic Data

	Latest Monthly Data '00 Apr	'00 Mar	'00 Feb	'00 Jan	6 Mo Trend	12 Mo Trend	Next Release
Nonfarm Payrolls (ch. thousands)	340	458	27	394	298	249	Jun 2
Unemployment Rate (%)	3.9	4.1	4.1	4.0	4.1	4.1	
Index of Hours Worked (% ch)	0.5	0.4	-0.1	0.6	3.7	3.1	
Average Hourly Earnings (% ch)	0.4	0.3	0.4	0.4	3.8	3.8	
Producer Price Finished Goods Index (% ch)	-0.3	1.0	1.0	0.1	4.1	3.9	Jun 9
Excluding food and energy	0.1	0.1	0.3	-0.2	0.8	1.3	
Consumer Price Index (% ch)	--	0.7	0.5	0.2	4.1	3.7	May 16
Excluding food and energy (% ch)	--	0.4	0.2	0.2	2.5	2.4	
Retail Sales (% ch)	[illegible]	0.5	1.3	-0.7	10.9	9.7	Jun 13
Excluding motor vehicles (% ch)	0.0	1.2	1.3	-0.1	10.6	9.4	
Industrial Production (% ch)	--	0.3	0.1	1.0	5.8	5.1	May 15
Manufacturing	--	0.4	0.1	0.8	6.6	5.7	
Capacity Utilization (%)	--	81.4	81.5	81.6	81.3	80.9	May 15
Manufacturing	--	80.6	80.6	80.8	80.5	80.1	
Housing Starts (annual rate, thousands)	--	1604	1807	1744	1704	1665	May 16
Single-family	--	1309	1307	1361	1351	1326	
Trade Balance (billions, monthly)	--	--	-29.2	-27.4	-26.0	-24.1	May 19
Merchandise	--	--	-36.0	-34.2	-32.8	-30.7	
Factory Orders (% ch)	--	2.2	0.0	-1.2	12.7	9.6	Jun 2
Durable Goods	--	3.5	-1.7	-1.9	13.4	9.1	May 26
Personal Income (% ch)	--	0.7	0.4	0.7	7.7	6.4	May 28
Wages and Salaries	--	0.7	0.3	0.9	7.1	6.8	
Purchasing Managers' Index (%)	54.9	55.8	56.9	56.3	56.3	55.9	Jun 1
Consumer Sentiment U Mich (Feb 66=100)	109.2	107.1	111.3	112.0	108.7	107.3	May 26
Conference Board (1985=100)	136.9	137.1	140.8	144.7	139.7	137.7	May 30

Note: Percentage changes are month to month for last four months, annualized for 6- and 12-month trends. 6- and 12-month figures for levels (e.g., unemployment rate) are averages over those periods.

U.S. Calendar

Focus for the Week Ahead

- The Federal Open Market Committee is likely to boost its federal funds rate target by 50 basis points, to 6½%, when it meets on Tuesday, May 16, and the Board of Governors will probably follow suit with a comparable increase in the discount rate, to 6%. The statement announcing these actions should retain the bias toward concern about rising inflation (May 16).
- April's CPI report should be fairly benign, with energy prices holding the overall index flat and the core index reverting to its mean increase of about 0.2% per month (May 16).
- We estimate that the U.S. trade deficit surpassed the $30-billion mark for the first time in March, as a strong domestic economy and rising oil prices boosted imports while exports weakened (May 19).

Economic Releases and Other Events

Date		Time	Indicator	Estimate GS	Estimate Consensus	Last Report
Mon	May 15	9:15	Industrial Production (Apr)	+1.0%	+0.7%	+0.3%
		9:15	Capacity Utilization (Apr)	81.9%	81.8%	81.4%
Tue	May 16	8:30	Consumer Price Index (Apr)	0.0%	+0.1%	+0.7%
			Excluding Food & Energy	+0.2%	+0.2%	+0.4%
		8:30	Housing Starts (Apr)	+4.0%	+2.84%	- 11.2%
Thu	May 18	10:00	Philadelphia Fed Survey (May)	16.0%	13.7%	12.8%
		2:00	Federal Budget Balance (Apr)	$158.0 bn	$153.0bn	$113.5bn
Fri	May 19	8:30	Trade Balance (Mar)	-$30.5 bn	-$29.5bn	-$29.2bn

- Homebuilders' Survey (Mon, May 15)
- FOMC Meeting (Tue, May 16)
- Kansas City Fed Survey (Wed, May 17 – 11:00)
- Treasury Announces 2-Year Note (Wed, May 17 – 2:30)
- March FOMC Minutes (Thu, May 18 – 2:00)

Interest Rates: Forecast vs. Forward Yields

	3 mo	6 mo	12 mo
LIBOR 3-month	7.1%	7.3%	7.8%
Forward	7.0	7.4	7.5
2-Year T-Note	6.8	6.9	7.1
Forward	6.9	6.8	6.9
10-Year T-Note	6.4	6.5	6.7
Forward	6.4	6.4	6.4

Key Numbers in the Business Outlook

	2000 Q1	2000 Q2E	2000 Q3E	1999	2000E
Real GDP	5.4%	3.7%	4.6%	4.1%	5.1%
Ind. Prod., Mfg.	6.1	6.5	7.6	4.2	6.4
CPI	4.0	3.7	2.3	2.2	3.2
After-Tax Profits*	5.7E	3.9	5.3	4.1	3.7
Unemployment	4.1	3.9	3.9	4.2	3.9

* Excluding inventory profits; adjusted for depreciation distortions.

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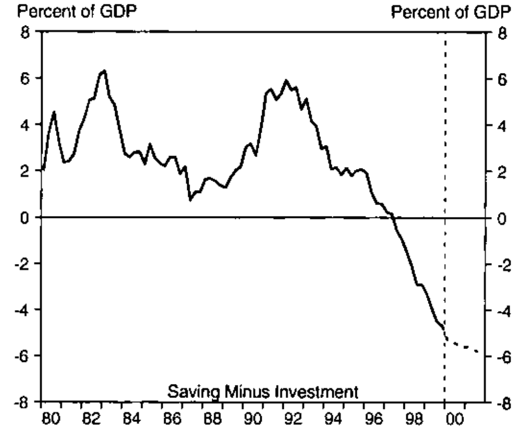
U.S. Economics Analyst

The Dark Side of the Brave New Business Cycle

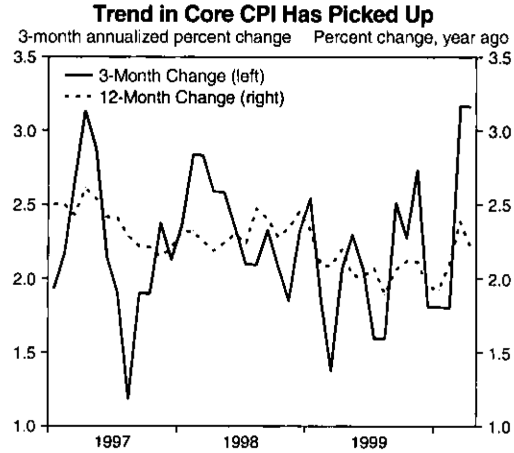
- The economy has performed spectacularly well in recent years. But now that performance has increased the risk of a hard landing. The problem is that the economy's forward momentum has pushed the unemployment rate to a level that may be inconsistent with a stable inflation rate. That is troubling because Fed officials have always had an extraordinarily tough time pushing up the unemployment rate and, at the same time, avoiding a hard landing.
- The risk of a hard landing has also increased because the stock market surge of the past few years has created some significant imbalances in the real economy including a depressed household saving rate and a huge current account imbalance. If the huge private sector deficit is not unwound smoothly, this could complicate the Fed's task of achieving a soft landing.
- The 50-basis-point hike by the FOMC in its target federal funds rate indicates that the monetary authorities may share these concerns. More tightening is likely barring a sharp reversal in stock prices and/or the type of market gyrations that let the Fed off the hook in 1997 and 1998. We continue to expect a 7% federal funds rate by late summer and a 7½% federal funds rate within a year.
- Although the April consumer price report was benign, this should be taken in the context of the terrible report that preceded it. Other data indicate that the growth pace remains strong. Production is rising swiftly now in response to the surge in demand in the preceding two quarters. The deterioration in the trade deficit reflects the strength of domestic demand. Export growth continues to revive as the growth pace picks up abroad.

A Record Private Sector Deficit



Source: Department of Commerce. Our estimates.

Trend in Core CPI Has Picked Up



Source: Department of Commerce.

Trade Recommendations

- Although we are growing more positive on the bond market, we would stay flat for now.

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Issue No: 00/20
May 19, 2000

I. Weekly Wrap-Up

Inflation Trend Still Up Despite Benign April Figures

Following the Fed's 50-basis-point rate hike on May 16, bond yields edged upward, though stocks held on to most of the gains achieved prior to the meeting.

The benign CPI report for April does not alter the fact that the best news on inflation has probably passed. The overall CPI was flat in April, and the core rose by only 0.2%, but these results were largely a payback for much faster increases in March. The underlying trend in core inflation is gently creeping up. Although the core CPI has risen by only 2.2% over the past year, over the past three months this index has advanced by a much faster 3.2% annualized rate.

The growing strain on resources, especially labor, is helping contribute to the upward pressure on inflation. Capacity utilization rose to 82.1% in April, the highest reading since May 1998, and the trend in unemployment remains downward. Although the four-week moving average of unemployment claims rose to 289,750 this week, this is likely a payback for unusually low claims over the past few months due to an extremely mild and dry winter.

Resource utilization continues to rise because the economy shows few signs of slowing. Industrial production jumped by 0.9% in April. Thus far in the second quarter, industrial production is growing at a 9% annualized rate, the fastest in four years. Along with the higher-than-expected reading of 20.2% for the May Philadelphia Fed Survey, the strength in industrial production implies that factory output is likely to remain strong in the current quarter.

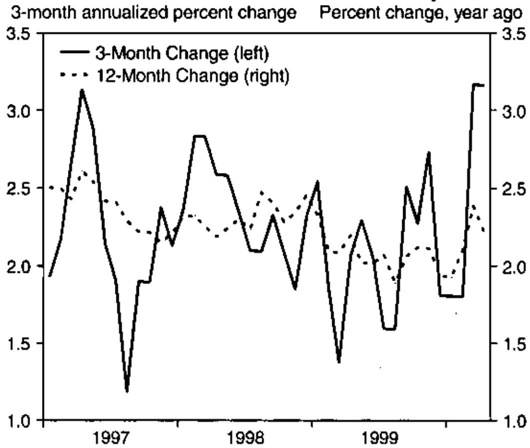
In addition, trade drag, which has helped moderate GDP growth in recent quarters, appears to be diminishing. Although the nominal trade deficit in goods and services rose by $1.5 billion to a record $30.2 billion in March, the real deficit in goods only rose to $36.2 billion from a downward-revised $35.9 billion in February. Less trade drag suggests that GDP growth should remain strong going forward.

The Fed's Ratification Game

The Fed's 50-basis-point hike on Tuesday brought the cumulative increase in the federal funds rate to 175 basis points in this tightening cycle. And finally, financial conditions have begun to tighten more noticeably, primarily because of a softer stock market. But further rate hikes are probable. First, the tightening of financial conditions still falls well short of what likely is needed to slow growth to a more sustainable pace. Second, that part of the tightening in financial conditions that has occurred outside the direct effect of higher short-term interest rates is unlikely to remain in place unless the Fed ratifies the more aggressive rate hike expectations that are now discounted in financial asset prices.

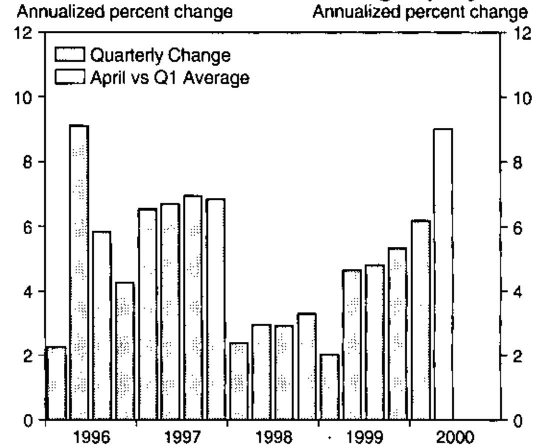
We have not yet made up our mind about the precise timing of the 50 basis points of further tightening that we expect to occur by late summer. It depends on the economic data and the behavior of financial markets. At this point, another step at the June 27-28 FOMC meeting seems probable given that is the expectation priced into the July federal funds futures contract. But softer data and the relaxed posture exhibited by the FOMC in the minutes to the March 21 meeting suggest that if a move occurs, it could very well be a more modest 25-basis-point step.

Trend in Core CPI Has Picked Up



Source: Department of Commerce.

Industrial Production Growing Rapidly



Source: Department of Labor.

House to Vote on China Trade Next Week

Next week, the House of Representatives is scheduled to vote on the establishment of permanent normal trade relations (PNTR) with the People's Republic of China. In our view, the most likely outcome is a narrow vote in favor of PNTR. House Majority Whip Tom DeLay's (R-Texas) assertion that there were still not enough votes to pass the legislation was likely a tactic to attract wavering legislators rather than a true assessment of the current standing of the bill. In fact, counts by other institutions, such as the G7 Group, show PNTR passing. Furthermore, the growing support for a proposal by Reps. Sander Levin (D-Michigan) and Doug Bereuter (R-Nebraska) to set up a commission to monitor human rights in China suggests that some Democrats who may have otherwise been opposed will vote in favor of granting China PNTR.

Approval of PNTR is likely to stimulate U.S. exports over time as China would lower its tariffs on imports from the United States. In contrast, U.S. imports are unlikely to be affected much. After all, the United States has granted China normal trade relations in every year since 1979 and U.S. tariffs against Chinese goods are already as low as those against other nations, averaging less than 4%. As these tariffs will not change upon China's accession to the WTO, there should be no increase in imports from China associated directly with PNTR.

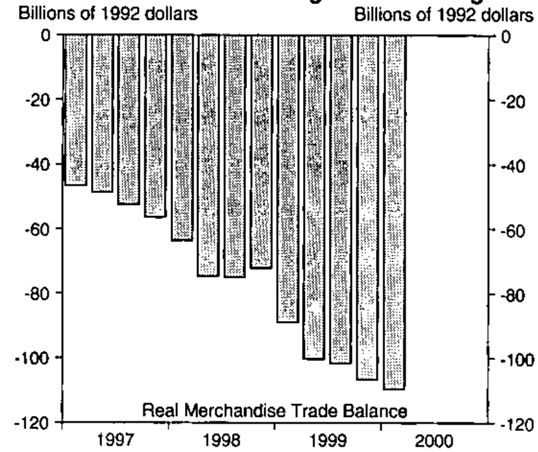
If PNTR fails, however, normal trade relations with China might not be renewed. The associated increase in trade barriers against Chinese imports might force consumers to turn to less efficient, more costly producers, either in the United States or elsewhere in the world. The main macroeconomic risk in such a scenario is upward pressure on inflation. Clearly, the longer-term risk is a loss in momentum for free trade.

Sell-off Likely to End Soon

Note: The following comments reflect trading views and may differ from our longer-term interest rate forecast.

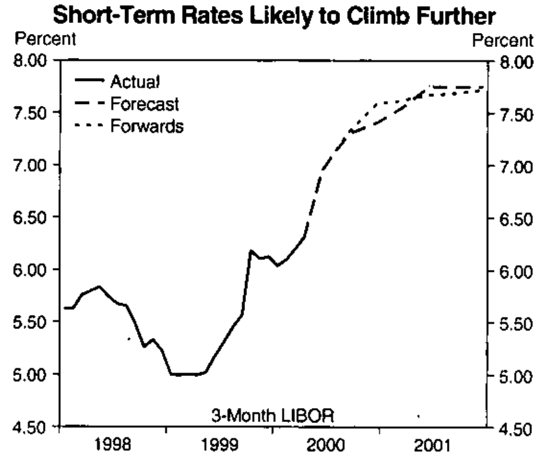
Fixed income yields continued to rise following Tuesday's FOMC meeting. However, this sell-off should exhaust itself fairly soon for two reasons. First, if it goes on much further, it is likely to weigh on the equity market. Second, the economic news is likely to indicate that domestic demand in the second quarter slowed sharply from the first-quarter pace. This should reassure investors that Fed officials have matters well in hand. We are reluctant to recommend outright long positions, however, because we believe that any rally will prove to be both modest and temporary in nature.

The Pace of Trade Drag Is Diminishing



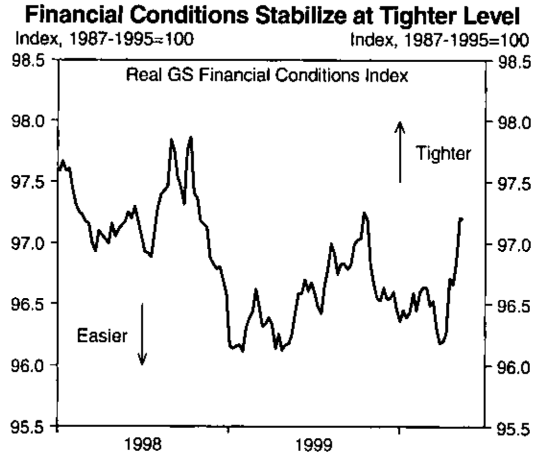
Source: Department of Commerce.

Short-Term Rates Likely to Climb Further



Source: International Financial Statistics. Bloomberg. Blue Chip Financial Forecasts. Our estimates.

Financial Conditions Stabilize at Tighter Level



Note: See page 7 for additional detail.
Source: Goldman Sachs.

II. The Dark Side of the Brave New Business Cycle

The following is based upon a speech given at the 10th anniversary symposium of the Center of Economic Policy Studies, Princeton University: "Is it a New World? Economic Surprises of the Last Decade" (May 6, 2000).

The U.S. economy has been performing terrifically. Structural changes such as just-in-time inventory management, more flexible labor markets, greater openness, and deregulation have made the economy less cyclical. This has encouraged greater investment. That, in turn, has boosted productivity growth. As a consequence, inflation has been well-behaved, and, until recently, the monetary authorities have generally been on the sidelines.

The consequence of all this good news has been a dramatic upward revaluation of equity prices. This has been very pleasant.

In our view, it is not appropriate to dismiss the extraordinary rise of the stock market as a bubble. There are two fundamental supports for its advance. First, the pace of sustainable earnings growth has increased as productivity growth has improved and has boosted the consensus estimate of potential GDP growth per year into a 3½%-4% range from 2%-2½% earlier.

Second, the reduced cyclicality of the economy implies that the equity risk premium should be narrower. After all, over the past 18 years, the United States has been in recession only 9 months, about 4% of the time. Prior to 1983, the United States was in recession about 25% of the time. Investors are willing (and should be willing) to pay more for a dollar of equity earnings when those earnings are less volatile and more predictable.

Nevertheless, the coast is not clear. As we see it, three problems remain that could ultimately lead to a hard landing.

First, there appears to be excessive optimism about the future: Investors expect stock market returns many multiples of nominal GDP growth, and equity research analysts expect the earnings growth rate to be sustained at an extraordinarily rapid pace. These views are intertwined and are embodied in the ongoing investment boom. If disappointment occurs, the result could be an investment bust.

Second, the stock market rise has created imbalances in the real economy. If these imbalances were to unwind unevenly or sharply, this could also help to generate a hard landing.

Third, the Federal Reserve may have let the unemployment rate fall too low to be consistent with a low and stable inflation rate. If that is the case, the prospects for a hard landing increase considerably because, as we shall see, the Fed has had a terrible track record in pushing up the unemployment rate significantly while, at the same time, avoiding a hard landing.

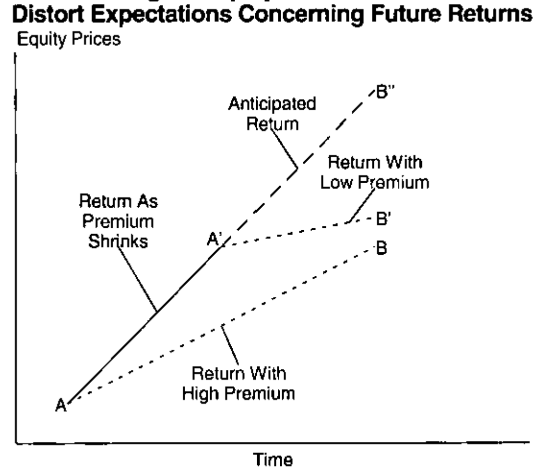
Too Much Optimism About the Future?

Investors do not appear fully cognizant that the higher returns earned from equities in recent years are not likely to be sustainable. That is because when the equity risk premium is shrinking, this temporarily boosts equity returns. When this process ends, however, equity returns will then be lower prospectively. By definition, they have to be if the equity risk premium is really lower.

This problem of expectations being formed by looking backward at past returns is apparent in some of the survey results of the returns expected by equity investors over the next ten years. Some surveys, for example, indicate that investors collectively expect to earn 15%-20% per year indefinitely. That is hardly possible if nominal GDP is constrained to a 5½%-6% annual growth rate.

The chart below illustrates the potential difficulty. Prior to the shrinkage of the equity risk premium, the expected return from equities was the path represented by the points, AB. As the equity risk premium shrinks, the return path shifts upward to the

Shrinkage in Equity Risk Premium Can Distort Expectations Concerning Future Returns



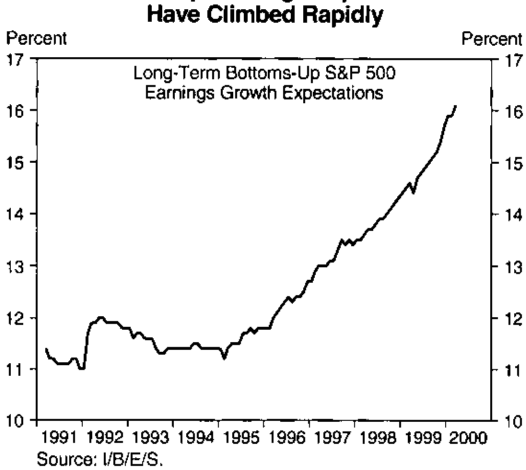
path AA'. During this period, investors earn outsized returns because the shrinkage of the equity risk premium leads to a climb in the market's price/earning ratio. During this period, stock prices rise faster than the earnings growth rate. If investors extrapolate this return path, they then expect returns along the path A'B". In fact, if the equity risk premium stabilizes at a lower level, this implies lower returns along the path A'B'. As shown in the chart, the gap between B" and B' can be large. This suggests that there is scope for disappointment.

A second potential area for excessive optimism concerns the growth rate of corporate profits expected by equity research analysts. As shown in the chart below, the long-term earnings growth rate expected by the median bottoms-up equity analyst has climbed to 16% per year from 11% per year in 1995. Such an earnings growth rate implies that the profit share of income would more than double over the next ten years, an outcome that is extraordinarily unlikely. If such returns began to materialize, investment spending would increase further, pushing down the return on capital.

This optimism about corporate profitability suggests the risk of an investment boom/bust scenario. Two key ingredients are in place. Not only are corporate profit expectations elevated, but also we are in the middle of the longest sustained boom in investment in U.S. history.

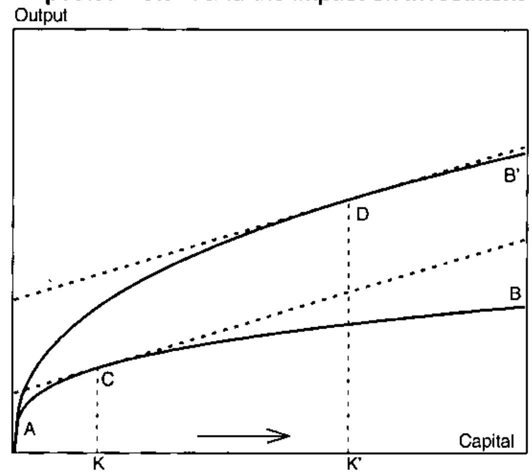
The two charts above right illustrate how an investment boom/bust scenario can develop. The initial impulse for investment is generated by a rise in the return on capital. This might occur due to a heightened pace of technological innovation. This development is shown graphically as an upward shift of the curve from AB to AB'. If interest rates are unchanged, then the desired capital stock rises to K' from K.

Bottoms-Up Earnings Expectations Have Climbed Rapidly

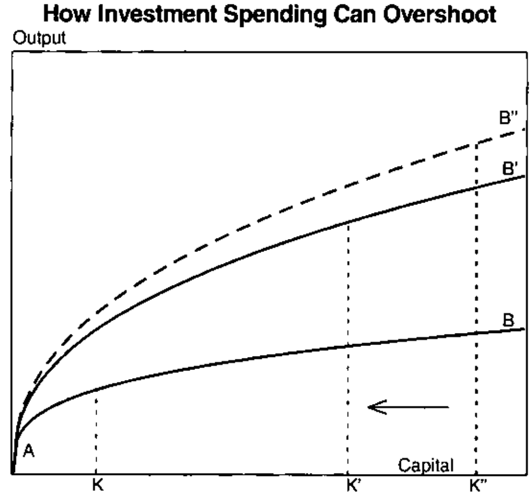


Source: I/B/E/S.

Expected Return and the Impact on Investment



How Investment Spending Can Overshoot



A problem can develop, however, during the investment boom that occurs during the transition from K to K'. The investment spending itself generates profits, which can cause investors to overestimate the magnitude of the improvement in the return on capital on a long-term basis. If investors mistakenly believe that the return on capital has shifted to AB" rather than to AB', then they will drive the capital stock beyond K' to K". When they reach K", however, the profits associated with the investment boom itself will vanish. The return on capital curve will shift back to AB', and companies will find that they have over-invested. The investment boom will turn to bust as the capital stock shrinks back to K'.

Equity Market Surge Has Created Imbalances

The second set of problems created by this fabulous economic expansion is that the stock market surge has generated significant imbalances. First, the household saving rate has fallen sharply as the stock market has climbed. This is sustainable as long as the stock market continues to rise quickly. But if the stock market were to decline, then the saving rate would likely rise dramatically. During this transition, the risk of a hard landing would increase significantly.

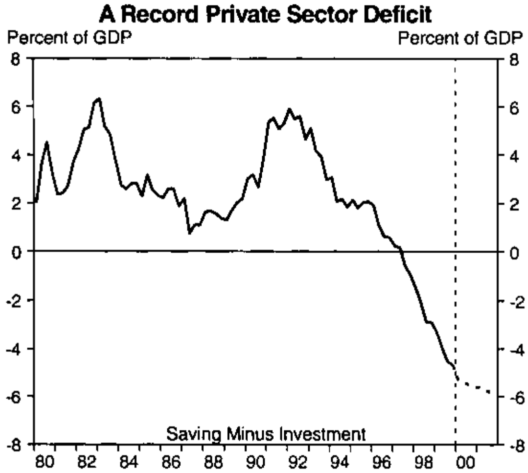
Second, the dependence of the United States on foreign capital inflows is very high. The current account deficit is at an all-time record both absolutely and as a proportion of GDP. The ability of the United States to sustain such a large current account deficit at a stable exchange rate depends on the return on capital in the United States remaining high. Disappointment about profit growth or an investment boom/bust could disturb the composure of foreign investors concerning their commitments to the United States.

The net imbalance of the private sector can be summarized in terms of the private sector deficit (see chart below). This measures the gap between domestic private saving and investment. As can be seen, investment outlays are far higher than saving. This is an imbalance that if corrected violently could also lead to a hard landing.

The Unemployment Rate May Be Too Low

The third potential problem is that the monetary authorities may already have let the unemployment rate fall too low. This problem really came about by accident. First, growth has been consistently stronger than what Fed officials expected. The stock market surge made financial conditions accommodative, leading to a sustained above-trend growth rate. Second, because the growth surge was accompanied by a rise in productivity, there was no immediate inflation consequence.

A Record Private Sector Deficit



Source: Department of Commerce. Our estimates.

Hard to Achieve Soft Landings from Below*

Unemployment Rate Trough	Trough Rate	Point by Which Rate Had Risen 0.3% or More	Business Cycle Outcome	Recession Began
1948 Q2	3.70 %	1949 Q1	Recession	Dec 1948
1953 Q2	2.61	1953 Q4	Recession	Aug 1953
1957 Q1	3.96	1957 Q4	Recession	Sep 1957
1959 Q2	5.12	1959 Q4	Recession	May 1960
1969 Q1	3.39	1970 Q1	Recession	Jan 1970
1973 Q4	4.79	1974 Q1	Recession	Dec 1973
1979 Q2	5.71	1980 Q1	Recession	Feb 1980
1981 Q3	7.39	1981 Q4	Recession	Aug 1981
1989 Q1	5.21	1990 Q3	Recession	Aug 1990

* Episodes of 0.3% or greater rise in unemployment rate from business-cycle low point (based on quarterly average unemployment rates).

Source: Department of Labor. Our calculations.

But the bill may now be coming due. Not only is the unemployment rate still falling, but there now is evidence that it already may be too low. After all, compensation costs and core inflation measures are both rising more quickly.

The real problem, though, is not just that inflation has moved up, but that the Fed faces difficulty in pushing up the unemployment rate without generating a hard landing. As can be seen in the table above, the Fed's ability to push up the unemployment rate significantly while avoiding recession is severely limited. For example, during the post World War II period, the biggest rise in the unemployment rate (on a quarterly average basis) that the Fed has been able to achieve without provoking a recession is only 0.2 percentage points. This means that if the unemployment rate needs to be 4.5% or 5%, the ultimate outcome is likely to be recession.

Up to now the ride has been great, but now it will probably become a bit bumpier. We are, for example, now getting worried about the prospects for a hard landing in late 2001 or 2002 for the first time. In particular, if the Fed is forced to tighten more aggressively as now seems likely, there is more risk of disappointment among households, businesses, and foreign investors about future returns. Given the imbalances that already exist, these disappointments could conceivably turn an economic boom into an economic bust.

Bill Dudley

Goldman Sachs Financial Conditions Index

	Latest Week*	Apr	Mar	Feb	Contribution to GSFCI Change 3 mo	6 mo	12 mo
GSFCI (index 1987-1995=100)	97.19	96.52	96.37	96.58	0.60	0.65	0.94
3-month LIBOR (%)	6.76	6.31	6.20	6.10	0.15	0.10	0.42
A-Rated Corporate Bond Yield (%)	8.56	8.07	8.07	8.06	0.12	0.24	0.34
Real GS Trade-Weighted $ (index 1990=100)	125.69	121.67	120.71	120.82	0.20	0.31	0.25
Market Cap**/GDP (%)	185.10	188.48	198.66	189.30	0.13	0.01	-0.06

* Ending Wednesday ** Wilshire 5000

Key U.S. Economic Data

	Latest Monthly Data '00 Apr	'00 Mar	'00 Feb	'00 Jan	6 Mo Trend	12 Mo Trend	Next Release
Nonfarm Payrolls (ch. thousands)	340	458	27	394	298	249	Jun 2
Unemployment Rate (%)	3.9	4.1	4.1	4.0	4.1	4.1	
Index of Hours Worked (% ch)	0.5	0.4	-0.1	0.6	3.7	3.1	
Average Hourly Earnings (% ch)	0.4	0.3	0.4	0.4	3.8	3.8	
Producer Price Finished Goods Index (% ch)	-0.3	1.0	1.0	0.1	4.1	3.9	Jun 9
Excluding food and energy	0.1	0.1	0.3	-0.2	0.8	1.3	
Consumer Price Index (% ch)	0.0	0.7	0.5	0.2	3.7	3.0	Jun 14
Excluding food and energy (% ch)	0.2	0.4	0.2	0.2	2.5	2.2	
Retail Sales (% ch)	-0.2	0.5	1.3	0.7	10.6	9.7	Jun 13
Excluding motor vehicles (% ch)	0.0	1.2	1.3	-0.1	10.6	9.4	
Industrial Production (% ch)	0.9	0.7	0.2	0.7	6.8	6.1	Jun 15
Manufacturing	0.8	0.9	0.2	0.8	7.4	6.6	
Capacity Utilization (%)	82.1	81.7	81.3	81.4	81.4	81.0	Jun 15
Manufacturing	81.4	81.0	80.6	80.7	80.7	80.2	
Housing Starts (annual rate, thousands)	1663	1618	1822	1744	1713	1676	Jun 16
Single-family	1329	1325	1324	1361	1354	1337	
Trade Balance (billions, monthly)	--	-30.2	-28.7	-27.4	-27.0	-25.0	Jun 20
Merchandise	--	-37.0	-35.4	-34.2	-33.8	-31.6	
Factory Orders (% ch)	--	2.2	0.0	-1.2	12.7	9.6	Jun 2
Durable Goods	--	3.5	-1.7	-1.9	13.4	9.1	May 26
Personal Income (% ch)	--	0.7	0.4	0.7	7.7	6.4	May 28
Wages and Salaries	--	0.7	0.3	0.9	7.1	6.8	
Purchasing Managers' Index (%)	54.9	55.8	56.9	56.3	56.3	55.9	Jun 1
Consumer Sentiment U Mich (Feb 66=100)	109.2	107.1	111.3	112.0	108.7	107.3	May 26
Conference Board (1985=100)	136.9	137.1	140.8	144.7	139.7	137.7	May 30

Note: Percentage changes are month to month for last four months, annualized for 6- and 12-month trends. 6- and 12-month figures for levels (e.g., unemployment rate) are averages over those periods.

U.S. Calendar

Focus for the Week Ahead

- Personal consumption expenditures are likely to be soft in April as the boost from mild winter weather begins to unwind (May 26).
- Durable goods orders in April are likely to soften slightly as noncapital goods dip a bit following a big upward surge in March (May 26).
- The Michigan consumer confidence survey will be scrutinized for evidence that the rise in interest rates is beginning to have an impact. The inflation expectation component may actually decline a bit given the moderation in gasoline prices (May 26).
- Real GDP growth for the first-quarter should be revised downward slightly, with domestic demand somewhat less robust (but still very strong) than originally reported and somewhat less drag from the trade sector (May 25).

Economic Releases and Other Events

Date		Time	Indicator	Estimate GS	Estimate Consensus	Last Report
Thu	May 25	8:30	Real GDP (Q1-Prel.)	+5.2%	+5.2%	+5.4%
		8:30	Chain-Weight Price Index (Q1-Prel.)	+2.7%	+2.7%	+2.7%
		8:30	After-Tax Corporate Profits (Q1-Prel.)	+6.2%	n.a.	+2.7%
		10:00	Existing Home Sales (Apr)	+2.5%	Flat	+1.5%
Fri	May 26	8:30	Personal Income (Apr)	+0.5%	+0.6%	+0.7%
		8:30	Personal Consumption (Apr)	+0.3%	+0.4%	+0.5%
		10:00	Durable Goods Orders (Apr)	-0.2%	-0.1%	+3.5%

- **House Likely to Vote on China PNTR Status**
- **Treasury 2-Year Note Auction (Wed, May 24)**
- **APICS Survey (Thu, May 25 – 8:30)**
- **Help-Wanted Index (Thu, May 25 – 10:00)**
- **Treasury Announces 1-Year Bill (Thu, May 25 – 2:30)**
- **Fed Chairman Greenspan Speaks to National Association of Urban Bankers (Thu, May 25 - 3:00)**
- **U. of Michigan Consumer Sentiment – Final (Fri, May 26 – 10:00)**

Interest Rates: Forecast vs. Forward Yields

	3 mo	6 mo	12 mo
LIBOR 3-month	7.3%	7.4%	7.8%
Forward	7.2	7.5	7.5
2-Year T-Note	6.9	6.9	7.3
Forward	7.0	7.0	6.9
10-Year T-Note	6.5	6.6	6.8
Forward	6.6	6.6	6.5

Key Numbers in the Business Outlook

	2000 Q1	2000 Q2E	2000 Q3E	1999	2000E
Real GDP	5.4%	3.7%	4.6%	4.1%	5.1%
Ind. Prod., Mfg.	6.7	8.0	7.6	4.2	6.8
CPI	4.0	3.5	2.3	2.2	3.2
After-Tax Profits*	5.7E	3.9	5.3	4.1	3.7
Unemployment	4.1	3.9	3.9	4.2	3.9

* Excluding inventory profits; adjusted for depreciation distortions.

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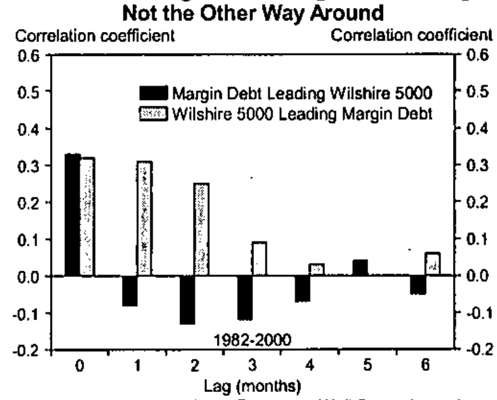
The Case Against Raising Margin Requirements

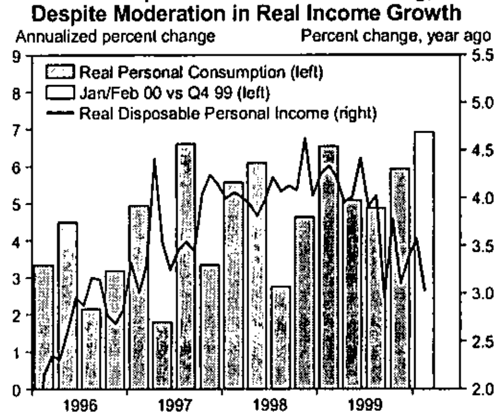
- Calls for raising margin requirements for stock purchase are misplaced for several reasons. Chief among them is the fact that investors can obtain leverage in other ways, including the purchase of derivative instruments and/or greater reliance on other forms of debt.
- Moreover, as Chairman Greenspan has noted recently, changes in margin debt do not appear to have a material effect on stock prices. The one discernible effect is that announcements of higher margin requirements can depress prices for a few days. This, coupled with the fact that margin requirements have not changed since 1974 and the Fed's concern about the effect of a soaring stock market on growth, creates a clear risk of unwanted effects should the Fed rethink its inclination to leave margin requirements alone.
- However, Fed officials appear to be focusing on other aspects of margin lending—in particular, lenders' obligations to ensure that investors with margin accounts possess suitable resources, experience, and appetites for the risks inherent in assuming the leverage involved in such activity. Maintaining vigilance on these matters will go a long way toward reducing the market's and the economy's vulnerability to a surge in margin calls if and when one develops.
- Demand for U.S. output remains firm, with real spending on a 6%-7% annualized growth track, home sales high despite rising interest rates, and backlogs of unfilled orders rising in the factory sector. Thus, our 5.0% estimate of growth in the first quarter remains subject to upside risk despite last week's report of a sharp deterioration in the U.S. trade balance.
- The economy's strength continues to buoy tax revenues. As a result, we now expect the federal surplus to top $200 billion in fiscal 2000.

Stock Price Changes Lead Margin Debt Changes, Not the Other Way Around



Source: New York Stock Exchange. Wall Street Journal. Our calculations.

Consumption Trend Remains Strong, Despite Moderation in Real Income Growth



Source: Department of Commerce.

Trade Recommendations

- Stay short June T-note futures, with a target of 92.16 and a stop on a close above 99.00.

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Issue No: 00/13
March 31, 2000

I. Weekly Wrap-Up

Latest News Underscores Vigor in Demand

Demand remains vigorous despite tighter monetary policy, suggesting that our 5.0% growth forecast for Q1 2000 remains subject to upside risk. Bonds have reacted only modestly to the strength, while stocks have fallen, led by a steep drop in the tech sector.

Fourth quarter real GDP growth was revised up to 7.3% at an annual rate from 6.9%, mainly due to a lower trade deficit. Meanwhile, after-tax adjusted corporate profits were 6.7% above year-earlier levels, the largest gain since the first quarter of 1998.

Components of demand for the first quarter appear robust as well. Personal consumption advanced by 1.0% in February; adjusting for inflation, spending is on a 6%-7% growth pace. The growth in spending has occurred despite a moderation in income growth; as a result, the personal saving rate fell to a new postwar low of 0.8% in February.

Housing activity continues to resist rising interest rates. Although new home sales fell by 0.5% in February, on a three-month moving average basis, they are back up to levels seen last summer, when the Fed began tightening policy. Furthermore, the supply of unsold new homes fell in February for the first time since late 1998.

The factory sector should also be well supported in the near future. While new orders for factory goods declined by 0.8% in February, backlogs rose by 0.6%, bringing the year-over-year growth rate in unfilled orders up to 3.8%, an increase unparalleled since January 1998. Inventory accumulation also appears to be accelerating as manufacturers strive to rebuild depleted stockpiles. They rose by 0.7% in February, also the fastest pace in about two years.

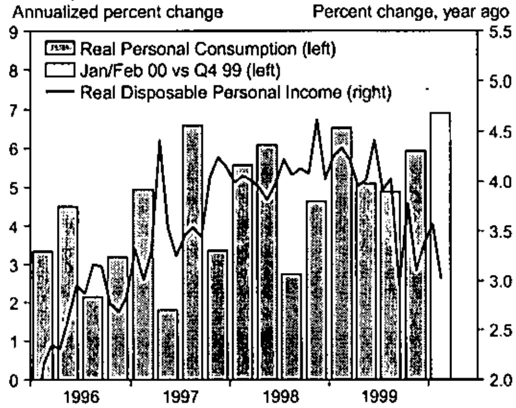
Continued strength in hiring and upbeat assessments of the labor situation are supporting demand. The four-week moving average of initial unemployment claims fell to another new 27-year low. In addition, the Conference Board's assessment of job availability remained at a near-record level in March. These data suggest that payrolls rose strongly in March and that the unemployment rate ticked back down to 4.0%.

Price and Wage Reports Key to Fed Thinking

Judging from recent commentary, Fed officials are nervous about the potential for inflation expectations or compensation costs to pick up soon. Therefore, the large number of reports on wages and prices due between now and the May 16 FOMC meeting will be crucial in shaping the central bank's strategy toward monetary restraint over the balance of 2000. Two sets of monthly producer and consumer price reports are due by mid-May, as well as advance figures on GDP-based price measures. The panel will also receive fresh detailed information concerning labor expenses in the first-quarter employment cost index release late next month, along with two more data points on average hourly earnings.

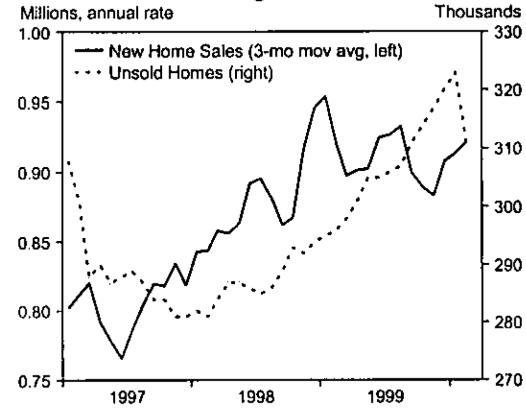
Chairman Greenspan and his colleagues are likely to continue preferring gradual to abrupt rate changes, but a shift to a faster pace of hikes cannot be ruled out in the event that price and wage trends strengthen. Medium-range expectations of inflation are already creeping up, judging from consumer surveys and the spread between nominal and inflation-indexed Treasury yields. With employees unusually well

Consumption Trend Remains Strong, Despite Moderation in Real Income Growth



Source: Department of Commerce.

Housing Demand Sturdy Amidst Declining Home Inventories



Source: Department of Commerce.

positioned to bargain for better wages and benefits, the FOMC members are anxious to resist any firming of inflationary attitudes before they begin seeping into compensation awards.

Treasury Debt Buybacks to Jump in Q2

We project that the Treasury will sharply step up the volume of its long-duration debt repurchases in the April/June period, to about $12 billion. With two successful buybacks last month (each for $1 billion), debt managers should feel comfortable engaging in such operations on a more or less routine basis going forward. They have said repeatedly that repurchases will be used as a tool to dampen volatility in government cash supplies, and with huge tax receipts due next quarter, this is the time of year when activity should be heaviest. Buyback volumes are apt to be particularly large in the late April, early May, and late June intervals.

Pressures continue to build for an accelerated pace of buybacks in coming fiscal years. Whereas officials are still aiming for up to $30 billion of repurchases for this year, we believe these acquisitions are apt to total at least $40 billion in 2001. The underlying budget balance is still improving rapidly; this week we raised our forecast for the fiscal 2000 budget surplus to $205 billion, compared to $176 billion in the latest Congressional Budget Office projection. Moreover, coupon debt maturities are set to steadily and significantly decline beginning in the second half of this year, reflecting past decisions to discontinue or downsize various Treasury note auction cycles.

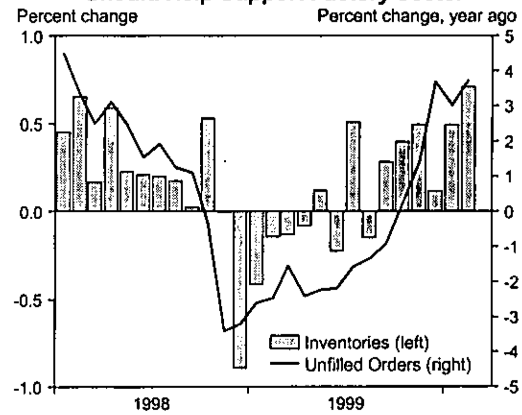
Yield Declines at Odds with Fundamentals

Note: The following comments reflect trading views and may differ from our longer-term interest rate forecast.

We continue to recommend short positions in June 10-year T-note futures because the economic backdrop suggests that the equilibrium real interest rate is climbing, whereas market yields have fallen sharply since January. Coming economic and price reports should reintroduce skepticism about whether the Fed can forestall inflationary pressures with the modest, brief further tightening now implied by the shape of the U.S. yield curve.

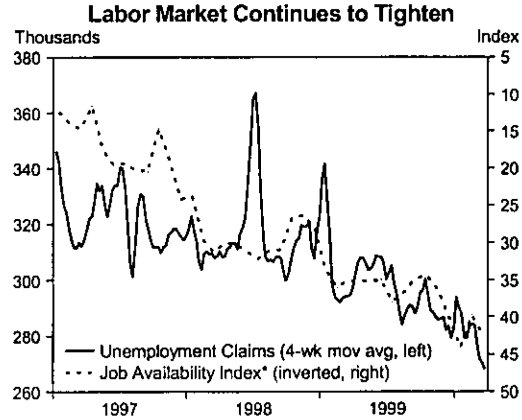
We were stopped out of our long position in the December 2000/December 2002 Eurodollar futures spread on Monday afternoon, when it closed below our 10-basis-point stop. This trade was unsuccessful because of a sudden shift in sentiment elevating the probability that Fed rate hikes would come on an early timetable. We would stay flat in this segment of the market for now.

Rising Inventories and Unfilled Orders Should Help Support Factory Sector



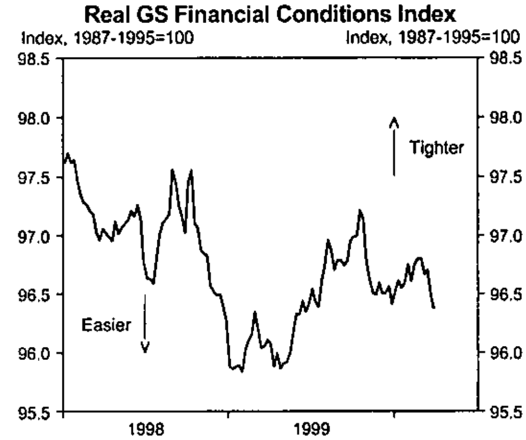
Source: Department of Commerce.

Labor Market Continues to Tighten



* Percent of people saying jobs are plentiful less those saying jobs are hard to get.
Source: Department of Labor, Conference Board.

Real GS Financial Conditions Index

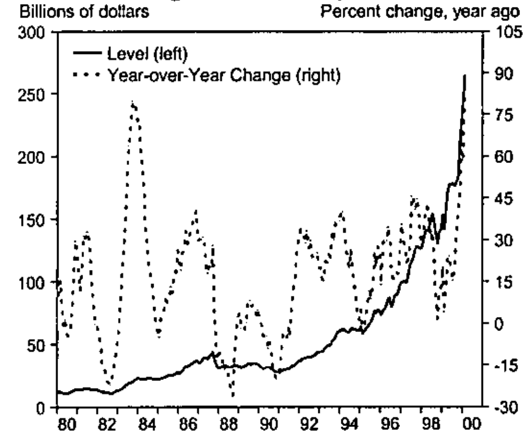


Note: See page 7 for additional detail.
Source: Goldman Sachs.

II. The Case Against Raising Margin Requirements

Calls for an increase in margin requirements on stock purchases are misplaced for several reasons. First, despite a recent surge, margin debt is small in relation to stock market capitalization. Second, the evidence does not support the view that changes in margin debt affect stock prices over any significant period of time, although announcements of increases in margin requirements do appear to have had temporary depressing effects. Third, if investors are seeking leverage to speculate in stocks, they can obtain it in other ways, including the purchase of derivative securities and/or an increased reliance on other forms of debt. Finally, given the recent focus on this subject and the Fed's disinclination to raise requirements thus far, an increase could easily generate unintended effects.

Margin Debt Has Exploded



Source: New York Stock Exchange.

Recent commentary by Chairman Greenspan strongly suggests that he and other Fed officials share these views and that changes in margin requirements are not imminent. However, this is not the only option available to the Federal Reserve, or other regulatory entities and lenders, to control the conditions under which such credit is extended. In particular, lenders are required by law and regulation to ensure that investors with margin accounts possess suitable resources, experience, and appetites for the risks inherent in assuming the leverage involved in such activity. In our view, maintaining vigilance on these matters will go a long way toward reducing the market's and the economy's vulnerability to a surge in margin calls if and when one develops. This is the route that Fed officials appear to be following.

An Explosion in Margin Debt

Under the Securities and Exchange Act of 1934, the Federal Reserve Board has the authority to set "margin" requirements for the amounts that investors must put up to purchase and carry securities. Over the years, this authority has been extended to include requirements on stock options and other derivative instruments.

In practice, the Fed sets only the "initial" requirement for securities purchases, delegating the remaining authority to the self-regulating exchanges (for the "maintenance" margin requirements that apply to securities after they have been purchased) and to the Commodity Futures Trading Commission (for margin requirements on derivative instruments such as stock index futures). For outright purchases of stocks (as opposed to purchases of stock options), the initial margin requirement is currently 50%, meaning that the investor must put up at least this percentage of the stock price in cash or collateral. This requirement was last changed in January 1974. The maintenance requirements are typically 25%, which permits the price of the stock to drop 33% before the investor is called upon to put up more margin. However, for both initial and maintenance margin, brokerage firms and banks have the option to impose higher requirements, and they often do so, especially on securities deemed to be highly speculative.

Margin debt has soared in recent months. At the end of February, such debt at brokers and dealers totaled \$265 billion—up nearly 50% in just four months and almost 90% above its year-earlier level, as shown in the chart above. It is this surge that has prompted calls for higher margin requirements. However, for the following reasons we think such a move would be ineffective at best and possibly counterproductive.

1. ***Margin debt is not large relative to stock market capitalization.***

The main objective of those who argue for a boost in margin requirements is to curb speculative excess in financial markets and thereby limit the potential for a sharp plunge in stock prices. However, the volume of margin debt does not appear to be large enough to justify serious worry. For example, at year-end 1999, this debt was worth only 1.2% of stock market capitalization, according to the Federal Reserve's flow of funds accounts. Although the figure has clearly risen further, with the market vacillating and margin debt soaring, it is probably still below 1½%.

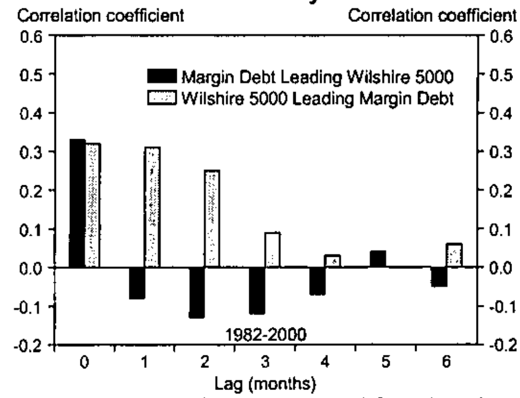
What does this figure mean? Theoretically, in the most extreme case where *all* stocks held on margin were subject to margin calls and *all* investors failed to meet those calls, forced sales of stock would total roughly $350 billion (February's $265 billion in margin debt divided by 0.75, the complement of the maintenance margin requirement). However, in reality the risk is considerably smaller for several reasons. First, margin debt includes positions on short sales, which are marked to market and therefore rise when prices weaken. Second, some portion of it also reflects debt incurred some time back on securities that have subsequently risen in value. The cushion in such accounts is probably fairly deep, although precise figures are not available. Finally, some of the margin debt is financing instruments other than stock—government and agency securities, corporate bonds, and the like. Given all of these considerations, the risk that massive margin calls would provoke or aggravate a sell-off in stocks seems low, though clearly it cannot be firmly ruled out.

2. *In the past, changes in margin debt have had no systematic, lasting effect on stock prices.*

For many years, economists have searched—largely in vain—for evidence that changes in margin requirements or in the outstanding balances affect stock prices. The consistency of these results is underscored by the following passage from a 1973 study, where the authors were at pains to differentiate conclusions that were, in fact, not very different from the received wisdom up to that point: "... although our findings, in contrast with Moore's [1966 study], indicate that margin policy appears to have an identifiable effect on the behavior of the stock market, this effect is so modest that it can hardly be regarded as more than trivial!"[1] The trivial difference was that announced changes in margin requirements appear to affect aggregate stock price indexes only for a few days, and then only when they were raised.

More recently, Simon Kwan, writing in the March 24 issue of the Federal Reserve Bank of San Francisco's *Economic Letter*, reported statistical tests showing that growth in margin debt tends to follow rather than precede growth in market capitalization.[2] This point is illustrated in the chart above, which summarizes the correlation between changes in margin debt and changes in the Wilshire 5000 index, the broadest gauge of stock prices, for the past 18 years. Whereas changes in margin debt are correlated with concurrent

Stock Price Changes Lead Margin Debt Changes, Not the Other Way Around



Source: New York Stock Exchange. Wall Street Journal. Our calculations.

changes in the Wilshire 5000 and with changes one or two months earlier, the opposite is not true. As Kwan goes on to note, these results fall short of disproving a causal link from margin debt to stock prices. However, in the context of earlier research they certainly suggest that any such relationship is not a strong or reliable one.

3. *Margin debt is not the only vehicle for leveraging positions in the stock market.*

A major reason for the lack of significant correlation is that investors have other ways of obtaining the leverage on stock market positions afforded by borrowing on margin. In our view, this is the biggest hole in the argument for raising margin requirements —namely, that such a change would not be effective in stemming investors' ability to leverage positions in the stock market.

One alternative is to buy options on stocks or stock index futures. In the case of stock options, margin requirements on purchases are already 100% of the option premium. However, because that premium is typically only a small fraction of the price of the underlying stock, the investor can obtain significant upside leverage. In the case of stock index futures, the CFTC's margin requirements are set as specific dollar values that are also only a small fraction of the face value of the contract. For example, the margin required on each Dow Jones Industrial Average futures contract is $6,750 for a contract with a value of $10 per index point, or about $110,000 currently.

The other alternative for obtaining leverage is simply to borrow more via the other avenues of credit that are available to individual investors, including home equity lines of credit, loans against 401(k) plans, or even credit cards, none of which is subject to legal regulations on the amounts borrowed comparable to

[1] James A Largay III and Richard R. West, "Margin Changes and Stock Price Behavior," *Journal of Political Economy*, March/April 1973, pp. 328-339. The study referred to therein was Thomas Gale Moore, "Stock Market Margin Requirements," *Journal of Political Economy*, April, 1966, pp. 158-167.

[2] Simon Kwan, "Margin Requirements as a Policy Tool?" *FRBSF Economic Letter*, March 24, 2000.

those imposed on margin accounts. Even though such borrowing may not be the proximate source of financing the purchase of stock, it can be the true source in the sense that the stock might not have been bought if such credit were not available.

To illustrate the point, we consider the following pair of transactions by a hypothetical investor who does not have a margin account. At year-end, he invests $10,000 of his bonus in stock, believing that he will not need this money to finance other outlays. Several months later (about two weeks from now to be exact), he discovers that his tax bill is $5,000 higher than he expected. Lacking sufficient cash and also believing that his stock will go up, he pays Uncle Sam via credit card. Although the credit card balance rises in the process of paying taxes, it is more reasonable to see this transaction as the creation of a homemade margin account, given the nondiscretionary nature of taxes and the more discretionary decision not to sell the stock. Put differently, if the investor had not been able to borrow in any form, then he would surely have sold the stock to pay his taxes.

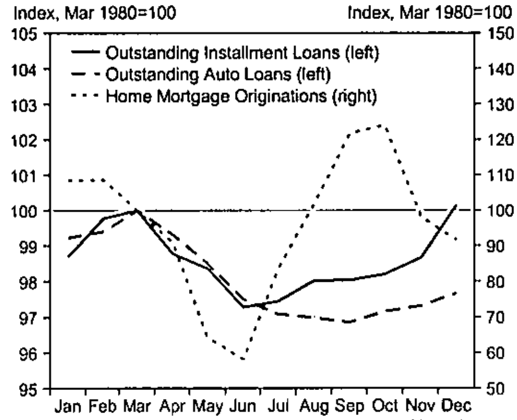
In fact, financing the stock on margin might be a preferable route from several vantage points. From the investor's point of view, the interest charged on margin loans, which is typically pegged one to two percentage points above the broker call rate, would be much lower—currently about 8%. For their part, lenders and regulators would surely prefer to have the loan explicitly secured by stock in a margin account where the stock could be liquidated, if needed, in an adverse turn in the market.

4. Beware the Law of Unintended Consequences.

As noted earlier, the one circumstance in which stock prices have shown a systematic tendency to respond to changes in margin requirements was in the few days following the announcement of an increase. While these responses were small and fleeting, it is also the case that 26 years have passed since the last change. This lapse, coupled with Fed officials' focus on the market's contribution to current economic strength and their obvious reluctance to boost margin requirements, could make the markets extremely sensitive to a shift in this position. In short, the first change in margin requirements in more than a quarter century could have unintended consequences.

In this regard, Fed officials are no doubt mindful of another time when tinkering with credit allocation produced unwanted results. In March 1980, the Fed imposed credit controls at the direction of President Carter. The main purpose of these controls was to slow down growth in unsecured borrowing, such as credit cards. However, as shown in the chart above,

1980 Credit Controls Had Pervasive Effects



Source: Federal Reserve Board, Department of Housing and Urban Development.

outstanding balances on auto loans also fell sharply, as did home mortgage originations. As a result, real GDP plunged at a 7.9% annual rate, the steepest quarterly decline of the past 40 years. Within months the controls were lifted.

Focus on Suitability

Fortunately, Fed officials appear to be holding fast to their view that a change in margin requirements would not have the intended effects. In a recent letter responding to follow-up questions from his Humphrey/Hawkins testimony, Chairman Greenspan wrote: "With regard to margin requirements, studies suggest that such requirements have no appreciable and predictable effect on stock prices." However, he went on to note that "considerable risks can be involved in the purchase of equities on margin, especially in volatile markets, and ... that lenders and borrowers need to assess carefully the risks they are assuming through the use of margin."

In this regard, federal and state laws and regulations require that brokerage firms recommend to customers only investments that are appropriate to their specific circumstances. In particular, firms are required to understand their customers' financial and tax status, investment objectives and experience, and appetite for risk before making such recommendations, and they are also obligated to monitor trading in customer accounts. Chairman Greenspan's comments suggest that the central bank sees this regulatory oversight as the more fruitful approach in guarding against the possibility of severe credit problems if and when the stock market might weaken. We strongly agree and see no reason why the Federal Reserve will or should boost margin requirements anytime soon.

Ed McKelvey

Goldman Sachs Financial Conditions Index

	Latest Week*	Feb	Jan	Dec	Contribution to GSFCI Change 3 mo	6 mo	12 mo
GSFCI (index 1987-95=100)	96.37	96.75	96.63	96.50	-0.04	-0.58	0.26
3-month LIBOR (%)	6.27	6.10	6.04	6.13	0.08	0.17	0.50
A-Rated Corporate Bond Yield (%)	8.01	8.06	8.15	7.96	0.00	0.02	0.55
Real GS Trade-Weighted $ (index 1990=100)	121.29	120.82	117.85	118.56	0.13	0.16	0.01
Market Cap**/GDP (%)	206.66	189.91	190.80	191.80	-0.25	-0.93	-0.81

* Ending Wednesday ** Wilshire 5000

Key U.S. Economic Data

	Latest Monthly Data '00 Mar	'00 Feb	'00 Jan	'99 Dec	6 Mo Trend	12 Mo Trend	Next Release
Nonfarm Payrolls (ch. thousands)	--	43	384	309	230	216	Apr 7
Unemployment Rate (%)	--	4.1	4.0	4.1	4.1	4.2	
Index of Hours Worked (% ch)	--	-0.4	0.7	0.1	2.0	1.8	
Average Hourly Earnings (% ch)	--	0.3	0.4	0.3	3.6	3.6	
Producer Price Finished Goods Index (% ch)	--	1.0	0.0	0.1	4.4	4.0	Apr 13
Excluding food and energy	--	0.3	-0.2	0.1	1.9	1.0	
Consumer Price Index (% ch)	--	0.5	0.2	0.2	3.4	3.2	Apr 14
Excluding food and energy (% ch)	--	0.2	0.2	0.1	2.3	2.1	
Retail Sales (% ch)	--	1.1	0.4	1.9	10.5	9.4	Apr 13
Excluding motor vehicles (% ch)	--	1.0	-0.5	2.0	9.9	8.1	
Industrial Production (% ch)	--	0.3	1.1	0.5	6.4	5.6	Apr 14
Manufacturing	--	0.3	1.0	0.4	7.1	5.9	
Capacity Utilization (%)	--	81.7	81.7	81.1	81.2	80.9	Apr 14
Manufacturing	--	80.9	80.9	80.4	80.4	80.0	
Housing Starts (annual rate, thousands)	--	1781	1758	1769	1706	1675	Apr 18
Single-family	--	1310	1363	1441	1349	1332	
Trade Balance (billions, monthly)	--	--	-28.0	-24.6	-25.1	-23.3	Apr 19
Merchandise	--	--	-34.7	-31.5	-31.9	-29.9	
Factory Orders (% ch)	--	-0.8	-1.2	3.8	4.2	8.4	May 3
Durable Goods	--	-2.7	-1.9	6.5	0.7	7.4	Apr 26
Personal Income (% ch)	--	0.4	0.7	0.3	6.5	5.9	Apr 28
Wages and Salaries	--	0.3	0.9	0.7	6.6	6.3	
Purchasing Managers' Index (%)	--	56.9	56.3	56.8	56.9	55.5	Apr 3
Consumer Sentiment U Mich (Feb 66=100)	107.1	111.3	112.0	105.4	107.7	106.9	Apr 28
Conference Board (1985=100)	136.7	141.8	144.7	141.7	138.6	137.5	Apr 25

Note: Percentage changes are month to month for last four months, annualized for 6- and 12-month trends. 6- and 12-month figures for levels (e.g., unemployment rate) are averages over those periods.

U.S. Calendar

Focus for the Week Ahead

- Nonfarm payrolls should climb sharply in the March survey, owing to a rebound in service sector job growth and a sizable contribution from hiring for the 2000 census. The unemployment rate probably will fall back to a business-cycle low, and average hourly earnings are likely to rise slightly more than the recent norm (April 7).
- Purchasing managers are expected to report continued rapid growth in manufacturing activity, with sturdy levels of new orders and production. Lofty petroleum and energy product costs probably will sustain the price index at an unusually high level (April 3).
- A modest decline in unit motor vehicle sales is anticipated, though the volume of deliveries should remain close to historical peaks (April 3).
- The leading economic index probably edged down in February, primarily reflecting weakness in stock-price indexes, a flattening yield curve, and lower building permits (April 4).

Economic Releases and Other Events

			Estimate		
Date	Time	Indicator	GS	Consensus	Last Report
Mon Apr 3	10:00	NAPM Index (Mar)	57.5%	56.5%	56.9%
	10:00	Construction Spending (Feb)	-2.0%	0.0%	+2.7%
		Domestic Motor Vehicle Sales (Mar)	15.5M	15.1M	16.3M
Tue Apr 4	10:00	Leading Indicators (Feb)	-0.2%	0.0%	+0.3%
Fri Apr 7	8:30	Civilian Unemployment Rate (Mar)	4.0%	4.0%	4.1%
	8:30	Nonfarm Payroll Employment (Mar)	+400,000	+300,000	+43,000
	8:30	Average Hourly Earnings (Mar)	+0.4%	+0.3%	+0.3%
	3:00	Consumer Credit (Feb)	+$8.0 bn	+$10.0 bn	+$17.0 bn

- **NAPM Nonmanufacturing Survey (Wed, Apr 5 – 10:00)**
- **FNMA 2/3-Year and 10-Year Note Pricing (Wed, Apr 5)**
- **White House Economic Conference (Wed, Apr 5)**
- **Wholesale Trade (Thu, Apr 6 – 10:00)**
- **Chain-Store Sales Results (Thu, Apr 6)**

Interest Rates: Forecast vs. Forward Yields

	3 mo	6 mo	12 mo
LIBOR 3-month	6.6%	6.8%	7.0%
Forward	6.7	7.0	7.1
2-Year T-Note	6.6	6.6	6.9
Forward	6.5	6.5	6.5
10-Year T-Note	6.6	6.6	6.9
Forward	6.0	6.0	6.0

Key Numbers in the Business Outlook

	1999	2000			
	Q4	Q1E	Q2E	1999	2000E
Real GDP	7.3%	5.0%	3.7%	4.1%	5.0%
Ind. Prod., Mfg.	7.1	7.5	7.7	4.2	6.9
CPI	2.9	2.7	2.5	2.2	2.7
After-Tax Profits*	6.7	2.8	2.3	4.1	1.9
Unemployment	4.1	4.0	3.9	4.2	3.9

* Excluding inventory profits; adjusted for depreciation distortions.

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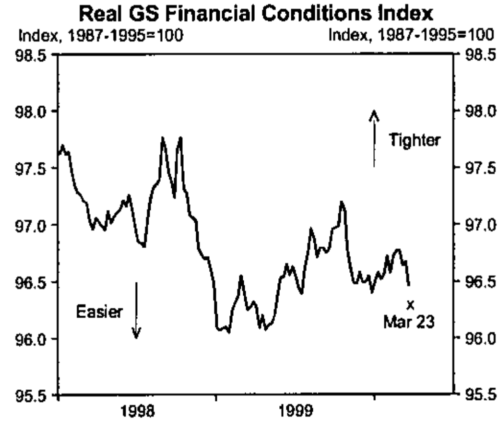
U.S. Economics Analyst

Our Views Have Changed Slightly

Election Won't Have Much Impact on Policy This Year

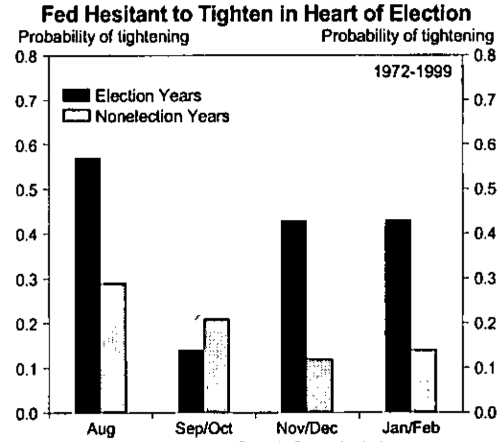
- Fed officials have indicated their determination to tighten financial conditions, but the stock market and bond market have not cooperated. Financial conditions as measured by our financial conditions index (GSFCI) are now easier than before the FOMC began tightening monetary policy last June.
- For this reason, we now anticipate that a greater proportion of the further 125 basis points of tightening that we expect through 2001 will be front-loaded into this year. The FOMC is likely to push up its federal funds rate target to at least 6.5% by late summer, with the next step occurring at the May meeting. We continue to anticipate additional steps in 2001, with the federal funds rate climbing eventually above 7%.
- With respect to timing, there is little evidence that the upcoming presidential election will have much of an impact on monetary policy this year. Rather, economic considerations will take precedence in determining the course of policy.
- Contrary to conventional wisdom, historical analysis shows that Fed policy changes in general have been more frequent in election years, as have Fed tightenings in particular. However, the threshold to Fed tightening is higher between Labor Day and Election Day in an election year.
- This week's economic news was softer, with the January trade deficit widening sharply and durable goods orders declining. However, this probably represents only a temporary setback, reflecting seasonal adjustment problems for trade and prior strength in durable goods orders.

Real GS Financial Conditions Index



Note: See page 7 for additional detail.
Source: Goldman Sachs.

Fed Hesitant to Tighten in Heart of Election



Source: Federal Reserve Board. Our calculations.

Trade Recommendations

- Stay short June T-note futures, with a target of 92.16 and a stop on a close above 99.00.
- Maintain a long position in the December 2000/December 2002 Eurodollar futures spread, with a target of 80 basis points and a stop on a close below 10 basis points.

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March 24, 2000

I. Weekly Wrap-Up

Less Upside Risk to Q1 GDP Forecast

In a light data week, longer-dated fixed income assets proved surprisingly resilient to stock market strength, a fed rate hike, and hawkish February FOMC minutes.

The January trade balance showed yet another record deficit of $28.0 billion. While some of this was to blame on a sharp rise in oil prices, the real trade deficit also deteriorated considerably, widening to $38.7 billion in January from an average level of $35.7 billion in the fourth quarter. We now think that the trade sector could cut real GDP growth by about 1½ percentage points in the first quarter. This is a greater drag than we had been assuming previously and eliminates much of the upside risk to our real GDP growth forecast of 5% for the quarter.

On a longer-term view, however, we would discount the implications of the January trade report. That is because the U.S. trade statistics seem to suffer from a seasonal adjustment problem that can obscure the underlying trends. For example, according to the official statistics, virtually the entire widening of the trade gap since 1995 has occurred in the first half of each year, and virtually none in the second half. Since other indicators of U.S. trade performance—such as the difference between the export and import order components of the NAPM survey—have turned more positive, we expect the degree of trade drag to diminish gradually over the next year.

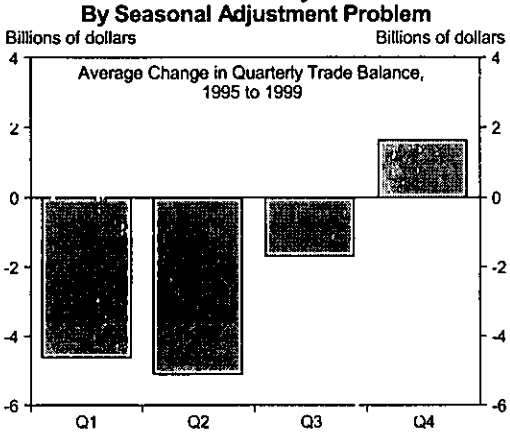
Durable goods orders, the only significant report on economic activity this week, came in on a weaker note. In particular, nondefense capital goods orders excluding aircraft plunged by 7.5%. However, since this was a correction to two consecutive increases of 5.4% each, we estimate that annualized growth in the first quarter remains around 20% in this core indicator of investment demand. A further drop in the 4-week average of initial unemployment claims to a 27-year low confirms that the economy's underlying momentum remains strong.

The FOMC Slowly Ratchets Up the Pressure

The FOMC's 25-basis-point tightening step occurred as expected. More noteworthy was the tone of the minutes to the February FOMC meeting that suggested Fed officials could tighten monetary policy significantly further this year. In particular, the minutes revealed that Fed officials believe that financial conditions should be tightened and that real interest rates increased. In addition, the monetary authorities noted that the degree of tightening might have to be greater than expected to have much impact on financial conditions. In this regard, the idea of a 50-basis-point move was favored by a few members at the February meeting.

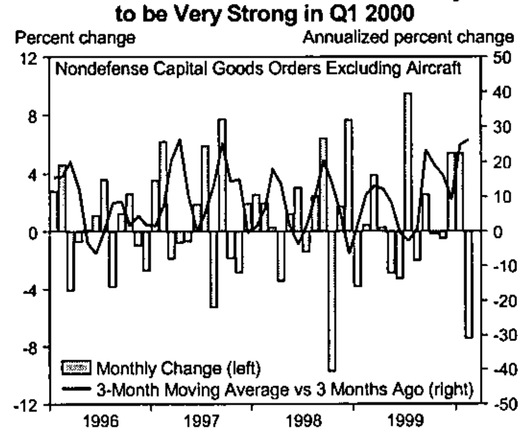
The interest rate hikes of the past year have not tightened financial conditions at all. The stock market rise has offset the increase in short-term interest rates. At Thursday's close, the Wilshire 5000 index was up 6.7% for this year and up 25.9% from a year earlier. Moreover, the Fed is getting little help from the bond market as the yield curve has been flattening. The bond market vigilantes have turned into zombies. The respect held for Chairman Greenspan is, ironically, making his job of slowing the economy more difficult.

Trade Data Probably Distorted By Seasonal Adjustment Problem



Source: Department of Commerce.

Business Fixed Investment Still Likely to be Very Strong in Q1 2000



Source: Department of Commerce.

This suggests that the FOMC will move further this year than we had earlier thought. We now expect the FOMC will raise its federal funds rate target to at least 6.5% by late summer. We continue to expect further hikes in 2001 that push the target above 7%.

Budget Surplus Growth Still in Progress

Improvement in the federal budget balance remains fairly rapid, pointing toward likely upward revisions to official surplus forecasts in coming months. The slight narrowing of the seasonal deficit in February (to $41.7 billion from $42.3 billion a year earlier) is misleading because tax refunds were artificially inflated by a sharp acceleration in return processing. Scrubbed of this influence, the deficit probably fell by about $4½ billion year-to-year.

Five months into the fiscal year, it looks increasingly possible that the surplus could go as high as $200 billion, compared to the Congressional Budget Office's January forecast of $176 billion. Whereas the CBO early this year projected a 6.5% rise in total federal receipts in fiscal 2000, through February the actual rise has been 8.5%, and it would be even higher if individual tax refunds had not been pulled forward in time. If sustained for the full year, the current 2% differential between actual and projected revenue growth would lift the budget surplus above the forecast by $37 billion.

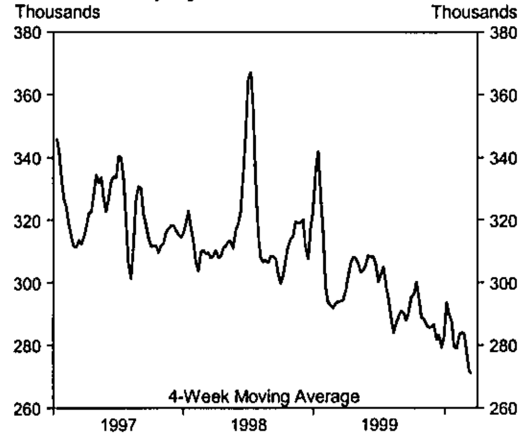
Financial Conditions Have Eased, Implying More Tightening Lies Ahead

Note: The following comments reflect trading views and may differ from our longer-term interest rate forecast.

We have been amazed by the resilience of the Treasury note market. Higher stock prices have not caused a significant reversal yet. However, we would stick with our short June T-note trade (target of 92.16 and a stop on a close above 99.00). The surging stock market implies higher real interest rates. With inflation also likely to drift higher gradually, we do not expect current prices to be sustained.

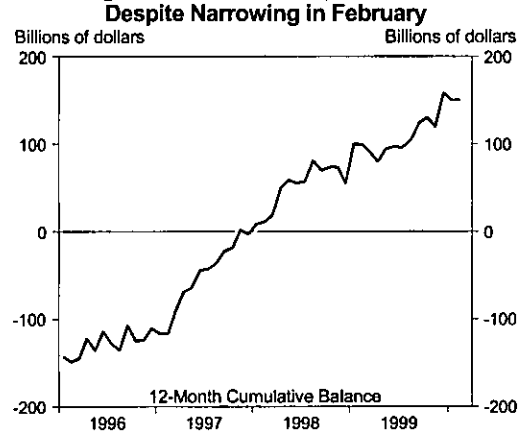
The case for our Eurodollar futures calendar spread trade (long Dec '00/short Dec '02) has become less compelling. Fed officials now appear posed to move more aggressively this year than we had earlier expected and the election (see center section article) is an insignificant barrier in this regard. Because further tightening moves still remain likely next year at a time that the yield curve is extraordinarily flat, we would stick with the trade and see if our stop on a close below 10 basis points is triggered today..

Initial Unemployment Claims Continue to Fall



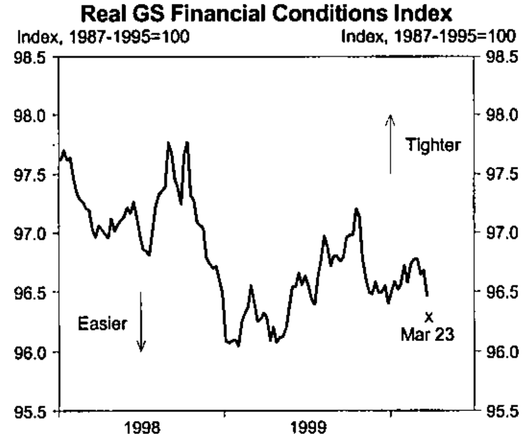
Source: Department of Labor.

Budget Balance Set to Improve Further, Despite Narrowing in February



Source: Department of Treasury.

Real GS Financial Conditions Index



Note: See page 7 for additional detail.
Source: Goldman Sachs.

II. Election Won't Have Much Impact on Policy This Year

There is little evidence that the upcoming presidential election will have much of an impact on monetary policy this year. Rather, economic considerations and issues of market confidence will take precedence in determining the course of policy in 2000.

Historical analysis suggests that three popular myths regarding Fed behavior in election years are untrue.[1] These myths are: (1) Fed policy changes are less frequent in election years; (2) Fed tightenings are rare during election years; and (3) the Fed shuns policy moves in either direction late in election seasons. The first two myths have no basis in fact; the evidence actually suggests the contrary. The third myth is only partially supported by the record, as the Fed appears hesitant only when tightening policy during the heart of the election season—between Labor Day and Election Day.

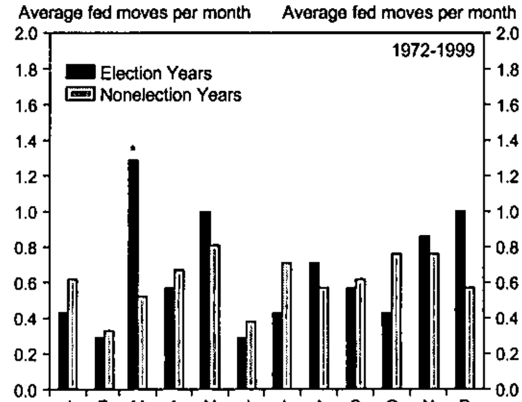
The Fed's behavior of raising rates more often in election years appears motivated by the fact that fiscal policy is generally more stimulative and economic growth faster during those years. With control of Congress and the Administration now split between the Republicans and Democrats, the scope for discretionary, stimulative fiscal policy has faded in recent years. However, economic growth should still remain robust this year, implying that the Fed will need to tighten further.

Fed Generally Unfazed by Elections

The conventional wisdom holds that due to political considerations, Fed officials remain patient throughout election years with respect to changes in monetary policy. However, the record since 1972 shows that the only noticeable effect of presidential election campaigns on Fed policy is to raise the threshold for, as opposed to preclude, tightening moves in September and October of an election season. These conclusions do not change materially if we only consider the Greenspan era—from August 1987 to the present. Three points are clear:

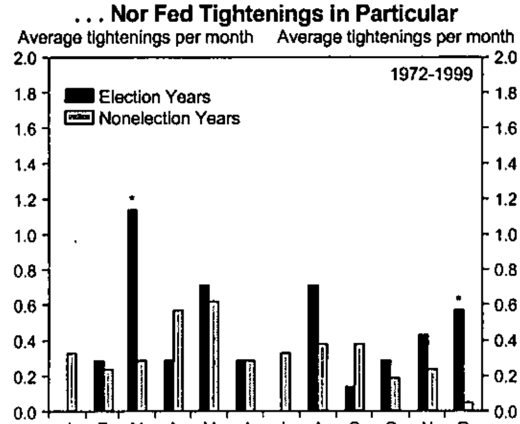
1. **Fed policy changes appear more frequent in election years.** Between 1972 and 1999, the Fed changed monetary policy 7.9 times on average during election years and only 7.3 times during other years. A month-by-month analysis, presented in the chart at top right, also supports the idea that the Fed has been *more* inclined to move monetary policy in an election year, especially in March.

Elections Deter Neither Fed Moves in General . . .



* Indicates statistically significant difference at the 5% level.
Source: Federal Reserve Board. Our calculations.

. . . Nor Fed Tightenings in Particular



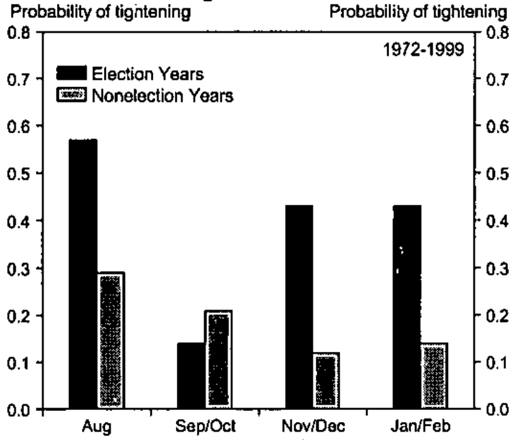
* Indicates statistically significant difference at the 5% level.
Source: Federal Reserve Board. Our calculations.

2. **Fed tightenings also appear more prevalent during election years.** From 1972 through 1999, the Fed tightened monetary policy 4.9 times on average during election years and only 3.9 times during other years, again contradicting popular conceptions. A comparable month-by-month analysis of Fed tightenings, shown in the chart above, suggests that the Fed has been most prone to tighten monetary policy in March and December of an election year.

3. **But the Fed appears hesitant to tighten policy late in election seasons.** The plurality of Fed moves is concentrated in the third trimester of the year in both election and nonelection years. However, during election years, moves within the

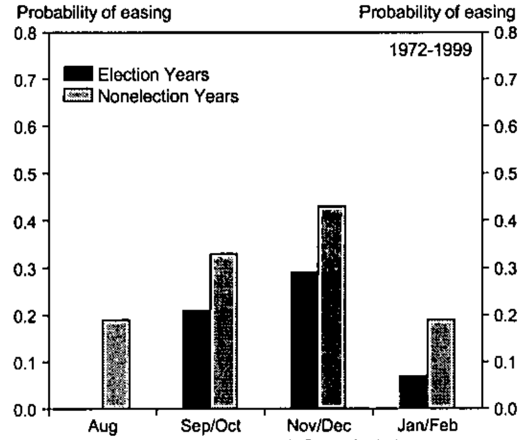
[1] This analysis was first presented in "The Fed in Election Years: A Reality Check," *U.S. Economics Analyst*, March 15, 1996.

Fed Hesitant to Tighten in Heart of Election . . .



Source: Federal Reserve Board. Our calculations.

. . . But Not as Reluctant to Ease



Source: Federal Reserve Board. Our calculations.

third trimester tend to be clustered in November and December. The split between moves in September/October and November/December in election years is 35%/65%, whereas it is nearly 50%/50% in other years. This difference is explained primarily by tightening moves. On average, the monetary authorities raised interest rates 1.0 times in November and December of election years versus 0.3 times in other years. In contrast, the Fed tightened monetary policy 0.4 times in September and October of election years, compared with 0.6 times in other years.

An examination of the probabilities of Fed tightening and easing support the notion that the Fed is hesitant to tighten during the heart of an election, but not as cautious to ease, as shown in the charts above. The probability of tightening in September or October is much lower than the probability of tightening in surrounding months during election years, whereas these probabilities follow a much smoother pattern in nonelection years. In the case of easings, no such distinction exists. These figures suggest that the Fed attempts to avoid politically sensitive rate hikes in the crucial part of the election season, pulling such moves ahead to August or pushing them back to November, December, or early the following year.

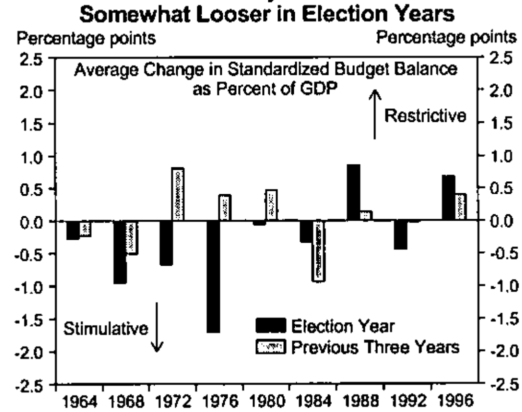
The historical record makes it clear that the threshold to tightening is higher in September and October of an election year, not that the Fed completely shuns such moves. In other words, if economic conditions still warrant tightening, the FOMC will likely take action despite the impending election. For example, the Federal Reserve raised interest rates between Labor Day and Election Day during both the 1972 and 1980 elections.

Fiscal Policy and Growth Help Explain Fed Behavior

The predilection of Fed officials toward tightening policy more frequently in election years makes some sense in the context of fiscal policy and economic growth. In general, fiscal policy has been looser and economic growth stronger in election years. These facts provide some justification for a higher frequency of rate hikes during election years, and they lend support to the theory that economic considerations take precedence over political factors in setting policy even in election years.

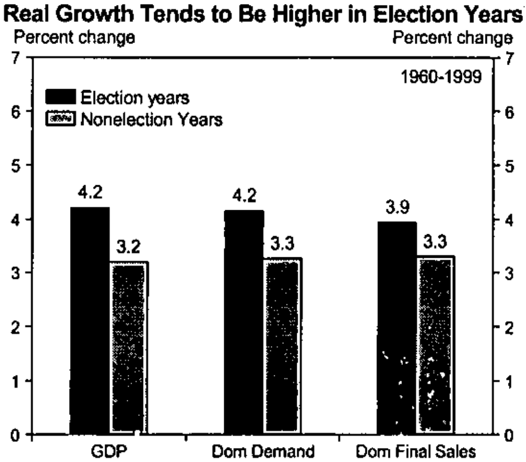
There is some evidence to support the common perception that incumbent parties attempt to loosen the fiscal levers during election years to help prop up their party's candidates. As shown in the chart below, fiscal policy was looser during six of the last nine presidential elections as compared to its stance over the three years prior to each election. However, the ability to conduct discretionary fiscal policy in

Fiscal Policy Has Been Somewhat Looser in Election Years



Source: Congressional Budget Office. Our calculations.

Real Growth Tends to Be Higher in Election Years



Source: Department of Commerce.

order to provide fiscal stimulus in election years appears linked to whether or not the same party controls both the presidency and the two houses of Congress. During the last four election years, neither party has held complete control over the federal government. In these cases, fiscal policy was stimulative only once, in 1992. Thus, the prevalence of stimulative fiscal policy during elections in the 1960s and 1970s has faded in recent years.

Looser fiscal policy in election years, among other factors, has helped the economy grow at a faster pace on average during those years than other years. Real GDP, real domestic demand, and real domestic final sales have all risen by an extra ½ to 1 percentage point during the last 10 presidential election years, as shown in the chart above. In this context, the tendency for the Fed to raise rates more often in election years is much easier to comprehend.

The Economy Will Take Precedence in Policy Making This Year

The course of monetary and fiscal policy for the remainder of this year will likely be affected little by the impending election. Thus, one should anticipate that:

1. **Fiscal policy will remain restrictive this year.** As we are once again faced with a split government heading into a presidential election, it is unlikely that either party will be able to release the fiscal levers in an attempt to boost their own party's political fortunes this November. The federal budget surplus could go as high as $200 billion this fiscal year from $124 billion in FY 1999. The prospects for fiscal policy next year, however, are very much contingent on the outcome of this November's elections.

2. **But growth will stay strong in 2000 for other reasons.** Despite the restrictive stance of fiscal policy, growth should remain quite strong in 2000, supported by sturdy personal consumption and business fixed investment. We expect real GDP will grow by 4.9% this year, the fastest growth pace since 1984.

3. **And the Fed will need to tighten further.** The strength of the economy suggests that the Fed will raise its federal funds rate target further this year, despite the impending election. In fact, there are a number of reasons to believe that the Fed probably feels less constrained to tighten monetary policy this election season than in the past. First, the Clinton Administration has approved of the Fed's goal to keep inflation in check and slow the economy's breakneck growth pace. Second, Alan Greenspan's recent reappointment to a fourth term as Chairman of the Federal Reserve means he has no special reason to try to win favor with Congress or the Administration. Chairman Greenspan will do what he believes is appropriate for economic reasons, and he has every incentive to act in a manner that protects his considerable reputation. In fact, such behavior would be nothing new. In 1988, he raised interest rates a total of six times over the course of that election year.

At the moment, we expect further rate hikes this year that push the federal funds rate target up to 6.5% or more by late summer, followed by additional tightening in 2001 taking it above 7%. While the threshold to tightening may be higher at the October 3 FOMC meeting relative to August 22, November 15, and December 19, the FOMC will continue to set monetary policy based on macroeconomic considerations. Keeping inflation in check will remain the primary goal.

Rajib Pal

Goldman Sachs Financial Conditions Index

	Latest Week*	Feb	Jan	Dec	Contribution to GSFCI Change 3 mo	6 mo	12 mo
GSFCI (index 1987-95=100)	96.46	96.71	96.59	96.48	-0.09	-0.33	0.19
3-month LIBOR (%)	6.22	6.10	6.04	6.13	0.04	0.18	0.39
A-Rated Corporate Bond Yield (%)	8.03	8.06	8.15	7.96	0.02	0.00	0.45
Real GS Trade-Weighted $ (index 1990=100)	121.41	120.82	117.85	118.56	0.11	0.14	0.06
Market Cap**/GDP (%)	202.01	190.03	190.91	191.93	-0.26	-0.65	-0.72

* Ending Wednesday ** Wilshire 5000

Key U.S. Economic Data

	Latest Monthly Data '00 Feb	'00 Jan	'99 Dec	'99 Nov	6 Mo Trend	12 Mo Trend	Next Release
Nonfarm Payrolls (ch. thousands)	43	384	309	257	230	216	Apr 7
Unemployment Rate (%)	4.1	4.0	4.1	4.1	4.1	4.2	
Index of Hours Worked (% ch)	-0.4	0.7	0.1	0.3	2.0	1.8	
Average Hourly Earnings (% ch)	0.3	0.4	0.3	0.1	3.6	3.6	
Producer Price Finished Goods Index (% ch)	1.0	0.0	0.1	0.2	4.4	4.0	Apr 13
Excluding food and energy	0.3	-0.2	0.1	-0.1	1.9	1.0	
Consumer Price Index (% ch)	0.5	0.2	0.2	0.2	3.4	3.2	Apr 14
Excluding food and energy (% ch)	0.2	0.2	0.1	0.2	2.3	2.1	
Retail Sales (% ch)	1.1	0.4	1.9	1.3	10.5	9.4	Apr 13
Excluding motor vehicles (% ch)	1.0	-0.5	2.0	0.9	9.9	8.1	
Industrial Production (% ch)	0.3	1.1	0.5	0.3	6.4	5.6	Apr 14
Manufacturing	0.3	1.0	0.4	0.5	7.1	5.9	
Capacity Utilization (%)	81.7	81.7	81.1	80.9	81.2	80.9	Apr 14
Manufacturing	80.9	80.9	80.4	80.3	80.4	80.0	
Housing Starts (annual rate, thousands)	1781	1758	1769	1663	1706	1675	Apr 18
Single-family	1310	1363	1441	1344	1349	1332	
Trade Balance (billions, monthly)	--	-28.0	-24.6	-26.0	-25.1	-23.3	Apr 19
Merchandise	--	-34.7	-31.5	-32.9	-31.9	-29.9	
Factory Orders (% ch)	--	-1.1	3.8	1.4	8.7	7.4	Mar 31
Durable Goods	-2.3	-2.2	6.5	1.2	1.0	7.6	Apr 26
Personal Income (% ch)	--	0.7	0.3	0.4	6.4	6.0	Mar 31
Wages and Salaries	--	0.8	0.7	0.3	6.7	6.6	
Purchasing Managers' Index (%)	56.9	56.3	56.8	57.1	56.5	55.1	Apr 3
Consumer Sentiment U Mich (Feb 66=100)	111.3	112.0	105.4	107.2	106.6	106.5	Mar 31
Conference Board (1985=100)	141.8	144.7	141.7	137.0	137.3	136.6	Mar 28

Note: Percentage changes are month to month for last four months, annualized for 6- and 12-month trends. 6- and 12-month figures for levels (e.g., unemployment rate) are averages over those periods.

U.S. Calendar

Focus for the Week Ahead

- OPEC will decide how much to increase production quotas at its Vienna meeting. This will set the tone for oil prices over the near-term (March 27).
- Consumer confidence probably weakened slightly in March. Job conditions as measured by the gap between jobs easier to get versus hard to get likely remained excellent (March 28).
- Profits in the fourth quarter likely rose sharply, boosted by the large gain in output, which was accompanied by a sharp surge in productivity growth (March 30).
- Personal income should be soft due to the decline in hours worked registered in February. But consumer outlays should rise sharply given the strength of retail sales reported earlier. The PCE deflator will be boosted by higher energy prices (March 31).

Economic Releases and Other Events

			Estimate		
Date	Time	Indicator	GS	Consensus	Last Report
Mon Mar 27	10:00	Existing Home Sales (Feb)	+4.0%	+5.0%	-10.7%
Tue Mar 28	10:00	Conf. Bd. Consumer Confidence (Mar)	140.0	141.8	141.8
Wed Mar 29	10:00	New Home Sales (Feb)	-2.5%	+0.3%	-4.2%
Thu Mar 30	8:30	Real GDP (Q4 Rev.)	+7.2%.	+6.9%	+6.9%
	8:30	Chain-Weight Price Index (Q4 Rev.)	+2.0%	+2.0%	2.0%
	8:30	Corporate Profits (Q4)	+9.5%	n.a.	2.2%
Fri Mar 31	8:30	Personal Income (Feb)	+0.4%	+0.3%	+0.7%
	8:30	Personal Consumption Expenditures	+0.8%	+0.8%	+0.5%
	8:30	PCE Deflator	+0.5%	n.a.	+0.2%
	10:00	Factory Orders	-0.9%	n.a.	-1.1%

- **Russian Presidential Election (Sun, Mar 26)**
- **OPEC Meeting (Mon, Mar 27)**
- **Treasury 2-Year Note Auction (Wed, Mar 29)**
- **FNMA 2/3-Year and 10-Year Announcement (Wed, Mar 29)**
- **APICS Survey (Thu, Mar 30)**
- **Help-Wanted Index (Thu, Mar 30)**
- **Consumer Sentiment – Final (Fri, Mar 31)**
- **Chicago Purchasing Managers Report (Fri, Mar 31)**

Interest Rates: Forecast vs. Forward Yields

	3 mo	6 mo	12 mo
LIBOR 3-month	6.6%	6.8%	7.0%
Forward	6.6	6.9	7.1
2-Year T-Note	6.6	6.6	6.9
Forward	6.6	6.6	6.7
10-Year T-Note	6.6	6.6	6.9
Forward	6.2	6.2	6.2

Key Numbers in the Business Outlook

	1999	2000			
	Q4	Q1E	Q2E	1999	2000E
Real GDP	6.9%	5.0%	3.7%	4.1%	4.9%
Ind. Prod., Mfg.	7.1	7.5	7.7	4.2	6.9
CPI	2.9	2.7	2.5	2.2	2.7
After-Tax Profits*	9.5E	2.8	2.3	4.4E	1.9
Unemployment	4.1	4.0	3.9	4.2	3.9

* Excluding inventory profits; adjusted for depreciation distortions.

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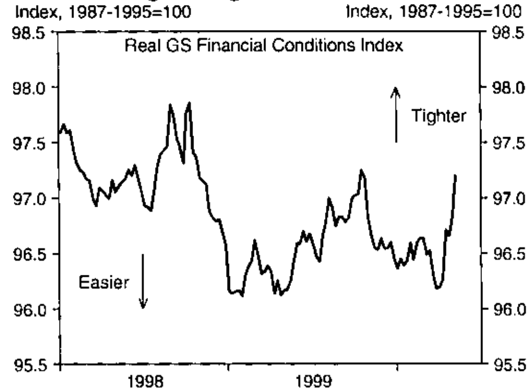
U.S. Economics Analyst

The Fed: Planning for the Worst, Hoping for the Best

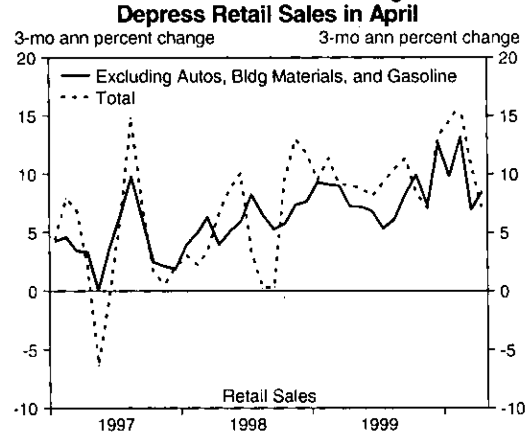
- We continue to anticipate that the FOMC will decide to tighten monetary policy by 50 basis points at the May 16 meeting. Although Chairman Greenspan would probably prefer to move more gradually, the case for a more aggressive posture is compelling given the recent evidence of above-trend growth and rising compensation cost and price inflation.
- Although a considerable amount of tightening is now discounted by market participants (to about a 7% federal funds rate target over the next 12 months), this would still be much less than what has occurred on a historical basis. This is one reason why we continue to believe that the monetary authorities will tighten monetary policy by more than expected over the next 12 months.
- Inflation in finished goods remains moderate, at about a 1% annual rate outside the volatile food and energy sectors. However, prices of goods part way through the production pipeline have come under increasing pressure, consistent with signs of bottlenecking from the monthly survey of purchasing managers. This will not go unnoticed at the FOMC meeting, where the focus will be on preventing the prices of final goods (as well as services) from following suit.
- The trend in consumer spending appears to have slowed, although not as much as implied by the 0.2% drop in retail sales reported for April. This decline came off of an upward-revised March base. Moreover, much of the slowing reflected lower gasoline prices and a weather-induced payback in outlays for items such as building materials. The report suggests that real spending is rising somewhat faster than the 3% annual rate we are projecting for this quarter.

Stock Price Weakness Leads to Further Tightening in Financial Conditions



Note: See page 7 for additional detail.
Source: Goldman Sachs.

Less Favorable Weather and Falling Oil Prices Depress Retail Sales in April



Source: Department of Commerce.

Trade Recommendations

- We would stay close to shore for the time being.

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May 12, 2000

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I. Weekly Wrap-Up

Inflationary Pressure and Lack of Economic Slowdown Should Keep Fed Vigilant

Inflationary pressure continues to build gradually, and the slowdown in goods demand is not as large as suggested by the latest statistics on retail sales. Consequently, the FOMC will likely raise its federal funds rate target by 50 basis points on May 16, as discussed further below and in the center section. Concerns over Fed tightening kept the stock market jittery this week, though bond yields edged lower.

Inflation remains relatively stable at the finished goods level outside the volatile food and energy sectors. The core PPI rose by only 0.1% in April, bringing the year-over-year rate up to a modest 1.3%. The much larger swings in the total index have been caused primarily by energy costs (-4.1% in April following +5.8% in March) and have so far showed little signs of feeding through to other prices.

However, input cost pressures continue to mount. Import prices excluding petroleum rose by 0.1% in April, bringing the year-to-year trend up to 1.3%, the fastest since February 1996. The PPI for intermediate goods excluding food and energy rose by 0.4% in April, the third 0.4% increase in four months. This index is now 3.3% above its year-earlier level.

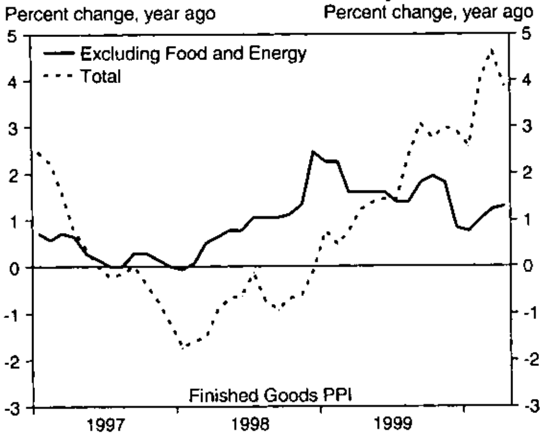
Moreover, there are few signs that the economy is slowing in a sustainable way from its recent torrid growth pace. Although retail sales fell by 0.2% in April, this was primarily the result of a payback for earlier weather-related strength and a fall in gasoline prices as demonstrated by sharp declines in sales for building materials (-1.6%) and gasoline (-2.3%). Excluding autos, building materials, and gasoline, retail sales posted a 0.4% rise in April. While this core measure of goods demand is rising less rapidly than in the first quarter, it is still growing at a sturdy 7.0% annualized rate thus far in the second quarter. Coupled with another drop in the inventory/sales ratio in the manufacturing sector to a record low 1.26 in March, this suggests that output of goods will remain quite strong in coming months.

Look for a 50-Basis-Point Rate Hike

The FOMC is likely to boost its federal funds rate target by 50 basis points when it meets on Tuesday, May 16, and the Board of Governors is apt to follow suit with a comparable increase in the discount rate. As discussed more fully in the center section, Fed officials worry that the economy is too strong and that the jobless rate may finally have dropped below the level consistent with stable inflation. They also believe that financial conditions have not tightened enough to slow growth despite recent setbacks in the stock and bond markets, in part because the increase in the federal funds rate to this point has been well below the standard of past tightening phases. Given these concerns, the FOMC is unlikely to be deterred from stepping up the pace of tightening by the benign April CPI that most analysts expect to be released just before the meeting gets underway.

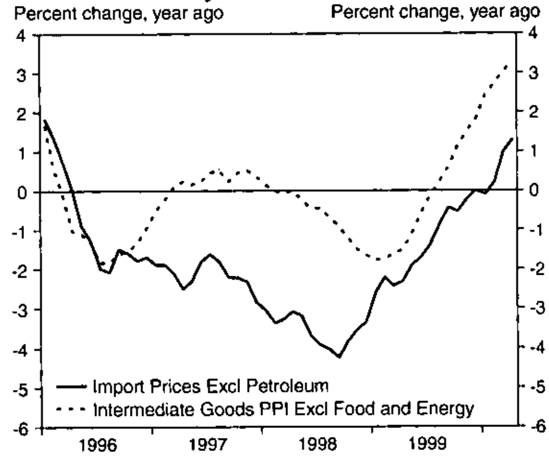
The statement announcing the decision will provide insights into how worried Fed officials have become about their prospects for managing the economy to a soft landing. The committee will surely keep the bias toward the potential for rising inflation. Beyond that, the wording of the statement—*e.g.*, whether inflation is seen as a potential or actual event and the focus

Core Inflation Remains Relatively Stable . . .



Source: Department of Labor.

. . . But Inflationary Pressure Continues to Mount



Source: Department of Labor.

given to the influence of financial conditions on growth—will have a big effect on how markets respond.

Bush Set to Endorse Individual Social Security Accounts

Texas Governor George W. Bush, the presumptive GOP presidential nominee, will reportedly endorse the principle of creating separately managed individual Social Security accounts in a speech in Los Angeles on Monday, May 15. Such a move would draw a sharp distinction between Gov. Bush and his Democratic opponent, Vice President Gore, who flatly opposes any such plan. Although the political risk for Gov. Bush is therefore quite high, he apparently sees three reasons to run this risk. (1) The Social Security Trust Funds are currently running large surpluses; therefore, the plan would not require higher taxes or lower benefits. (2) The plan could draw support from younger voters, who are skeptical that they will receive the promised benefits from the current program. (3) Key Democrats have expressed support for the idea, thereby creating potential bipartisan cover.

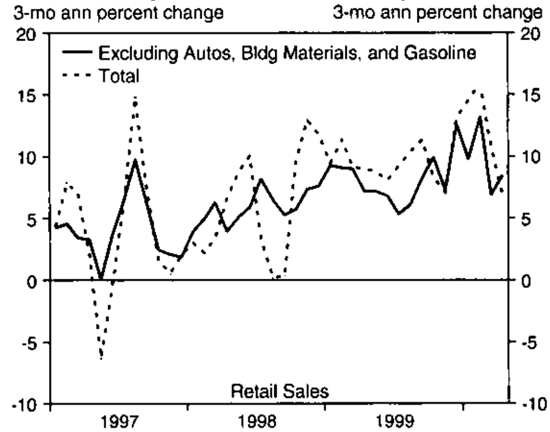
The importance of appealing to swing voters was highlighted in the May 9 meeting between Gov. Bush and Arizona Senator John McCain, his erstwhile rival in the primaries. Recent polls show that Sen. McCain would boost Republican chances for recapturing the White House measurably if he became the vice presidential nominee. However, Sen. McCain firmly ruled out that option. Although he endorsed the Bush candidacy and promised enthusiastic support in the fall campaign, in other respects the endorsement had a noticeably lukewarm tone.

Stay Close to Shore for Now

Note: The following comments reflect trading views and may differ from our longer-term interest rate forecast.

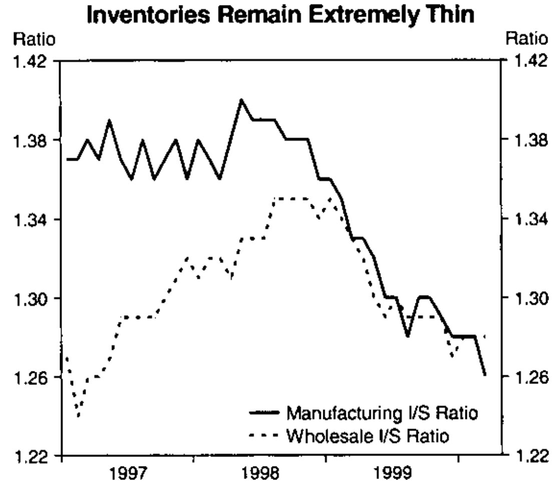
Over the near-term, we would stay close to shore because there are too many complex crosscurrents. On one hand, the forthcoming data are likely to be friendlier. On the other hand, the magnitude of monetary policy tightening is likely to be greater than anticipated over the next 12 months. Also, it is unclear how the equity market will react to the May 16 tightening step. If stocks rally, that could bother the bond market as such a rally would ease financial conditions. On balance, we expect the fixed income market to improve somewhat over the next few weeks. However, this is only likely to set the stage for a sizable rise in yields later. After all, financial conditions need to be tighter to restrain the economy to a sustainable growth pace.

Less Favorable Weather and Falling Oil Prices Depress Retail Sales in April



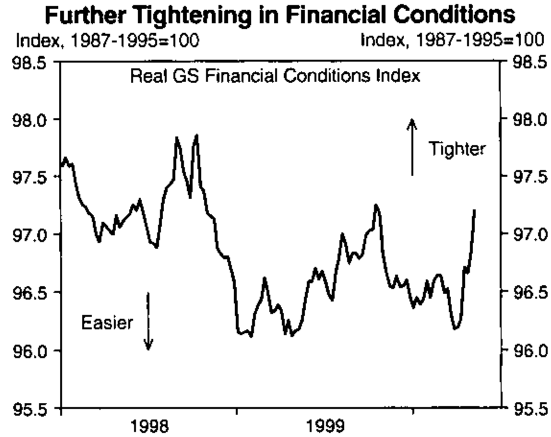
Source: Department of Commerce.

Inventories Remain Extremely Thin



Source: Department of Commerce.

Stock Price Weakness Leads to Further Tightening in Financial Conditions



Note: See page 7 for additional detail.
Source: Goldman Sachs.

II. The Fed: Planning for the Worst, Hoping for the Best

We anticipate that the Federal Open Market Committee's federal funds rate target will climb to 6½% next week and to 7½% within the next 12 months. The strength of the economy, evidence of rising compensation cost and price inflation, and the fact that financial conditions remain accommodative continue to point to a quickened pace of monetary policy tightening. Assuming the equity market proves resistant to higher interest rates, the main risk is that the cumulative amount of tightening proves to be greater than what market participants expect and possibly even more than what is embodied in our current interest rate forecast.

Why the Fed Has to Tighten Monetary Policy More Aggressively

The case for a tighter monetary policy is compelling:

1. **The economy remains much stronger than anticipated.** On a year-over-year basis, the growth rates of both consumer spending and overall domestic demand growth are still climbing. Although domestic demand is likely to slow sharply in the second quarter, this will mainly represent a temporary weather effect, rather than be the start of a sustained slowdown.
2. **The unemployment rate continues to decline.** In the debate about how fast the economy can grow, the unemployment rate is the ultimate arbitrator. Growth sufficient to tighten labor market conditions further is too fast for comfort.
3. **The tightness of U.S. labor markets is leading to a rise in compensation cost inflation.** Thus, the unemployment rate may already be too low. If that is the case, then Fed officials will have to engineer a more pronounced slowdown in order to push up the unemployment rate.
4. **Financial conditions have still not tightened much.** For example, in the latest week, the Goldman Sachs Financial Conditions Index has averaged 97.21, up about one percentage point in the past six weeks. Everything else equal, this could be expected to cut less than one percentage point from the annualized growth pace in 2001.
5. **Headwinds from the foreign sector and from fiscal policy should subside.** Growth abroad has picked up and this should diminish the trade sector's drag on U.S. growth. Moreover, the burgeoning budget surplus should erode the support for continued fiscal stringency. These developments suggest that financial conditions will need to be tighter.

Fed Tightening in a Historical Context

Financial conditions have tightened considerably within the past few weeks as expectations have shifted towards a view that the Federal Open Market Committee would push up its federal funds rate target more quickly and to a higher level than earlier expected. This shift in expectations has contributed to a rise in bond yields, a fall in equity prices, and a firmer dollar (see chart below and table on page 7). As a result, the Goldman Sachs Financial Conditions Index has increased to 97.21 in the latest week, up about one percentage point in just the past six weeks.

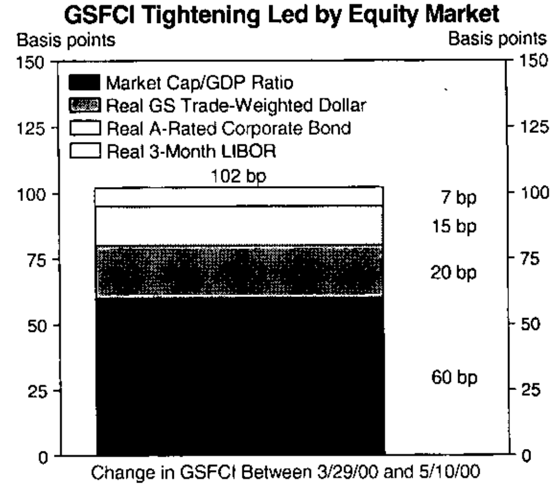
Although expectations about the path of the federal funds rate have become more pessimistic, it is important to recognize that these expectations are actually quite optimistic when judged versus the standard of what has actually taken place during past tightening episodes.

In evaluating the current degree of tightening that is anticipated, we consider three benchmarks:

1. The magnitude of the rise in the nominal federal funds rate.
2. The magnitude of the rise in the real federal funds rate.
3. The degree of tightening of financial conditions.

Currently, financial market participants are discounting a rise in the federal funds rate to about 7%-7¼% on a 12-month time horizon. This would imply a cumulative rise in the nominal federal funds rate of 262 basis points (using a 7¼% fed funds rate). As can be seen in Table 1, this is considerably less than what Fed officials have engineered historically.

GSFCI Tightening Led by Equity Market



Source: Goldman Sachs.

Table 1: Benchmarking Fed Tightening: Funds Rate, Trough to Subsequent Peak

Trough to Peak Dates	Trough Rate	Subsequent Peak	Increase (bp)
1954 Oct - 1957 Oct	0.90	3.50	260
1958 May - 1959 Nov	0.63	4.00	337
1961 Jul - 1969 Aug	1.16	9.19	803
1972 Feb - 1974 Jul	3.29	12.92	963
1977 Jan - 1980 Apr	4.61	17.61	1300
1980 Jul - 1981 Jun	9.03	19.10	1007
1983 Feb - 1984 Aug	8.51	11.64	313
1986 Oct - 1989 Mar	5.85	9.85	400
1993 Dec - 1995 Apr	2.96	6.05	309
Average			632
Excl 1977-1981 period (a)			484
Current episode:			
1999 Jan - Present	4.63	6.00	137
Market expectation	4.63	7.25	262

(a) High-inflation cycles affected by monetary tightening.

Source: Federal Reserve Board.

Of course, to the extent that the monetary authorities have become more preemptive, this should reduce the magnitude of the rise in the nominal federal funds rate needed to cool off the economy.

However, when one uses the real federal funds rate as a benchmark, which should help adjust for the degree of preemption, one reaches the same conclusion: The degree of tightening that is anticipated is less than what has occurred historically. Using the Blue Chip consensus estimate for the GDP chain-weight deflator for 2001, a 7¼% nominal federal funds rate target would imply about a 186-basis-point rise in the real federal funds rate (see Table 2 below). This is considerably less than the average rise of more than 400 basis points during past tightening episodes.

Finally, if one focuses instead on the impact of Fed policy on financial conditions, the conclusion is unchanged: Unless the stock or bond markets react much more to the Fed tightening than they have up to now, the degree of tightening of financial conditions will be modest by historical standards.

For the week ending Wednesday, May 10, the GSFCI had climbed to about 97.21, up nearly one percentage point from the first quarter of 1999. If the FOMC behaves as anticipated, the major impact on the index will be to push up the level of the real 3-month LIBOR. In principle, the other variables in the index—the real A-rated corporate bond yield, the market capitalization of the stock market to GDP ratio, and the Goldman Sachs real trade-weighted dollar index—should not be affected by the rise in short-term rates as this expectation should already be embodied in current prices.

If this is the case, a rise in the nominal 3-month LIBOR rate to 7.50% would only tighten the GSFCI by about an additional 0.30 percentage points. Thus, barring some further adjustment in bond and stock prices and the foreign exchange value of the dollar, the cumulative degree of tightening would be only about 1.20 percentage points, much less than what has occurred historically. As can be seen in Table 3, the monetary authorities have typically tightened the GSFCI by about 3 percentage points on average, and by more than 2 percentage points when the 1975-1982 period is excluded.

Given that the monetary authorities have not done much to tighten monetary policy and financial conditions, it should not be surprising that those areas of the economy that might be affected by greater stringency have, as yet, shown little evidence of any impact. For example, as shown in Table 4, housing starts, motor vehicle sales, consumer confidence, and the equity market are all close to their business cycle peaks.

Table 2: Benchmarking Fed Tightening: Real Funds Rate, Trough to Subsequent Peak (a)

Trough to Peak Dates	Trough Rate	Subsequent Peak	Increase (bp)
1956:Q3 - 1957:Q4	-1.07	0.52	159
1958:Q2 - 1959:Q4	-1.19	3.26	445
1961:Q2 - 1969:Q4	0.61	3.75	314
1971:Q1 - 1973:Q3	-1.22	4.48	570
1975:Q1 - 1980:Q1	-4.72	6.03	1075
1980:Q3 - 1981:Q3	0.77	8.29	752
1982:Q4 - 1984:Q3	4.06	7.67	361
1987:Q1 - 1989:Q2	3.52	5.69	217
1993:Q4 - 1995:Q2	0.57	3.77	320
Average			468
Excl 1975-1981 period (b)			341
Current episode:			
1999:Q2 - Present	3.29	3.92	63
Market expectation	3.29	5.15	186

(a) Federal funds rate less year-ago percent change in the GDP chain-weight price deflator.

(b) High-inflation cycles affected by monetary tightening.

Source: Federal Reserve Board.

Table 3: Benchmarking Fed Tightening: GSFCI, Trough to Subsequent Peak

Trough to Peak Dates	Trough GSFCI	Subsequent Peak	Increase (bp)
1961:Q1 - 1962:Q2	97.26	98.74	148
1968:Q4 - 1970:Q2	95.91	99.19	328
1972:Q1 - 1973:Q1	96.32	97.62	130
1975:Q2 - 1976:Q3	94.35	98.31	396
1977:Q2 - 1978:Q4	97.48	99.77	229
1980:Q3 - 1982:Q2	98.94	106.65	771
1983:Q2 - 1984:Q3	103.98	107.53	355
1987:Q1 - 1987:Q4	101.01	102.43	142
1993:Q4 - 1994:Q4	97.68	99.79	211
Average			301
Excl 1975-1982 period (a)			219
Current episode:			
1999:Q1 - Present	96.31	97.21	90
Market expectation	96.31	97.51	120

(a) High-inflation cycles affected by monetary tightening.

Source: Federal Reserve Board.

Table 4: Economic Indicators of Monetary Restraint

Indicators	Peak Value (a)	Latest High	Current Value (a)	Percent Change
Housing Starts (thousands)	1773	2000 Feb	1718	-3.1
Motor Vehicle Sales (millions)	18.1	2000 Mar	18.1	0.0
S&P 500 Price Index (1941-1943=10)	1430.8	2000 Apr	1430.8	0.0
U of Michigan Cons Conf Index (1966=100)	110.1	2000 Mar	109.2	-0.8
Conference Bd Cons Conf Index (1985=100)	142.4	2000 Feb	138.3	-2.9
GS Real Td-Wtd Dollar Index (1990=100) (b)	117.8	1999 Nov	122.1	3.7

(a) Data refer to 3-month moving averages.

(b) Refers to trough.

Source: Department of Commerce. Standard and Poor's. University of Michigan. Conference Board. Federal Reserve.

Table 5: Hard to Achieve Soft Landings from Below*

Unemployment Rate Trough	Trough Rate	Point by Which Rate Had Risen 0.3% or More	Business Cycle Outcome	Recession Began
1948 Q2	3.70 %	1949 Q1	Recession	1948 Dec
1953 Q2	2.61	1953 Q4	Recession	1953 Aug
1957 Q1	3.96	1957 Q4	Recession	1957 Sep
1959 Q2	5.12	1959 Q4	Recession	1960 May
1969 Q1	3.39	1970 Q1	Recession	1970 Jan
1973 Q4	4.79	1974 Q1	Recession	1973 Dec
1979 Q2	5.71	1980 Q1	Recession	1980 Feb
1981 Q3	7.39	1981 Q4	Recession	1981 Aug
1989 Q1	5.21	1990 Q3	Recession	1990 Aug

*Episodes of 0.3% or greater rise in unemployment rate from business-cycle low point (based on quarterly average unemployment rates).

Source: Department of Labor. Our calculations.

What to Look For

Two issues will largely determine the magnitude of Fed tightening:

1. How much Fed officials need to slow growth.
2. How much help they get via higher bond yields and lower stock prices.

The first issue depends mainly upon whether the unemployment rate is already too low. This remains an open question. Some rise in compensation cost inflation was virtually inevitable given the uptick in headline inflation. Thus, it is difficult to discern from the compensation cost trends whether a too-tight labor market is also a culprit and whether compensation cost trends will stabilize on their own once the uptrend in headline inflation ends.

Despite this uncertainty, Fed officials must plan for the worst (while hoping for the best). That is because it historically has been very difficult to push up the unemployment rate significantly and avoid a hard landing. As shown in Table 5, whenever the monetary authorities have pushed up the unemployment rate by more than 0.2 percentage points on a quarterly average basis from the cycle low, the outcome has been recession. The lower the unemployment rate falls, the greater the risk that Fed officials will have to tighten monetary policy aggressively and that this will lead to a hard landing.

The second key issue is the degree of help Fed officials get from financial markets in restraining the pace of the U.S. economy. The risks to our interest rate forecast are clearly on the upside in light of our equity market strategists' view that the stock market will continue to advance and our expectation that the dollar will weaken over time. Should both occur, this would actually tend to ease financial conditions, all else equal, putting the burden even more squarely back on Fed officials.

With respect to the equity market, the historical record suggests that the stock market is generally quite insensitive to higher interest rates. What is anathema for equities is a rise in inflation. As long as Fed officials keep inflation bottled up, then the equity market should be well-supported. With respect to the dollar, the risks of higher inflation and the potential for a hard landing indicate the dollar should weaken over time. A rising current account deficit at a time that the gap between the performance of the U.S. economy and the rest of the world is likely to narrow also points in the same direction.

So why not get more negative about the interest rate outlook now? First, a lot of bad news about the Fed is priced into the market already. Second, the economic news is likely to soon turn more supportive, at least temporarily. Not only is the trend of domestic demand growth likely to slow as the weather-assisted strength of the first quarter unwinds, but also the inflation news is likely to improve. Although the underlying inflation trend is probably gently higher, the process should be a gradual one. In the past, whenever there has been a very bad reading on inflation such as the March consumer price index report, it almost always has been followed by a relatively good reading the following month.

However, if market participants were to take such news as evidence that the Fed tightening process is nearly complete, we would take the opposite view. After all, any resultant bond and stock market rally would ease financial conditions. It is unlikely to be so simple. A sustained slowdown is likely to require tighter financial market conditions.

Bill Dudley

Goldman Sachs Financial Conditions Index

	Latest Week*	Apr	Mar	Feb	Contribution to GSFCI Change 3 mo	6 mo	12 mo
GSFCI (index 1987-1995=100)	97.21	96.52	96.37	96.58	0.76	0.55	1.03
3-month LIBOR (%)	6.69	6.31	6.20	6.10	0.13	0.07	0.41
A-Rated Corporate Bond Yield (%)	8.50	8.07	8.07	8.06	0.16	0.19	0.33
Real GS Trade-Weighted $ (index 1990=100)	125.75	121.67	120.71	120.82	0.22	0.32	0.29
Market Cap**/GDP (%)	182.58	188.48	198.66	189.30	0.26	-0.03	0.00

* Ending Wednesday ** Wilshire 5000

Key U.S. Economic Data

	Latest Monthly Data '00 Apr	'00 Mar	'00 Feb	'00 Jan	6 Mo Trend	12 Mo Trend	Next Release
Nonfarm Payrolls (ch. thousands)	340	458	27	394	298	249	Jun 2
Unemployment Rate (%)	3.9	4.1	4.1	4.0	4.1	4.1	
Index of Hours Worked (% ch)	0.5	0.4	-0.1	0.6	3.7	3.1	
Average Hourly Earnings (% ch)	0.4	0.3	0.4	0.4	3.8	3.8	
Producer Price Finished Goods Index (% ch)	-0.3	1.0	1.0	0.1	4.1	3.9	Jun 9
Excluding food and energy	0.1	0.1	0.3	-0.2	0.8	1.3	
Consumer Price Index (% ch)	--	0.7	0.5	0.2	4.1	3.7	May 16
Excluding food and energy (% ch)	--	0.4	0.2	0.2	2.5	2.4	
Retail Sales (% ch)	-0.2	0.5	1.3	0.7	10.6	9.7	Jun 13
Excluding motor vehicles (% ch)	0.0	1.2	1.3	-0.1	10.6	9.4	
Industrial Production (% ch)	--	0.3	0.1	1.0	5.8	5.1	May 15
Manufacturing	--	0.4	0.1	0.8	6.6	5.7	
Capacity Utilization (%)	--	81.4	81.5	81.6	81.3	80.9	May 15
Manufacturing	--	80.6	80.6	80.8	80.5	80.1	
Housing Starts (annual rate, thousands)	--	1604	1807	1744	1704	1665	May 16
Single-family	--	1309	1307	1361	1351	1326	
Trade Balance (billions, monthly)	--	--	-29.2	-27.4	-26.0	-24.1	May 19
Merchandise	--	--	-36.0	-34.2	-32.8	-30.7	
Factory Orders (% ch)	--	2.2	0.0	-1.2	12.7	9.6	Jun 2
Durable Goods	--	3.5	-1.7	-1.9	13.4	9.1	May 26
Personal Income (% ch)	--	0.7	0.4	0.7	7.7	6.4	May 28
Wages and Salaries	--	0.7	0.3	0.9	7.1	6.8	
Purchasing Managers' Index (%)	54.9	55.8	56.9	56.3	56.3	55.9	Jun 1
Consumer Sentiment U Mich (Feb 66=100)	109.2	107.1	111.3	112.0	108.7	107.3	May 26
Conference Board (1985=100)	136.9	137.1	140.8	144.7	139.7	137.7	May 30

Note: Percentage changes are month to month for last four months, annualized for 6- and 12-month trends. 6- and 12-month figures for levels (e.g., unemployment rate) are averages over those periods.

U.S. Calendar

Focus for the Week Ahead

- The Federal Open Market Committee is likely to boost its federal funds rate target by 50 basis points, to 6½%, when it meets on Tuesday, May 16, and the Board of Governors will probably follow suit with a comparable increase in the discount rate, to 6%. The statement announcing these actions should retain the bias toward concern about rising inflation (May 16).
- April's CPI report should be fairly benign, with energy prices holding the overall index flat and the core index reverting to its mean increase of about 0.2% per month (May 16).
- We estimate that the U.S. trade deficit surpassed the $30-billion mark for the first time in March, as a strong domestic economy and rising oil prices boosted imports while exports weakened (May 19).

Economic Releases and Other Events

Date	Time	Indicator	Estimate GS	Estimate Consensus	Last Report
Mon May 15	9:15	Industrial Production (Apr)	+1.0%	+0.7%	+0.3%
	9:15	Capacity Utilization (Apr)	81.9%	81.8%	81.4%
Tue May 16	8:30	Consumer Price Index (Apr)	0.0%	+0.1%	+0.7%
		Excluding Food & Energy	+0.2%	+0.2%	+0.4%
	8:30	Housing Starts (Apr)	+4.0%	+2.84%	- 11.2%
Thu May 18	10:00	Philadelphia Fed Survey (May)	16.0%	13.7%	12.8%
	2:00	Federal Budget Balance (Apr)	$158.0 bn	$153.0bn	$113.5bn
Fri May 19	8:30	Trade Balance (Mar)	-$30.5 bn	-$29.5bn	-$29.2bn

- Homebuilders' Survey (Mon, May 15)
- FOMC Meeting (Tue, May 16)
- Kansas City Fed Survey (Wed, May 17 – 11:00)
- Treasury Announces 2-Year Note (Wed, May 17 – 2:30)
- March FOMC Minutes (Thu, May 18 – 2:00)

Interest Rates: Forecast vs. Forward Yields

	3 mo	6 mo	12 mo
LIBOR 3-month	7.1%	7.3%	7.8%
Forward	7.0	7.4	7.5
2-Year T-Note	6.8	6.9	7.1
Forward	6.9	6.8	6.9
10-Year T-Note	6.4	6.5	6.7
Forward	6.4	6.4	6.4

Key Numbers in the Business Outlook

	2000 Q1	2000 Q2E	2000 Q3E	1999	2000E
Real GDP	5.4%	3.7%	4.6%	4.1%	5.1%
Ind. Prod., Mfg.	6.1	6.5	7.6	4.2	6.4
CPI	4.0	3.7	2.3	2.2	3.2
After-Tax Profits*	5.7E	3.9	5.3	4.1	3.7
Unemployment	4.1	3.9	3.9	4.2	3[illegible]

* Excluding inventory profits; adjusted for depreciation distortions.

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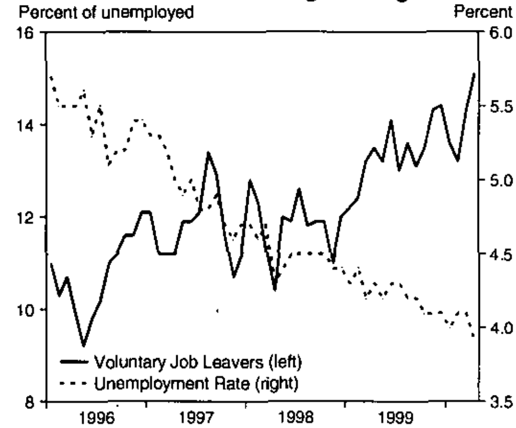
U.S. Economics Analyst

Time to Pay Back Weather's Growth Contribution

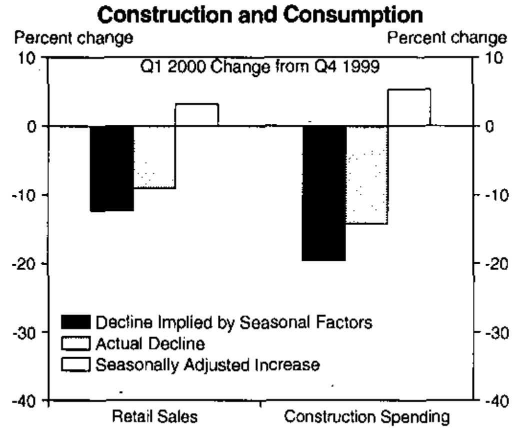
- We modified our interest rate forecast further on May 3. We now expect the federal funds rate to reach 7% by the end of the summer (versus 6¾% previously) and 7½% within 12 months (versus 7¼% previously), with 50 basis points of this increase likely to come on May 16.
- The stepped-up tightening is likely to occur in spite of signs that growth in consumer spending cooled in March and April. In our view, this is just a payback for the contribution of unusually warm and dry weather to first-quarter growth.
- The effect of weather appears to have been large, and its unwinding could create the impression of much slower growth. For example, we estimate that the extra spending and construction induced by good weather may have added 2¾ points to the 8% annualized surge in real domestic final sales in the first quarter. We expect this growth to drop into a 3%-3½% range this quarter.
- So far, the slower pace of retail sales is the main evidence that the payback is underway, although the construction job count fell 55,000 in April. In other respects; the labor market remains tight, with the unemployment rate now below 4%, hourly wages accelerating, and payrolls surging. Housing activity also remains robust. Data from U.S. factories underscore the strength of demand for goods, the inflation risks of slower deliveries, and the pressures on future output of rising backlogs. Consistent with these patterns, hours worked at U.S. factories rose sharply in April.
- In short, while we expect slower growth as the weather payback proceeds, much of this is still forecast rather than fact. Moreover, Fed officials are well aware of the potential for weather to distort economic activity and are therefore likely to discount any slowing that does occur. Market participants should do the same.

Labor Markets Growing Ever Tighter



Source: Department of Labor.

Warm Weather Lifts Construction and Consumption



Source: Department of Commerce.

Trade Recommendations

- We recommended closing short positions in September 2002 Eurodollar futures at the close on Wednesday, May 3, at 92.54.

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I. Weekly Wrap-Up

Resource Strains Increasing

Pressures on an already tight labor market intensified in April. The jobless rate fell to 3.9%, a new 30-year low, and the portion of this pool that had voluntarily left a previous job rose to a cycle high of 15.1%. Average hourly earnings rose 0.4%, pulling the year-to-year trend up to 3.8% despite a downward revision for March. Meanwhile, nonfarm payrolls rose a sturdy 340,000 in April, and 62,000 jobs created in prior months were uncovered on revision. Although the April tally included 73,000 temporary census workers, it also showed a 55,000 drop in construction jobs created earlier during unusually warm weather.

Goods production gains should remain solid for some time, even if consumer spending cools in coming months. Orders for U.S. factory products were broadly strong in March, rising 2.2% overall. Large gains were recorded for consumer durables, capital equipment, and nondurable items. Importantly, the backlog of unfilled orders continues to expand rapidly, expanding 1.1% overall and 1.8% when the volatile defense and aircraft sectors are excluded. The latter "core" unfilled orders measure has soared over 16% annualized since last June.

It appears that strains on factory production resources are intensifying as a function of buoyant demand. Although purchasing managers reported a slight moderation in manufacturing growth during April (the composite NAPM index dipped to 54.9%), the timeliness of supplier deliveries deteriorated further (vendor performance rose to 55.6%). Moreover, factory stockpiles are exceptionally lean. Inventories of work-in-process and finished goods have risen just 2.2% in the latest 12 months, while shipments of manufactured products last quarter were up more than 8% year-to-year. With backlogs exploding, these conditions suggest the potential for a further industrial output acceleration. In fact, hours worked at U.S. factories jumped 1.1% in April.

Housing demand remains resilient in the face of higher interest rates. New single-family home sales rose 4.5% in March, to a level within 2% of the all-time peak hit in November 1998. Loan applications for home purchase have escalated since the turn of the year, indicating that total home sales could match or exceed prior cyclical heights in the near term.

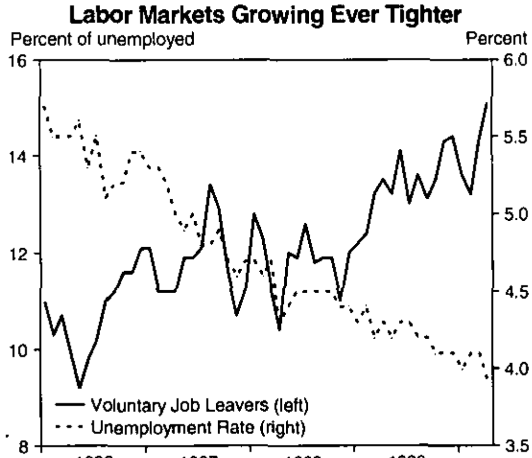
Labor costs have not been a problem for business firms thus far, but this could soon change. The Fed's latest "beige book" was distinctly more cautionary about wage growth, citing "more frequent reports of intensifying wage pressures" due to labor shortages. Sturdy productivity growth (2.4% annualized last quarter in the nonfarm sector, 3.7% year-to-year) has kept unit labor costs under wraps (up only 0.7% from a year ago). Sustaining this favorable performance, however, could prove problematic if Federal Reserve efforts to retard economic growth prove effective.

Expect a Faster Pace of Fed Tightening

We have changed our forecast for short-term interest rates to reflect a faster, cumulatively larger degree of Fed tightening over the next 12 months. The federal funds rate target likely will be raised by 50 basis points to 6½% on May 16, to 7% by late summer, and to 7½% within a year (see table on page 3).

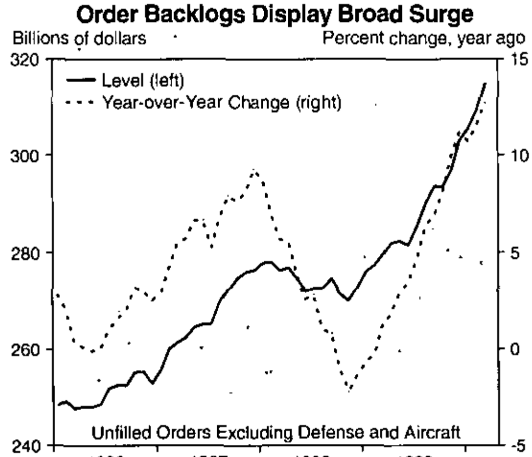
With underlying price and labor cost trends now firming more demonstrably, it has become more

Labor Markets Growing Ever Tighter



Source: Department of Labor.

Order Backlogs Display Broad Surge



Source: Department of Commerce.

urgent for Fed officials to prevent domestic demand from continuing to outstrip potential output growth. This means that financial conditions need to be tightened substantially and soon. As long as the bond and equity markets remain resilient—in part due to confidence that the Fed will be successful in blocking a permanent inflation rise—the burden on monetary policy to supply financial restraint will be heavy.

The fact that financial markets already substantially discount a half-percent rate increase this month makes it easier for the FOMC to hike by that much. Additionally, those policy makers who have been warning about inflationary consequences deriving from extremely tight labor supplies probably will be less willing to accept a slow pace of tightening.

More Upside Surprises on the Fiscal Surplus

Results from the crucial April tax period point to yet another substantial favorable surprise in the federal budget balance. It now appears that the fiscal 2000 surplus could reach or exceed $225 billion, compared to official forecasts of $167-$176 billion just last January. Individual final settlements on 1999 tax liabilities proved to be very large, no doubt in part reflecting remittances tied to capital gains. Moreover, strength in quarterly corporate tax payments during March suggests room for greater optimism regarding that revenue source.

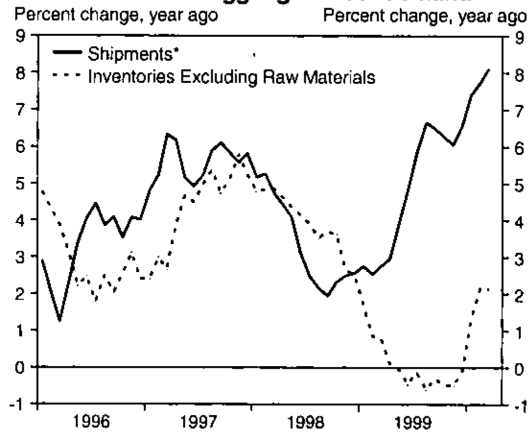
The government's stronger financial position will permit lawmakers to pad discretionary spending accounts, and possibly increase tax cuts, when fiscal 2001 plans are finalized this summer. This underscores the probability that the fiscal impulse on economic activity will turn gradually more positive.

Market Too Confident Fed Will Finish Job This Year

Note: The following comments reflect trading views and may differ from our longer-term interest rate forecast.

We recommended closing short positions in September 2002 Eurodollar futures at the close on Wednesday, May 3, at 92.54. Although some additional rise in forward money-market interest rates would be justified, in light of our latest Fed policy forecasts, the market has already moved a long way in a short time. Also, the expected softening in demand data to correct for the inflating effects from favorable weather last quarter may foster more optimism in markets that current interest rate levels are undermining the expansion's momentum. We would stay close to shore for now.

Factories Struggling to Meet Demand



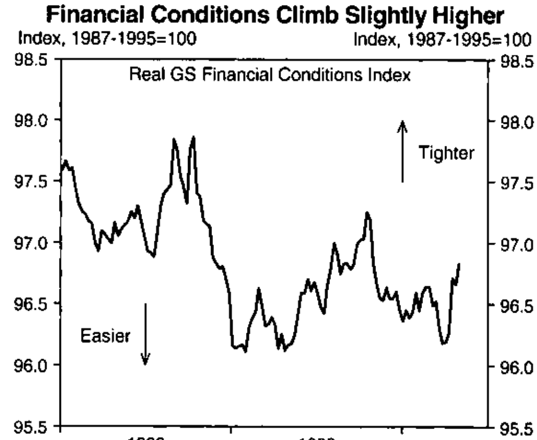
* 3-month moving average.
Source: Department of Commerce.

Revised Interest Rate Forecast
(percent)

	2000			2001			
	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Federal Funds	6.75	7.00	7.00	7.25	7.50	7.50	7.50
3-Month LIBOR	7.10	7.30	7.40	7.55	7.75	7.75	7.75
2-Year T-Note	6.75	6.90	6.90	7.10	7.30	7.25	7.20
10-Year T-Note	6.40	6.50	6.60	6.70	6.80	6.70	6.70
30-Year T-Bond	6.10	6.20	6.25	6.35	6.40	6.30	6.25

*Rates are as of quarter end.

Financial Conditions Climb Slightly Higher

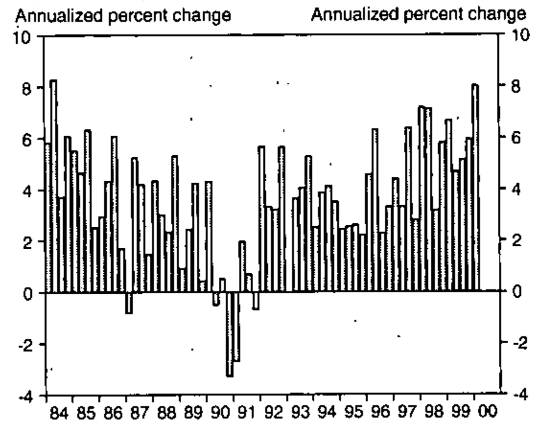


Note: See page 7 for additional detail.
Source: Goldman Sachs.

II. Time to Pay Back Weather's Growth Contribution

Unusually warm and dry weather has helped boost U.S. economic activity in recent months. This is most apparent in the behavior of retail sales and construction outlays, which have risen sharply since October on a seasonally adjusted basis. Coupled with strong underlying fundamentals, favorable weather helped propel growth in real domestic final sales to a 8% annual rate—the largest quarterly advance in more than 15 years, as shown in the chart.

Real Domestic Final Sales Posts Its Fastest Growth In 15 Years



Source: Department of Commerce.

Weather's effects should soon wear off, resulting in a kinder and gentler set of data for financial markets to digest. After all, the main effect of unusual weather is to accelerate or postpone activity that would have occurred in any event. As the reversal occurs, we expect real growth in private domestic final sales to slow sharply, into a 3%-3½% range this quarter.

Some evidence of slowing has already surfaced in the retail reports for March and April. For example, the Goldman Sachs Retail Index indicated that year-to-year sales gains at stores open one year or more averaged 4.5% in these two months, down from 5.6% in the winter. However, construction outlays rose again in March, and vehicle sales rebounded in April.

Because weather's effect is mainly to shuffle activity from one time to another, market participants should not read too much into any slowdown that does occur during the second quarter. Just as the first quarter's surge in domestic spending overstates the underlying trend, so will the second quarter's growth understate this trend. Federal Reserve officials are well aware of the potential for unusual weather patterns to distort the data, and they are therefore not likely to let signs of slower growth keep them from tightening monetary policy.

Warm Winter Weather Can Have a Big Effect on Economic Activity

During the winter, unusually warm and dry weather can boost economic activity in two ways. First, it allows more progress on construction projects at a time of the year when such activity is normally slow. Second, it encourages consumers to get out and shop at a time when they are also typically less active. Although warm weather also reduces heating bills, the net effect on economic activity is usually positive.

Moreover, it can be huge. The reason is that activity in both sectors tends to drop sharply in the winter, which creates plenty of upside potential if weather permits. For example, from 1995 through 1999, the (seasonally unadjusted) first-quarter level of outlays on construction projects was consistently 16% to 19% below the preceding fourth-quarter level, as shown in the chart on page 5 (top left). Likewise, retail sales fell 11% to 15% in each of these years. These figures are especially impressive in view of the fact that they are not annualized.

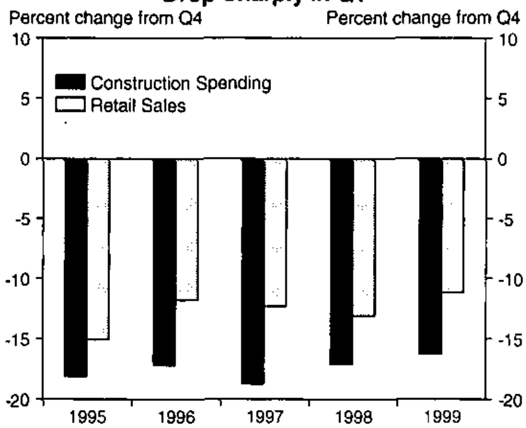
Given regularities of this size, it should be clear why economists rely on seasonally adjusted data to isolate the "true" (*i.e.*, other than seasonal) change from one month or quarter to the next. For construction outlays and retail sales, the seasonal adjustment factors for the first quarter of 2000 anticipated declines of 19.5% and 12.3%, respectively, relative to the underlying trend.

Weather Was Especially Favorable This Year

This past winter, weather conditions were especially conducive to smaller-than-normal declines, which would translate into higher-than-trend growth on a seasonally adjusted basis. According to the National Oceanic and Atmospheric Administration, the period from December 1999 to February 2000 was the warmest such three-month interval in the 106 years for which records exist. The pattern continued in March, which was the fifth warmest on record.

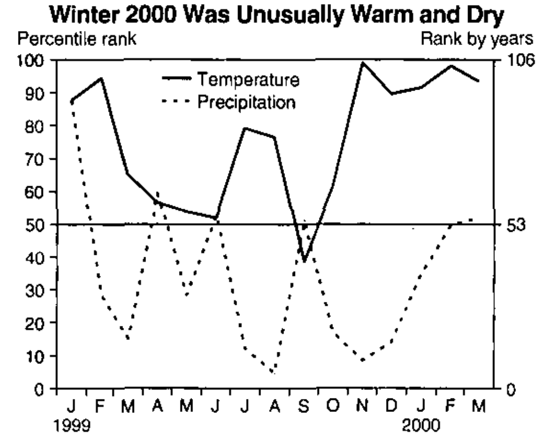
In an era of global warming, one might think that an unusually warm winter would make little difference to growth given that weather's growth effect depends more on *changes* in weather patterns relative to surrounding periods than on comparisons to longer-term norms. By this logic, an unusually warm winter following an unusually warm autumn should have no material effect on growth during the winter.

Construction and Retail Sales Drop Sharply in Q1



Source: Department of Commerce.

Winter 2000 Was Unusually Warm and Dry



Note: Each month is ranked according to how hot or wet it was relative to earlier such months dating back to 1895.
Source: National Oceanic and Atmospheric Administration.

However, two considerations suggest otherwise in the current circumstances. First, even if the weather was equally warm relative to its norms throughout the year, the stimulus to growth would most likely occur in the winter, when the low level of economic activity leaves the most room for exceeding its norm. Unless and until the seasonal patterns change, this means that the scope for a weather-induced boost to growth is largest in the winter, especially when the economy is operating with unusually thin margins of excess resources, as it is currently. So far, seasonal factors for construction spending and retail sales have been remarkably stable from one year to the next, implying a minimal impact from global warming.

Second, the weather did in fact turn more favorable just before the winter, as shown in the chart above (right panel). From March through October 1999, comparisons with prior years were not nearly as extreme as they have been since. Moreover, as also shown in the chart, the conditions in November, December, and January were unusually dry, a factor that would further encourage builders in particular to maintain a high rate of activity.

In fact, the timing of this shift in the weather was especially conducive to strong first-quarter growth for two reasons. First, November is the month when housing starts and construction outlays usually begin to fall. Although both indicators did move somewhat lower, the declines were far smaller than normal. Thus, on a seasonally adjusted basis, housing starts rose 10.5% between October and February despite upward pressures on interest rates, while monthly gains in construction spending averaged 1.8%, or 23.6% at a compound annual rate. And, although the big seasonal decline in retail sales does not occur until January, seasonally adjusted increases in this gauge of consumer spending were also quite large over the entire four-month period—1.2% per month and 15.3% at a compound annual rate. In both cases, these growth rates far exceeded earlier trends.

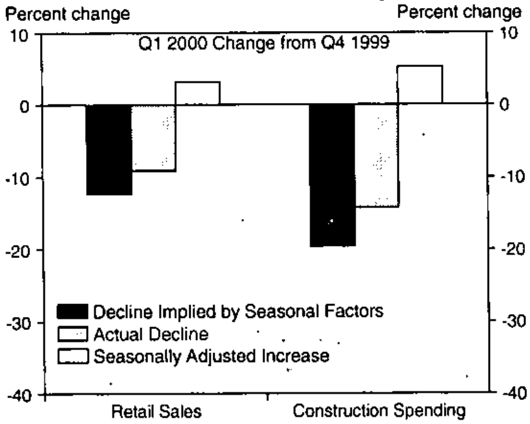
The second reason why the timing was so fortuitous is that quarter-to-quarter growth rates for the first quarter depend on monthly changes from November onward. This is because a large rise in November, if it is not subsequently offset, will add only two-thirds as much to the fourth-quarter average as it does to the first-quarter average, thereby pushing the first-quarter growth rate up.[1] Thus, a turn toward favorable weather that occurs in November will have an even bigger effect than one that occurs in January, presuming that both last throughout the first quarter. This is essentially what happened in late 1999 and early 2000.

The effects on the first quarter's growth rates in these sectors are shown in the chart on page 6 (top left). Construction spending fell 14.3%, and retail sales fell 9.1%. In both cases, the declines were only about three-quarters as steep as the norm, resulting in significant gains when adjusted for the usual seasonal decline. And if growth rates in the second half of 1999 are taken as a standard for the underlying trend, then the contribution to growth in real domestic final sales from the acceleration in real consumer spending and construction activity during the first quarter was about 2¾ percentage points.

The effect on output would have been smaller, given that some of the added spending would have depleted

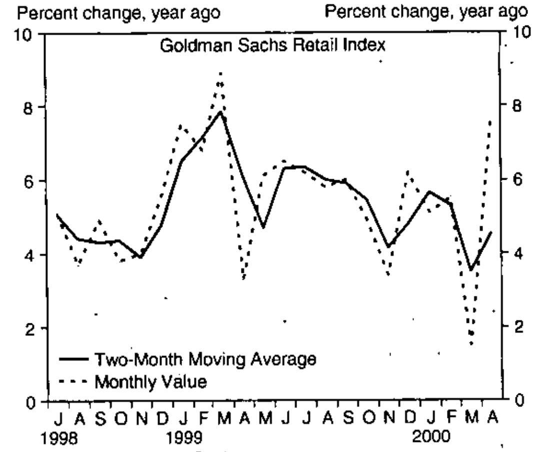
[1] Of course, the months that follow are more important. Roughly speaking, the relative importance of individual monthly growth rates in the quarterly growth rate are as follows: one-ninth for November and March, two-ninths for December and February, and three-ninths (one-third) for January.

Warm Weather Lifts Construction and Consumption



Source: Department of Commerce.

Retail Sales Trend Slows



Source: Goldman Sachs.

inventories. Note in this regard that a reduced rate of stockpiling sliced about 1½ points from last quarter's annualized growth rate in real GDP. Even so the contribution was probably substantial.

Time for a Payback

If this analysis is close to the mark, then we should soon see a sizable downshift in consumer spending and construction. For example, if the "paybacks" for the extra activity that occurred in the first quarter all occurred in the second quarter, then the growth rate in real consumer expenditures would slow to about 2½% from the sizzling 8.3% first-quarter advance. Real outlays on structures would fall at more than a 9% rate after surging at a 12.0% rate. Corrections of this magnitude would pull growth in real domestic final sales down to about a 2% annual rate, restoring the 5½% average of the second half of 1999.

The assumptions underlying our forecast are not quite so severe, in part because we believe that some of the payback will stretch out over a longer period. For example, progress should continue on construction projects that were started early. Thus, persistent strength in construction outlays should not be too surprising. We also recognize that some of the strength in the first quarter did not borrow from the second quarter. In particular, the 23.7% annualized surge in real outlays for business equipment that occurred in the first quarter followed an unusually small 4.0% fourth-quarter increase that was probably held down by Y2K worries. In this area, growth should revert to the 10%-15% annualized growth range of the past few years rather than slowing more substantially. That said, we do expect significant corrections in consumer spending and construction activity, which should drag growth in real domestic final sales down to about a 3¼% annual rate.

Are we on track for a payback this large? Except for a rebound in auto sales, the retail reports do suggest that a substantial slowing is underway. Although the Goldman Sachs Retail Index of sales at stores open one year or more was a robust 7.6% in April, this mainly reflected the late timing of Easter. The March/April average was 4.5%, about one percentage point below the preceding trend, as shown in the chart above. This implies a substantial slowing on a month-to-month basis, especially when the March surge in consumer prices is factored in. Consistent with this pattern, real consumer spending rose only 0.1% in March, setting a low platform for this quarter's growth.

Evidence in the construction sector is more mixed. Outlays remained strong in March, rising 1.4% from an already elevated level. However, housing starts have moved erratically lower in recent months, and the 55,000 drop in construction employment reported for April suggests that the correction in outlays on projects already underway may not be far behind.

As evidence of slower growth in domestic spending accumulates, financial participants should be wary of reading too much into it. Just as the first-quarter surge in demand overstates the underlying trend in growth, so will developments in the second quarter understate it. In particular, given the role of weather (and other factors) in pushing growth up in the first quarter, we are confident that Federal Reserve officials will regard any slowing as suspect. Thus, we do not expect softer reports on retail sales and construction activity to deter Fed officials from increasing interest rates in the months ahead.

Ed McKelvey

Goldman Sachs Financial Conditions Index

	Latest Week*	Apr	Mar	Feb	Contribution to GSFCI Change 3 mo	6 mo	12 mo
GSFCI (index 1987-1995=100)	96.84	96.52	96.37	96.58	0.25	0.01	0.67
3-month LIBOR (%)	6.52	6.31	6.20	6.10	0.08	-0.02	0.35
A-Rated Corporate Bond Yield (%)	8.24	8.07	8.07	8.06	-0.02	-0.02	0.26
Real GS Trade-Weighted $ (index 1990=100)	124.74	121.67	120.71	120.82	0.19	0.31	0.21
Market Cap**/GDP (%)	187.33	188.48	198.66	189.30	0.00	-0.26	-0.16

* Ending Wednesday ** Wilshire 5000

Key U.S. Economic Data

	Latest Monthly Data '00 Apr	'00 Mar	'00 Feb	'00 Jan	6 Mo Trend	12 Mo Trend	Next Release
Nonfarm Payrolls (ch. thousands)	340	458	27	394	298	249	Jun 2
Unemployment Rate (%)	3.9	4.1	4.1	4.0	4.1	4.1	
Index of Hours Worked (% ch)	0.5	0.4	-0.1	0.6	3.7	3.1	
Average Hourly Earnings (% ch)	0.4	0.3	0.4	0.4	3.8	3.8	
Producer Price Finished Goods Index (% ch)	--	1.0	1.0	0.0	4.7	4.6	May 12
Excluding food and energy	--	0.1	0.3	-0.2	1.0	1.2	
Consumer Price Index (% ch)	--	0.7	0.5	0.2	4.1	3.7	May 16
Excluding food and energy (% ch)	--	0.4	0.2	0.2	2.5	2.4	
Retail Sales (% ch)	--	0.2	1.3	0.7	11.3	10.3	May 11
Excluding motor vehicles (% ch)	--	0.9	1.3	-0.1	11.9	10.1	
Industrial Production (% ch)	--	0.3	0.1	1.0	5.8	5.1	May 16
Manufacturing	--	0.4	0.1	0.8	6.6	5.7	
Capacity Utilization (%)	--	81.4	81.5	81.6	81.3	80.9	May 16
Manufacturing	--	80.6	80.6	80.8	80.5	80.1	
Housing Starts (annual rate, thousands)	--	1604	1807	1744	1704	1665	May 16
Single-family	--	1309	1307	1361	1351	1326	
Trade Balance (billions, monthly)	--	--	-29.2	-27.4	-26.0	-24.1	May 19
Merchandise	--	--	-36.0	-34.2	-32.8	-30.7	
Factory Orders (% ch)	--	2.2	0.0	-1.2	12.7	9.6	Jun 2
Durable Goods	--	3.5	-1.7	-1.9	13.4	9.1	May 26
Personal Income (% ch)	--	0.7	0.4	0.7	7.7	6.4	May 28
Wages and Salaries	--	0.7	0.3	0.9	7.1	6.8	
Purchasing Managers' Index (%)	54.9	55.8	56.9	56.3	56.3	55.9	Jun 1
Consumer Sentiment U Mich (Feb 66=100)	109.2	107.1	111.3	112.0	108.7	107.3	May 26
Conference Board (1985=100)	136.9	137.1	140.8	144.7	139.7	137.7	May 30

Note: Percentage changes are month to month for last four months, annualized for 6- and 12-month trends. 6- and 12-month figures for levels (e.g., unemployment rate) are averages over those periods.

U.S. Calendar

Focus for the Week Ahead

- Most of the action in April's producer price index should be in food and energy, as other prices appear to have maintained the 0.1%-per-month trend of the past year. Although energy quotes fell sharply (about 4.7% by our estimate), prices of food rose significantly (0.8%). The net effect should be a modest reversal of last month's large increase in the overall index (May 12).
- Although unit sales of motor vehicles rebounded in April, sales of other items were sluggish after correcting for the late timing of Easter. Thus, we estimate that total sales were roughly unchanged with the "core" down measurably (May 11).

Economic Releases and Other Events

				Estimate		
Date		Time	Indicator	GS	Consensus	Last Report
Thu	May 11	8:30	Retail Sales (Apr)	-0.1%	+0.4%	+0.4%
			Excluding Autos	-0.4%	+0.4%	+1.4%
Fri	May 12	8:30	Producer Price Index (Apr)	-0.3%	-0.2%	+1.0%
			Excluding Food & Energy	+0.1%	+0.1%	+0.1%
Fri	May 12	8:30	Business Inventories (Mar)	+0.3%	+0.3%	+0.5%

- Richmond Fed Survey (Tue, May 9 – 10:00)
- Treasury 5-Year Note Auction (Tue, May 9)
- Atlanta Fed Survey (Wed, May 10 – 10:00)
- Treasury 10-Year Note Auction (Wed, May 10)
- Import & Export Prices (Thu, May 11 – 8:30)
- Consumer Sentiment – Preliminary (Fri, May 12 – 10:00)

Interest Rates: Forecast vs. Forward Yields

	3 mo	6 mo	12 mo
LIBOR 3-month	7.1%	7.3%	7.8%
Forward	7.0	7.3	7.5
2-Year T-Note	6.8	6.9	7.1
Forward	6.9	6.9	7.0
10-Year T-Note	6.4	6.5	6.7
Forward	6.5	6.5	6.6

Key Numbers in the Business Outlook

	2000				
	Q1	Q2E	Q3E	1999	2000E
Real GDP	5.4%	3.7%	4.6%	4.1%	5.1%
Ind. Prod., Mfg.	6.1	6.5	7.6	4.2	6.4
CPI	4.0	3.7	2.3	2.2	3.2
After-Tax Profits*	5.7E	3.9	5.3	4.1	3.7
Unemployment	4.1	3.9	3.9	4.2	3.9

* Excluding inventory profits; adjusted for depreciation distortions.

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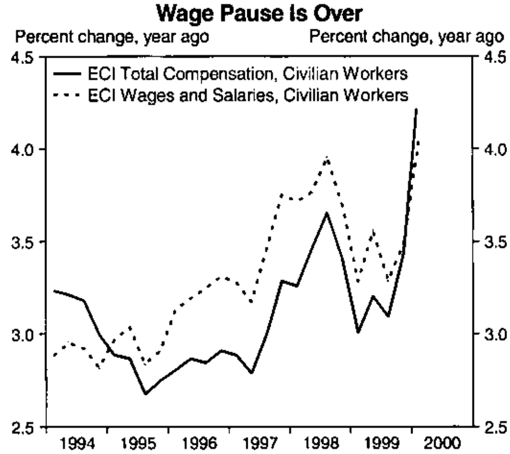
U.S. Economics Analyst

Our Views Have Changed (Slightly)

Monetary Policy in an Investment Boom

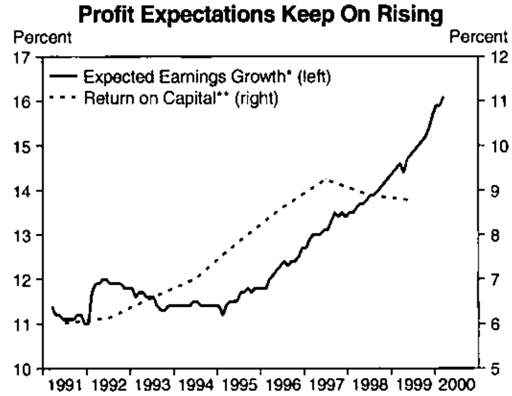
- We now believe that the Fed will raise its federal funds rate target to at least 6½% by midyear and at least 6¾% by late summer. Much tighter financial conditions are needed, and the Fed will need to work quite hard to deliver them.
- The first-quarter employment cost index confirms that the U.S. labor market works much like it always has. Low unemployment and higher headline inflation eventually feed into wages. The report raises the question whether the unemployment rate is already too low for inflation to remain stable.
- Final domestic demand in the first quarter surged at the fastest rate of the decade, though real GDP growth was held back by slower inventory accumulation and more trade drag. The rise in the GDP price indexes also exceeded expectations.
- In an investment boom, monetary policy should push up real interest rates and let the inflation rate fall. If the boom is due to a "new era," then the equilibrium real interest rate will rise. If it is due to an investment bubble, then monetary policy should be restrictive. Either way, real interest rates should be above the level that would be required to keep inflation stable.
- The resulting tendency for inflation to fall is welcome, again regardless of whether it is a new era or not. If it is a new era with a higher growth trend, the optimal inflation rate will be lower. If it is an investment bubble, falling inflation will go some way toward restraining it.
- But U.S. inflation has been rising rather than falling in the last year, regardless of which inflation measure is used. Thus, monetary policy has clearly been too accommodative. Our analysis implies a need for a further, significant tightening of monetary policy over the next year.

Wage Pause Is Over



Source: Department of Labor.

Profit Expectations Keep On Rising



* Long-term earnings growth expected by S&P 500 equity analysts.
** Adj. corporate profits divided by corporate capital stock.
Source: I/B/E/S. Department of Commerce.

Trade Recommendations

- Stay short the September '02 Eurodollar futures contract, maintaining a target of 92.25, but move stop to a close above 92.82 from 93.15 previously.

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April 28, 2000

I. Weekly Wrap-Up

Robust Demand and Rising Compensation Inflation...

Financial markets were surprised by the exceedingly robust gains in compensation costs and in domestic demand for the first quarter. The data indicate that Fed officials will need to tighten financial conditions more quickly and by a greater amount to prevent the economy from overheating.

The biggest surprise was the 1.4% rise in total compensation costs for the first quarter, which pushed the year-over-year rate of gain up to 4.3% from 3.4% a quarter earlier. Although the sharp rise could be partially explained away as a product of an outsized gain in benefits (up 2.0% in the quarter, not annualized) and the fact that a modest 0.5% rise from a year ago was being discarded, even after these adjustments the compensation cost figures were disturbing. They suggest that the unemployment rate may already be below a level consistent with stable compensation and price inflation. Most noteworthy in this regard was the fact that wages and salaries for private workers rose by 1.2%, and that these gains were broadly distributed and not concentrated within the volatile finance, insurance, and real estate component.

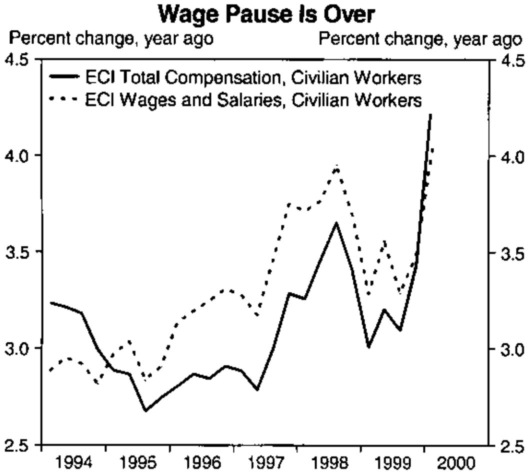
The GDP report was considerably stronger than the 5.4% annualized gain in first-quarter real output suggests. The overall gain was held down by significant drag from a lesser pace of inventory accumulation and from the trade sector. Real domestic final sales advanced at an 8.0% annual rate, spurred by huge gains in consumer spending (+8.3%) and business fixed investment (+21.2%). If this weren't frightening enough, the report also revealed greater price pressures than anticipated, with the GDP deflator rising by 2.7% and the deflator for domestic purchases climbing by 3.2% at an annual rate.

Other news also painted a picture of an economy largely unaffected by the Fed tightening that has occurred to date. For example, consumer confidence remained at an extremely high level despite the recent volatility of the equity market, existing home sales for March climbed by 1.5%, and durable goods orders climbed sharply in March (+2.6%), with unfilled order backlogs rising by 1.1%. However, real personal consumption expenditures only rose by 0.1% in March, which means that the jumping off point into the second quarter is not very high. Combined with the absence of unusually good weather, this suggests consumer spending growth should slow sharply in the second quarter.

...Indicate Need for Tighter Financial Market Conditions

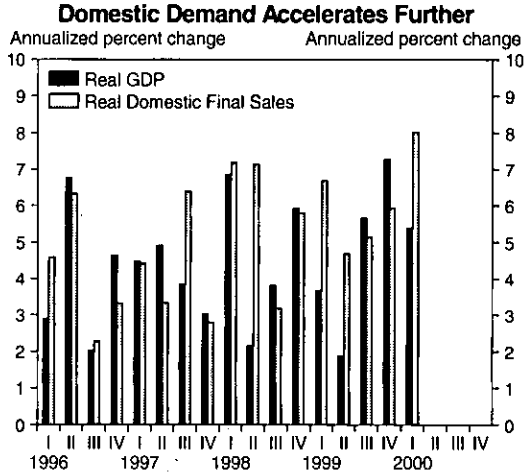
The economic news indicates that the economy is stronger than anticipated and that the unemployment rate may already be lower than what is consistent with a stable inflation rate. This means that Fed officials will probably have to engineer a bigger slowdown in the growth pace than anticipated earlier. This is likely to require a significant amount of monetary policy tightening. After all, despite the 125 basis points of tightening to date, the Goldman Sachs Financial Conditions Index is only marginally tighter than it was last June before the Fed began this series of tightening steps. Because the urgency for a tighter monetary policy has clearly increased, we now believe the pace will be faster than before with the FOMC likely to push up its target for the federal

Wage Pause Is Over



Source: Department of Labor.

Domestic Demand Accelerates Further



Source: Department of Commerce.

funds to at least 6½% by midyear and to at least 6¾% by late summer.

Speculation about whether Fed officials will tighten by 50 basis points at the May 16 meeting has increased, which is understandable given the economic news. If the meeting were held right now, the Committee probably would do a 50-basis-point move, but a lot could happen in the 2½ weeks until the May 16 meeting date that could change the situation. Keeping an open mind on this issue is probably the right posture for now. The payroll employment report and the commentary of Fed officials over the next week may clarify the outlook.

Tax Receipts Surge Pushing Up Budget Surplus

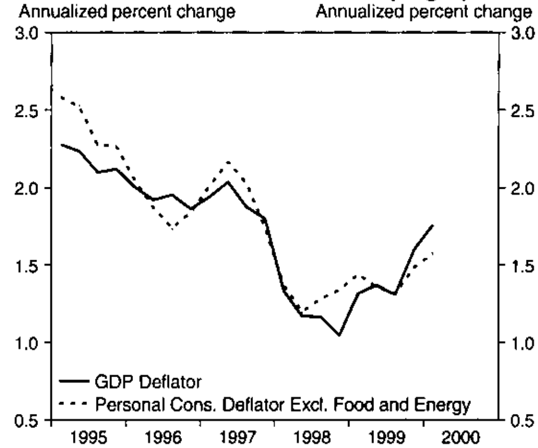
Adjusting for the late tax date this year (April 17), tax receipts are running considerably ahead of the pace of a year earlier. This reinforces our view that the budget surplus for the current fiscal year should surpass $200 billion. Ironically, this fiscal surfeit could actually make the Fed's task more difficult. That is because a bigger surplus is likely to erode the fiscal discipline that helped to generate the rising surplus in the first place. After all, while there is support to preserve the Social Security surplus, there is no consensus that the government should continue to run surpluses excluding the Social Security accounts.

Stay Short, Fed Likely to Tighten by More than Expected

Note: The following comments reflect trading views and may differ from our longer-term interest rate forecast.

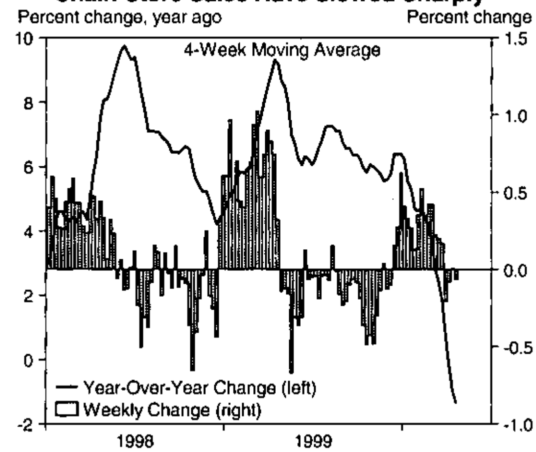
We continue to be bearish on the fixed income market. Investors are overly optimistic about how easy it will be for Fed officials to temper the pace of economic activity given the absence of any significant tightening of financial conditions. Two wild cards complicate the picture. First, domestic demand should slow sharply in the second quarter because the first-quarter figures were boosted by unusually warm weather. Investors could misperceive the slowdown, which is already visible from the recent weakening of chain-store sales, as a result of the Fed's actions. Second, the tightening of financial conditions could occur via a weaker equity market. However, the ability of the equity market to shrug off this week's data suggests that the bulk of the adjustment is likely to occur via higher interest rates. We would remain short the September '02 Eurodollar futures contract, maintaining our target of 92.25, but moving our stop down to a close above 92.82, from 93.15 earlier.

Core Inflation Measures Creeping Up



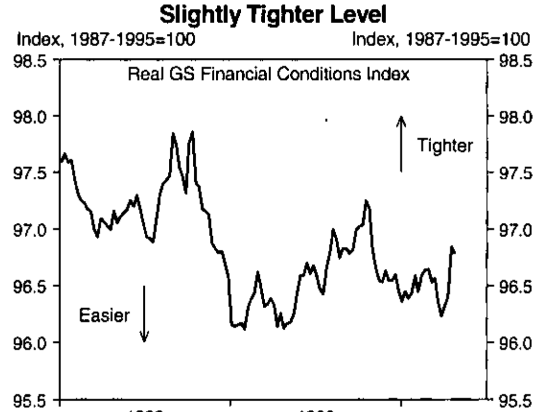
Source: Department of Commerce.

Chain-Store Sales Have Slowed Sharply



Source: Mitsubishi Bank/Wertheim Schroder.

Financial Conditions Stabilize At Slightly Tighter Level



Note: See page 7 for additional detail.
Source: Goldman Sachs.

II. Monetary Policy in an Investment Boom

In an investment boom, monetary policy should push up real interest rates and let the inflation rate fall. If the boom is due to a "new era," then the equilibrium real interest rate will rise. If it is due to an investment bubble, then monetary policy should be restrictive. Either way, real interest rates should be above the level that would be required to keep inflation stable.

The resulting tendency for inflation to fall is welcome, again regardless of whether it is a new era or not. If it is a new era,with a higher growth trend, the optimal inflation rate will be lower. If it is an investment bubble, falling inflation will go some way toward restraining it.

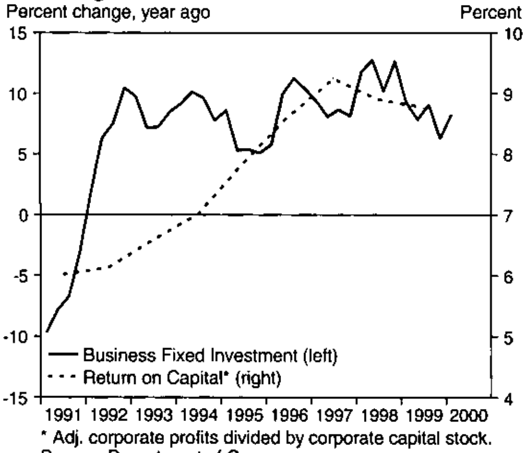
But U.S. inflation has been rising rather than falling in the last year, regardless of which inflation measure is used. Thus, monetary policy has clearly been too accommodative. Our analysis implies a need for a further, significant tightening of monetary policy over the next year.

Virtuous Cycle or Investment Bubble?

Rising inflation has preceded the end of virtually every business expansion since World War II. Moreover, there is a consensus among economists that monetary policy affects only the price level but not real activity in the long run. The conventional view is therefore that the Fed should make stable and low inflation its primary or even only monetary policy target.

But there are signs that the current expansion is different. Despite some firming in the recent inflation data, core inflation on a year-over-year basis remains near a cycle low, more than nine years into the expansion. To a large extent, this is because real business investment has grown more quickly than in any previous postwar expansion, thus boosting productivity growth and largely preventing the emergence of bottlenecks.

High Returns Fuel Investment Boom



* Adj. corporate profits divided by corporate capital stock.
Source: Department of Commerce.

In our February 2000 *Pocket Chartroom*, we therefore outlined an alternative "investment boom" model of the current expansion. In this model, structural changes make the economy less cyclical and increase the return to investment (see the chart below on the left). This leads to more capital accumulation and stronger productivity growth, dampening inflationary pressures and keeping Fed officials mainly on the sidelines. These developments then extend the expansion, triggering further gains in investment outlays.

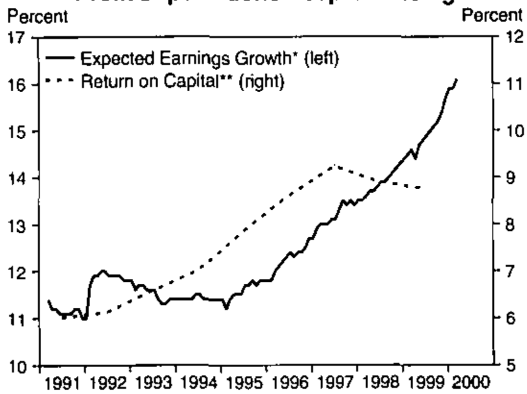
This investment boom contains elements of a virtuous cycle that is held together by the expectation of high returns on capital in the future. As long as actual returns match or exceed expected returns, the virtuous cycle continues.

There are two risks to the virtuous cycle. First, strong investment is the very mechanism that drives down the return on capital toward the cost of capital. Eventually, rapid capacity expansion tends to put pressure on profit margins. Second, the initial increase in returns on capital can make investors excessively optimistic that returns will continue to grow quickly in the future. If these expectations are unrealistic—and especially if capacity expansion is already putting pressure on returns—the virtuous cycle can turn into an investment bubble.

Are we in such an investment bubble? Probably not yet, but it is hard to be sure. It seems clear that the good economic performance of the 1990s was mostly due to improved fundamentals—deregulation, better fiscal and monetary policy, better inventory management, faster technological progress, and the like. But it is much less clear whether the *further* outsized investment gains that we are currently seeing are still due to these improvements or whether they reflect an emerging investment bubble.

There are certainly some worrying signs. Perhaps most striking is the contrast between the falling actual return on capital in the economy as a whole and the rising forecasts for long-term growth in S&P 500 earnings per share by bottoms-up security analysts (see the chart on the next page). Admittedly,

Profit Expectations Keep On Rising



* Long-term earnings growth expected by S&P 500 equity analysts.
** Adj. corporate profits divided by corporate capital stock.
Source: I/B/E/S. Department of Commerce.

part of this could be due to a growing gap between large and small corporations, or to expectations of large-scale stock repurchases by the analysts. But it might also indicate that optimism about profits has jumped ahead of the fundamentals.[1]

Such uncertainty is frustrating for investors, but even more so for Fed officials. If they knew for sure that an investment bubble was emerging, they might want to restrain it even at the risk of an economic slowdown. This would be an argument to tighten monetary policy even abstracting from concerns about higher inflation. Conversely, if they knew that the continuing increase in investment and profit expectations was only due to fundamental improvements in the economy, they might want to let the economy run.

Such uncertainty is usually seen to favor inaction. After all, it is hard to explain to the public why monetary policy needs to be tightened while inflation is well-behaved and economic performance looks excellent. Faced with these difficulties, the conventional view is that the Fed should pursue stable inflation and otherwise hope for the best.

Investment Booms Imply Higher Real Rates

But this attitude is overly agnostic. Whether the investment boom reflects mainly improved fundamentals—a "new era"—or mainly an investment bubble is not that crucial for monetary policy. If it is mainly a new era, then the equilibrium real interest rate—the rate at which monetary policy neither boosts nor restrains the economy—will be higher in the future. And if it is mainly an investment bubble, then monetary policy should be tight enough to restrain investment spending before the bubble grows further. Either way, an investment boom implies that real interest rates need to rise.

Why does a new era raise the equilibrium real rate? First, firms will see more good projects in which to invest, so investment will rise. Second, households will increase their consumption in response to higher expected future incomes, especially if the investment boom coincides with an equity bull market, so savings will fall. The combination of higher investment and lower savings raises the equilibrium real interest rate. In this situation, the central bank should gradually increase the actual real rate and keep it close to the equilibrium rate. After all, there is no need to either boost or restrain the economy.

If it is not a new era, the Fed should tighten monetary policy in order to lean against the potentially damaging bubble by pushing the actual real rate above its equilibrium level. After all, an investment bubble is likely to end in a bust and should therefore be restrained as early as possible.

None of this means that monetary policy can perfectly control the risk of investment bubbles. The interest rate elasticity of investment spending—much like the interest sensitivity of stock prices—is relatively low. Nevertheless, by pushing up real interest rates, monetary policy can do its share to prevent investment bubbles.

Monetary Policy Should Seek Falling Inflation

Pushing up real rates in an investment boom is likely to lead to a lower inflation rate. This is because an investment boom is typically accompanied by faster productivity growth, which holds down inflation for some time. For example, the core inflation rate in the early years of the current boom fell from around 3% in 1995 to little more than 2% in 1998, even though the Fed kept (nominal) interest rates very stable.

This raises the question whether falling inflation is a problem. Should we perhaps be worried about deflation? No, on the contrary. An investment boom means inflation *should* be lower, again regardless of whether it is a new era or not. If it is a new era, with a higher growth trend, the "optimal" inflation rate will be lower. If it is an investment bubble, falling inflation will go some way toward restraining it.

First, a higher growth trend means the optimal inflation rate is lower. In general, a small amount of inflation is welcome because it makes the labor market function more smoothly. Since workers tend

[1] Note that I/B/E/S uses the *median* security analyst's forecast to compute this series, so it is not distorted by the increasing share of technology firms in the S&P 500.

to resist nominal wage cuts, negative real wage growth—which is sometimes necessary to maintain full employment following an adverse economic shock—typically requires positive inflation. For this reason, inflation is sometimes called "grease" in the labor market's wheels. However, faster trend growth reduces the need for such grease because it means that cuts in real wages are needed less frequently. After all, the growth rates of real GDP and labor productivity now fluctuate around a higher trend.

Second, a falling inflation rate can also help restrain investment bubbles, especially those following a productivity pickup. Once again, the reason has to do with the sluggish behavior of nominal wages. Suppose that initially productivity, wages, and profits are all growing by 2% a year, and both the labor force and the price level are stable. Now consider what happens if productivity growth picks up to 3%. Initially, wages are likely to keep growing at 2%, because workers do not immediately recognize and react to the productivity pickup. For a while, corporate profits will then grow much faster than the economy's new 3% trend. But ultimately, wage growth will catch up to the new productivity trend, and profit growth will moderate to 3%. In the initial phase, firms might mistake the temporarily inflated profit growth rate for the new trend. Making investment decisions on that basis could either start or reinforce an investment bubble.[2]

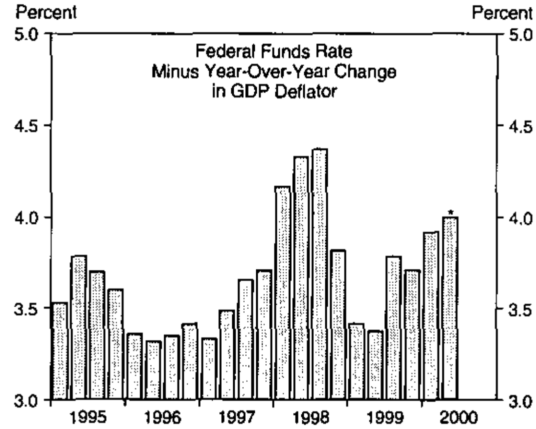
However, if the productivity upturn coincides with a fall in the inflation rate because policy is tightened early on, real wage growth will pick up "automatically" even if nominal wages are slow to react. That will keep profit growth from overshooting its new 3% trend and reduce the potential for overly optimistic expectations. This example shows that monetary policy should let a productivity pickup feed through into lower inflation.

A Clear Need for More Restraint

Will this business expansion end the old-fashioned way, because of rising inflation and monetary overkill, or because of an investment bust? We think this is still an open question. But the answer is much less important for near-term monetary policy than is often thought. Either way, monetary policy needs to be tightened significantly.

In particular, the risk of an investment bubble implies that real interest rates should be high and inflation should be falling. This may be a reasonable description of the years 1995 to 1998, the early phase

Real Funds Rate Still Below 1998 Level



* Current estimate.
Source: Federal Reserve Board. Department of Commerce.

of the recent investment boom. As shown in the chart above, the real federal funds rate—deflated by the GDP deflator—during this time did rise to 4½% from 3½%. Moreover, core inflation fell almost continuously, as shown in the first chart on page 3.[3] Thus, the Fed did keep policy tighter than would have been necessary for stabilizing inflation, though it is hard to judge whether the degree of restraint was "optimal" in any sense.

But policy has been clearly too accommodative more recently. Despite a nominal tightening of 125 basis points, the real federal funds remains below the level seen in 1998. Meanwhile, the investment boom continues and there has been a further large increase in expected future returns. Moreover, core PCE inflation has gradually accelerated in the last two years. If the investment boom is still due to ongoing fundamental improvements, the monetary authorities should accommodate the rise in the equilibrium real interest rate and let inflation fall. And if it is now an investment bubble, then they should restrain it. Either way, Fed officials need to continue tightening monetary policy, as we expect they will in the next year.

Jan Hatzius

[2] See Federal Reserve Bank of Cleveland, *Annual Report 1998*, http://www.clev.frb.org/Annual98/index.htm.

[3] In general, we think the GSFCI is a better measure of monetary policy than the real federal funds rate. In this case, however, we are specifically interested in the response of real interest rates to the investment boom.

Goldman Sachs Financial Conditions Index

	Latest Week*	Mar	Feb	Jan	Contribution to GSFCI Change 3 mo	6 mo	12 mo
GSFCI (index 1987-1995=100)	96.78	96.42	96.58	96.46	0.35	-0.40	0.66
3-month LIBOR (%)	6.34	6.20	6.10	6.04	0.06	-0.06	0.32
A-Rated Corporate Bond Yield (%)	8.09	8.07	8.06	8.15	-0.10	-0.16	0.27
Real GS Trade-Weighted $ (index 1990=100)	123.41	121.79	120.82	117.85	0.23	0.26	0.11
Market Cap**/GDP (%)	185.24	198.66	189.30	190.18	0.16	-0.44	-0.05

* Ending Wednesday ** Wilshire 5000

Key U.S. Economic Data

	Latest Monthly Data '00 Apr	'00 Mar	'00 Feb	'00 Jan	6 Mo Trend	12 Mo Trend	Next Release
Nonfarm Payrolls (ch. thousands)	--	416	7	394	278	242	May 5
Unemployment Rate (%)	--	4.1	4.1	4.0	4.1	4.2	
Index of Hours Worked (% ch)	--	0.3	-0.2	0.6	3.1	2.5	
Average Hourly Earnings (% ch)	--	0.4	0.4	0.4	3.8	3.7	
Producer Price Finished Goods Index (% ch)	--	1.0	1.0	0.0	4.7	4.6	May 12
Excluding food and energy	--	0.1	0.3	-0.2	1.0	1.2	
Consumer Price Index (% ch)	--	0.7	0.5	0.2	4.1	3.7	May 16
Excluding food and energy (% ch)	--	0.4	0.2	0.2	2.5	2.4	
Retail Sales (% ch)	--	0.4	1.8	0.7	13.4	10.5	May 11
Excluding motor vehicles (% ch)	--	1.4	1.8	-0.2	13.9	10.3	
Industrial Production (% ch)	--	0.3	0.1	1.0	5.8	5.1	May 16
Manufacturing	--	0.4	0.1	0.8	6.6	5.7	
Capacity Utilization (%)	--	81.4	81.5	81.6	81.3	80.9	May 16
Manufacturing	--	80.6	80.6	80.8	80.5	80.1	
Housing Starts (annual rate, thousands)	--	1604	1807	1744	1704	1665	May 16
Single-family	--	1309	1307	1361	1351	1326	
Trade Balance (billions, monthly)	--	--	-29.2	-27.4	-26.0	-24.1	May 19
Merchandise	--	--	-36.0	-34.2	-32.8	-30.7	
Factory Orders (% ch)	--	--	-0.8	-1.2	4.2	8.4	May 3
Durable Goods	--	2.6	-2.07	-1.9	10.9	8.0	May 26
Personal Income (% ch)	--	0.7	0.4	0.7	7.7	6.4	May 28
Wages and Salaries	--	0.7	0.3	0.9	7.1	6.8	
Purchasing Managers' Index (%)	--	55.8	56.9	56.3	56.6	55.7	May 1
Consumer Sentiment U Mich (Feb 66=100)	109.2	107.1	111.3	112.0	107.7	106.9	May 26
Conference Board (1985=100)	136.9	137.1	140.8	144.7	139.7	137.7	May 30

Note: Percentage changes are month to month for last four months, annualized for 6- and 12-month trends. 6- and 12-month figures for levels (e.g., unemployment rate) are averages over those periods.

U.S. Calendar

Focus for the Week Ahead

- Payroll employment will rise sharply, aided by census worker hiring. The unemployment rate is likely to decline, with a risk of a bigger-than-expected drop to 3.9%. Average hourly earnings gains should stay firmer in line with the trend of recent months and firmer tone of the first quarter ECI report (May 5).
- The purchasing managers' index should remain around recent levels. Vendor performance should be carefully scrutinized for evidence of strains in the manufacturing sector (May 1).
- Nonfarm productivity growth is likely to decline from the extremely high rate of recent quarters given the strong trend of hours worked in the first quarter (May 4).

Economic Releases and Other Events

Date	Time	Indicator	Estimate GS	Estimate Consensus	Last Report
Mon May 1	10:00	NAPM Index (Apr)	56.0%.	55.5%	55.8%
	10:00	Construction Spending (Mar)	-1.3%	-0.1%	+1.5%
		Domestic Motor Vehicle Sales (Apr)	15.2M	14.8M	15.1M
Tue May 2	10:00	New Home Sales (Mar)	+5.5%	-1.0%	-0.5%
	10:00	Leading Indicators (Mar)	+0.1%	+0.1%	-0.3%
Wed May 3	10:00	Factory Orders (Mar)	+1.6%	+1.3%	-0.8%
Thu May 4	8:30	Nonfarm Productivity (Q1 Preliminary)	+3.0%	+4.1%	+6.4%
Fri May 5	8:30	Civilian Unemployment Rate (Apr)	4.0%	4.0%	4.1%
	8:30	Nonfarm Payroll Employment (Apr)	+350,000	+340,000	+416,000
	8:30	Average Hourly Earnings (Apr)	+0.4%	+0.3%	+0.4%
	3:00	Consumer Credit (Mar)	+$9.0 bn.	+$10.0 bn.	+$8.0 bn

- Treasury Announces Market Borrowing Estimates (Mon, May 1 – 3:00)
- New York Fed Pres. McDonough speaks at National Housing Service in New York (Tue, May 2 – 8.30)
- Treasury Announces May Refunding (Wed, May 3 – 9:45)
- NAPM Nonmanufacturing Survey (Wed, May 3 – 10:00)
- New York Fed President McDonough speaks at Regional Plan Association in New York (Wed, May 3 – 1.30)
- Fed "Beige Book" (Wed, May 3 – 2:00)
- FNMA 5-Year and 30-Year Note Pricing (Wed, Apr 5)
- Chairman Greenspan speaks at Chicago Fed on Bank Structure and Competition (Thu, May 4 – 9.25)
- Chain-Store Sales Results (Thu, May 4)

Interest Rates: Forecast vs. Forward Yields

	3 mo	6 mo	12 mo
LIBOR 3-month	6.8%	7.0%	7.3%
Forward	6.8	7.1	7.2
2-Year T-Note	6.7	6.8	6.9
Forward	6.7	6.8	6.8
10-Year T-Note	6.6	6.6	6.9
Forward	6.2	6.2	6.3

Key Numbers in the Business Outlook

	2000 Q1	2000 Q2E	2000 Q3E	1999	2000E
Real GDP	5.4%	3.7%	4.6%	4.1%	5.1%
Ind. Prod., Mfg.	6.1	6.5	8.6	4.2	6.8
CPI	4.0	3.7	2.3	2.2	3.2
After-Tax Profits*	3.0E	2.3	3.5	4.1	1.9
Unemployment	4.1	4.0	3.9	4.2	4.0

* Excluding inventory profits; adjusted for depreciation distortions.

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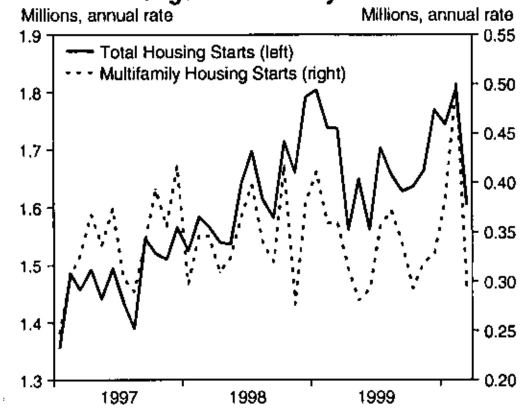
U.S. Economics Analyst

Still on Course for Monetary Tightening

This issue of the U.S. Economics Analyst is in an abridged, four-page format. The center section and the tables of historical and forecast data have been omitted. Our regular format will resume with our next issue, dated April 28, 2000.

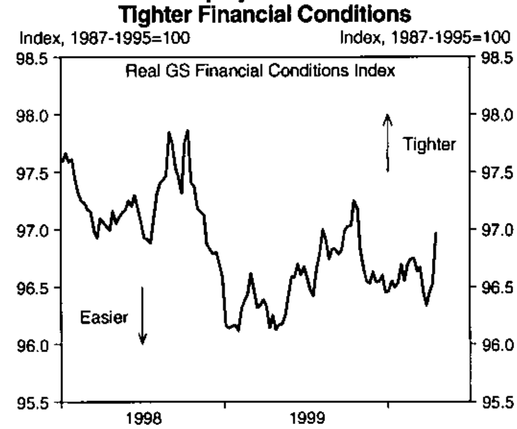
- Equity prices have rebounded and bond prices have moved down slightly as the economic news in the past week has been both scarcer and closer to expectations.
- In particular, housing activity is showing signs of slowing in response to rising interest rates, although the sharp decline in March was essentially a reversal of previous weather-related strength in multifamily construction. Meanwhile, the drag on U.S. growth from a deteriorating trade balance appears to be abating, although higher prices of imports have inflated the nominal deficit.
- We continue to expect that Fed officials will tighten monetary policy by 25 basis points at the May 16 FOMC meeting. Upcoming reports on first-quarter employment costs, real GDP growth, and related inflation measures—all due on April 27—should reinforce the case for monetary tightening and could rekindle fears of a more aggressive move.
- Inflows of tax payments into the U.S. Treasury remain strong as the tax season enters its crucial stage. Meanwhile, refunds have abated, confirming that strength earlier in the year was mainly due to faster filing and processing. If these trends persist, as we expect, then the consensus expectation for the fiscal 2000 budget surplus could rise toward our $205-billion estimate later this spring.

Fall in Housing Starts Led by Plunge in Multifamily Starts



Source: Department of Commerce.

Fall in Equity Prices Leads to Tighter Financial Conditions



Source: Goldman Sachs.

Trade Recommendations

- We closed out our "disinversion" trade—long 2-year Treasury notes/short 5-year Treasury notes—on Tuesday evening, April 18, at a spread of -5 basis points.
- We replaced this recommendation with an outright short position in September 2002 Eurodollar futures, initiated at a price of 92.94, with a target of 92.25 and a stop on a close above 93.15.

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Issue No: 00/16
April 20, 2000

Weekly Wrap-up

Less News Is Good News for Equities

Equities recovered from last Friday's plunge, and bonds fell slightly, as there was little new economic data to digest this week. The data that were released were also fairly benign, with signs of moderate cooling in housing activity and abatement in the trade drag on real GDP growth. These developments were close enough to our expectations that we are sticking with our 6.0% growth forecast for Q1 2000, though the risks remain skewed to the high side.

Housing starts may finally be slowing in response to rising interest rates. Total starts fell by 11.2% to 1.60 million annual units in March, the lowest level since June 1999. This reflected a 41.0% fall in multi-family starts, which reversed a weather-induced surge in February. In the single-family sector, starts were essentially flat between February and March but nearly 10% below their December peak. In addition, building permits were down for the second month in a row, falling by 4.5%. These data are consistent with builders' surveys, which point to a slower pace of residential construction.

In the foreign sector, the drag exerted on GDP growth by a deteriorating trade deficit seems to be easing. While the overall trade deficit rose to a record $29.2 billion in February, the January level was revised down by about $600 million. In addition, much of the deterioration in February appears to have been the result of higher energy prices. In real terms, the deficit in merchandise trade actually narrowed in February from a January level that was revised down.

While the strength of the domestic economy has kept import growth much higher than export growth, the underlying trend appears to be improving. On a year-over-year basis, growth in nonoil imports has fallen for two consecutive months while growth in exports excluding civilian aircraft is now at its highest rate since September 1997. This suggests that trade will be less of a negative influence on GDP growth going forward than it has been over the last few years.

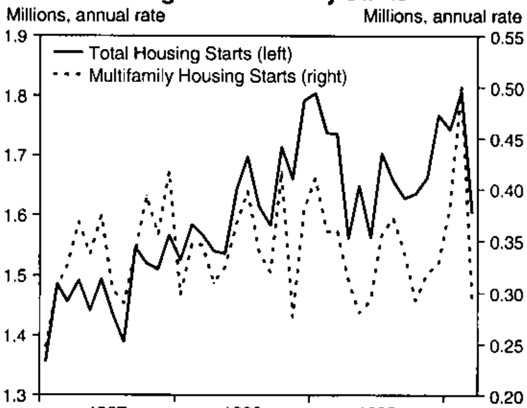
The U.S. labor market continues to tighten. Filings for jobless benefits fell to 257,000 in the week ended April 15, pulling the four-week average down to 262,500. Both figures are the lowest since late 1973.

Data to Underscore Need for Higher Rates

The risks remain skewed toward more aggressive monetary tightening in coming months versus what is now discounted in forward money-market interest rates. Although the March CPI report overstates the current degree of core inflation, it has badly damaged one of the main arguments against substantial additional rate increases in the face of extraordinary demand growth—namely, the absence of hard evidence of firmer underlying price pressures. At a minimum, the figures support the notion that labor resource strains combined with recovery abroad create a fertile environment for a pickup in inflationary wage and price expectations.

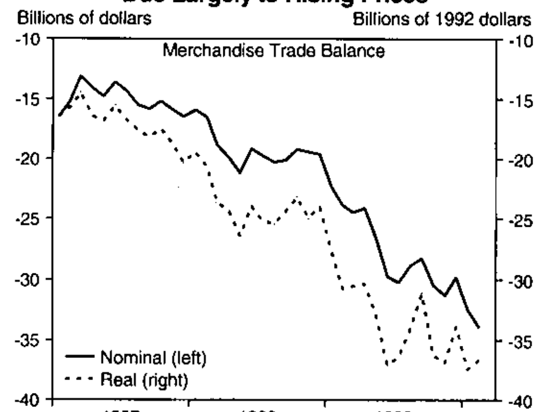
Against this background, first-quarter statistics on employment costs, GDP, and related price measures (all due on April 27) will be crucial inputs to the FOMC's policy-making process in coming weeks. These reports are more likely to reinforce than relieve anxieties about possible economic overheating. The ECI on a year-to-year comparison should be up about 3.9% overall, and 4.1% in the wage and salary

Fall in Housing Starts Led by Plunge in Multifamily Starts



Source: Department of Commerce.

Recent Trade Deterioration Due Largely to Rising Prices



Source: Department of Commerce.

component, which would be the highest levels since early 1991-1992. Meanwhile, real GDP should post the third consecutive huge quarterly advance, and nominal GDP year-to-year will likely test or exceed the 7% mark for the first time in over ten years. Such information could spur more hawkish commentary from Fed officials, so as to prepare the markets for greater restraint.

Preliminary April Tax Receipts Appear Solid

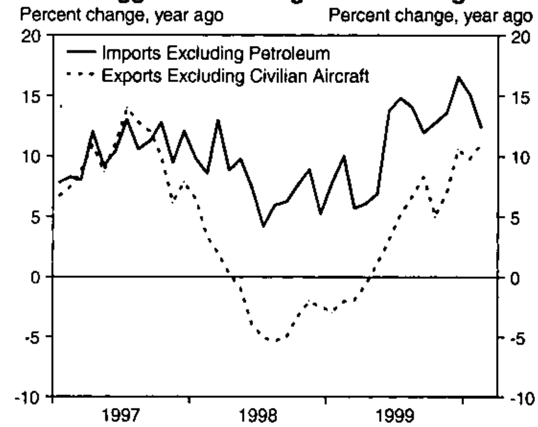
We continue to expect substantial upward revisions to the consensus and official estimates of the federal budget surplus as this crucial tax receipts season proceeds. The consensus expectation for the fiscal 2000 budget surplus could rise toward our $205-billion estimate later this spring. On a cash basis, corporate tax payments this month appear to be running 15%-20% above year-earlier levels, in line with the brisk March pace. It is still too early to get a good reading on individual final tax payments on 1999 incomes, which were due just last Monday, but the probabilities lie on the side of a robust outcome given prior trends and heavy capital gains distributions by mutual funds. Finally, as expected, personal tax refunds have begun to decline, reflecting the acceleration in timing this year due to better automation and increased electronic filing.

More Bearish on the Fixed Income Outlook

Note: The following comments reflect trading views and may differ from our longer-term interest rate forecast.

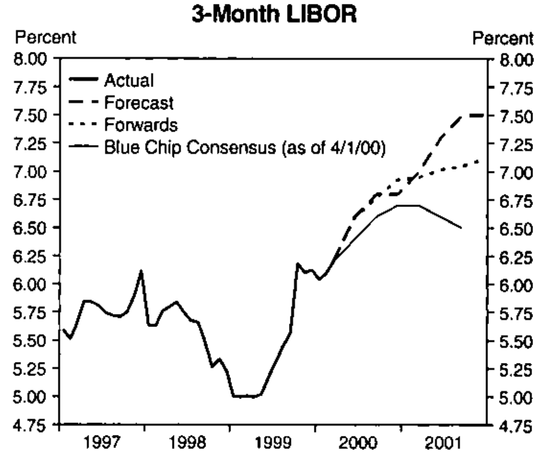
Over the past few days, we have become more convinced that the markets are discounting too little potential for Fed policy tightening, as the equity market has regained support and recovered a substantial amount of the ground lost late in the preceding week. If the main economic reports meet our expectations for notable strength, then Fed policy makers may soon express a greater sense of urgency about boosting interest rates to dampen the strong trend in domestic spending so as to limit inflation dangers. While this would argue for broadly higher market yields, it is not clear that the response to such developments would occur disproportionately in yields on intermediate- versus short-duration securities. Therefore, on Tuesday afternoon we recommended closing our long position in the 2-year/5-year Treasury yield spread, at -5 basis points. Simultaneously, we instituted a recommendation to go short the September 2002 Eurodollar futures contract, at 92.94, with a stop on a close above 93.15 and a target of 92.25. This change is meant to signal a more negative short-term view on the overall fixed income market outlook.

Underlying Trade Developments Suggest Trade Drag is Diminishing



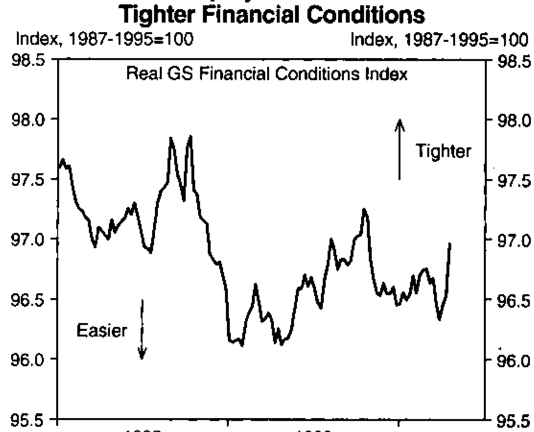
Source: Department of Commerce.

3-Month LIBOR



Source: International Financial Statistics. Bloomberg. Blue Chip Financial Forecasts. Our estimates.

Fall in Equity Prices Leads to Tighter Financial Conditions



Source: Goldman Sachs.

U.S. Calendar

Focus for the Week Ahead

- Employment costs likely rose briskly in the January/March quarter, led by strength in wages and salaries. Higher annual bonuses in finance should boost the results. Year-to-year changes will show a marked acceleration versus prior quarters given that first-quarter gains in 1999 were unusually low (April 27).
- "Advance" estimates of first-quarter growth should show another robust gain in real GDP, powered by an exceptional (8%-9% annualized) surge in private domestic final sales. Risks are skewed to the upside of the consensus estimate. Meanwhile, the deflator should post another 2%-plus (annualized) gain (April 27).
- Personal income probably rose sharply in March, judging from sturdy advances in nonfarm payrolls and average hourly earnings. Nominal spending apparently kept pace, although this in part reflects the sizable increases reported for consumer prices (April 28).
- Durable goods orders are expected to post a broad advance for March, with especially large gains among capital goods producers. Backlogs probably remained on a brisk upward path in most industries (April 26).

Economic Releases and Other Events

Date	Time	Indicator	Estimate GS	Estimate Consensus	Last Report
Tue Apr 25	10:00	Consumer Confidence (Apr)	135.0	135.2	136.7
	10:00	Existing Home Sales (Mar)	+4.0%	-0.8%	+6.7%
Wed Apr 26	8:30	Durable Goods Orders (Mar)	+1.4%	+1.7%	-2.7%
Thu Apr 27	8:30	Real GDP (Mar)	+6.0%	+6.0%	+7.3%
	8:30	Chain-Weighted Price Index (Mar)	+2.2%	+2.2%	+2.0%
	8:30	Employment Cost Index (2000 Q1)	+0.9%	+1.0%	+1.1%
Fri Apr 28	8:30	Personal Income (Mar)	+0.6%	+0.5%	+0.4%
	8:30	Personal Consumption (Mar)	+0.6%	+0.5%	+1.0%
	10:00	Chicago Purchasing Manager's Index (Apr)	57.5%	56.5%	57.4%

- **Treasury 2 Year Note Auction (Wed, Apr 26)**
- **FNMA 5- & 30-Year Announcement (Wed, Apr 26)**
- **APICS Survey (Thu, Apr 27)**
- **Help-Wanted Index (Thu, Apr 27)**
- **Consumer Sentiment – Final (Fri, Apr 28)**

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U.S. Economics Analyst

Grounds for Concern About Labor Cost Pressures

- Growth in nominal business employment expenses is due to strengthen over the course of 2000 and 2001. Unusually tight labor supplies, and widening recognition of greater bargaining leverage for individuals, should sustain brisk gains in real wages and benefits. Meanwhile, pay packages are apt to be fattened in lagged response to higher total price inflation since early 1999. A recent upturn in average hourly earnings hints this may already be underway.

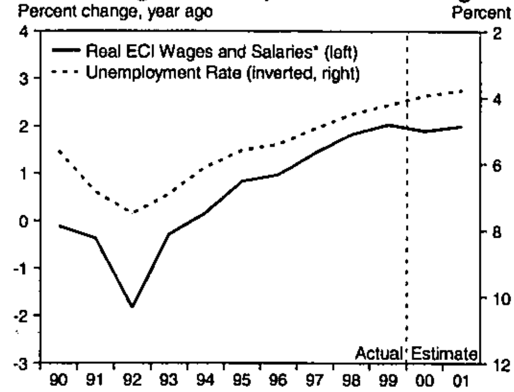
- Efforts to offset faster compensation hikes with more rapid productivity advances are likely to be less successful going forward. Output per hour already is climbing relatively quickly for a mature economic expansion. Moreover, productivity tends to be positively correlated with final demand, and Federal Reserve officials have made clear their determination to slow spending with tighter financial conditions.

- Narrowing corporate profit margins or a weakening dollar exchange rate would be important leading signals that resistance to upward pricing flexibility is wearing down.

- We have lifted our estimate of first-quarter annualized real GDP growth to 6.0% on the back of exceptionally strong retail sales data. The economy should moderate somewhat in the spring months but probably not by enough to alleviate tightening in resource supplies.

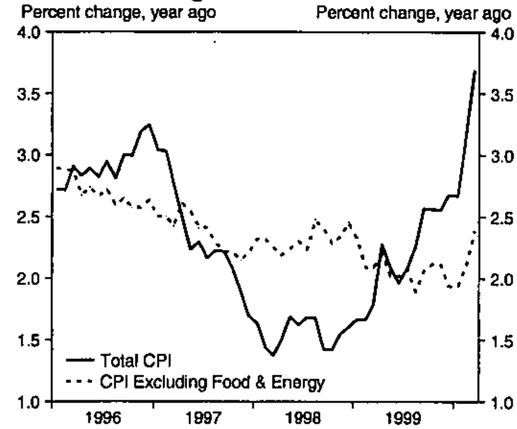
- Central bankers remain on course to lift interest rates another quarter-point in mid-May. Gradualism remains the order of the day at the Fed, barring hard evidence of stronger underlying price patterns. The sharp rise in core CPI inflation in March may fan talk of a 50-basis-point rise, but this still seems unlikely given it is just one data point and the Fed does not want to unhinge the stock market altogether.

Real Wage Growth Apt to Remain Strong



* Deflated by PCE deflator lagged six quarters.
Source: Department of Labor, Department of Commerce. Our estimates.

Headline Surge Leaks Into Core Inflation



Source: Department of Labor.

Trade Recommendations

- Maintain a long position in the 2-year/5-year U.S. Treasury note yield spread, with a target of +5 basis points and a stop on a close below -25 basis points.

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Issue No: 00/15
April 14, 2000

I. Weekly Wrap-Up

The Economy Continues to Power Ahead

The Treasury bond market continues to look to the stock market for direction. With stocks still faltering, this has created a bid for bonds despite evidence that the economy is robust and inflation pressures may gradually be building up.

On the fundamentals, interest rates should be headed higher. After all, the retail sales figures were much stronger than expected outside of the motor vehicle sector (which declined from a spectacular sales pace in February) and indicate that the strength in consumer spending remains unabated. Not only were nonauto retail sales up sharply in March (+1.4%), but also there were substantial upward revisions to February (now +1.8% from +1.0% previously). Although higher gasoline prices were a factor boosting sales, retail sales were strong even when gasoline is excluded. As shown in the accompanying chart, retail sales excluding autos, building materials, and gasoline advanced at an 11.7% annual rate in the first quarter, indicating that monetary policy has not yet restrained domestic demand.

The strength of retail spending has caused us to raise our forecast for consumer spending growth to 7.5% annualized for the first quarter from 6% previously. We are also lifting our first-quarter real GDP forecast to 6% annualized from 5% previously.

On the inflation side of ledger, the story was the rise in core consumer prices, which advanced by 0.4% in March and now have increased by 2.4% over the past year. This compares to a trough in the core inflation rate of 1.9% (year-over-year) two months earlier. The spike was broadly based, with large increases in medical care, shelter, and other services costs. One factor may be the sharp rise in energy prices that is now filtering into the core inflation measure.

Nor was this the only sign of an uptick in inflation pressure. For example, producer prices for core intermediate goods rose by 0.4% in March, and import prices, excluding petroleum, rose by 0.2% in March and now have increased by 1% over a year ago. The increase in import prices is a sharp shift from the pattern evident in recent years.

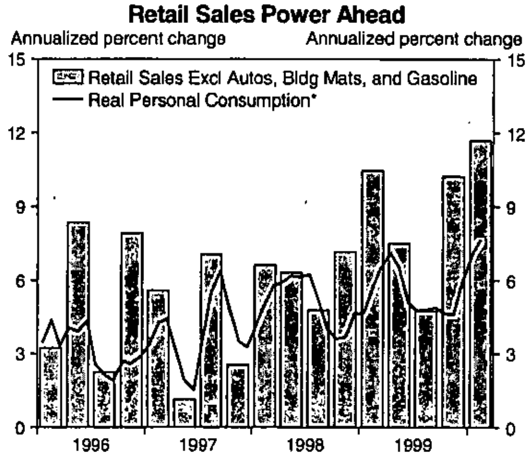
Elsewhere the data were more benign. In March, core producer goods prices for finished goods rose by only 0.1% and industrial production rose by only 0.3%, with a smaller gain for February than reported earlier. The overall capacity utilization rate ticked down to 81.4% from the 81.7% rate originally reported last month.

Still Expect a 25-Basis-Point Hike in May

In a speech in Toronto, Governor Laurence Meyer suggested that the FOMC was likely to move gradually. He noted that a gradual approach was warranted when inflation was well-behaved, especially given the high degree of uncertainty concerning the economic outlook. Although the core CPI reading for March probably increases his anxiety level a bit, we doubt that there will be much support for a 50-basis-point move, especially when the stock market remains unsettled.

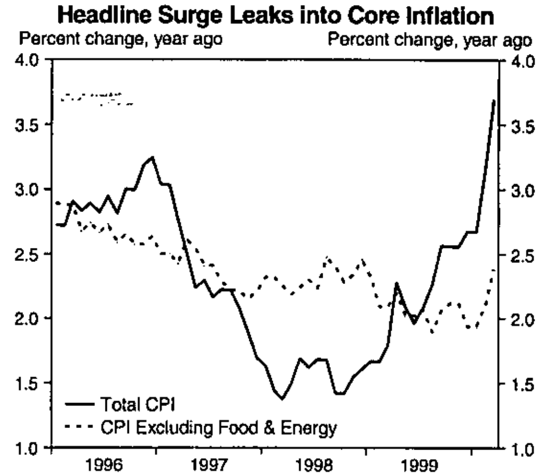
Conversely, recent stock market weakness would have to grow much more pronounced to deter the FOMC from tightening at the May 16 meeting. After

Retail Sales Power Ahead



* 3-month moving average versus 3 months ago.
Source: Department of Commerce.

Headline Surge Leaks into Core Inflation



Source: Department of Labor.

all, the broad stock market is still up significantly from its year-ago level, and the economy retains brisk forward momentum. Moreover, Fed officials are loath to send a message that they are a guarantor of the equity market. Finally, a failure to tighten would undoubtedly lead to a rally in stock and bond prices, which would ease financial conditions and undermine the restraint that they are trying to put in place.

Although the FOMC is likely to move slowly, it also may move further than generally anticipated. Governor Meyer pointed out that the tightening that had occurred to date was very modest by historical standards. Second, using the Goldman Sachs Financial Conditions Index, he showed that financial conditions remain accommodative despite the 125-basis-point rise in the federal funds rate target that the FOMC has engineered since last June.

Higher Surplus Increases the Impetus for Higher Healthcare Spending

The burgeoning budget surplus has increased the pressure on politicians to boost federal healthcare outlays. The prospective Republican nominee, George W. Bush, proposed a program of tax credits of up to $2,000 per year to help low-income households purchase healthcare insurance.

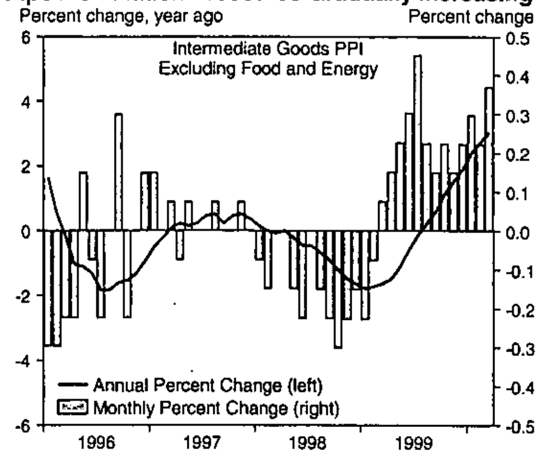
Meanwhile, the House Republican leadership unveiled a Medicare prescription drug benefit proposal. The proposed legislation would cost $40 billion over five years. The plan would include catastrophic coverage to cap total outlays and would include a subsidy for low-income households. Because there are competing plans in the Senate and from the administration, and legislative time is short, it appears unlikely that such legislation will be enacted this year. But a prescription drug benefit is politically popular and the surplus is still climbing. The result is that such a benefit is likely to be enacted sometime next year.

Market Does Not Reflect Longer-Term Fed Tightening Risks

Note: The following comments reflect trading views and may differ from our longer-term interest rate forecast.

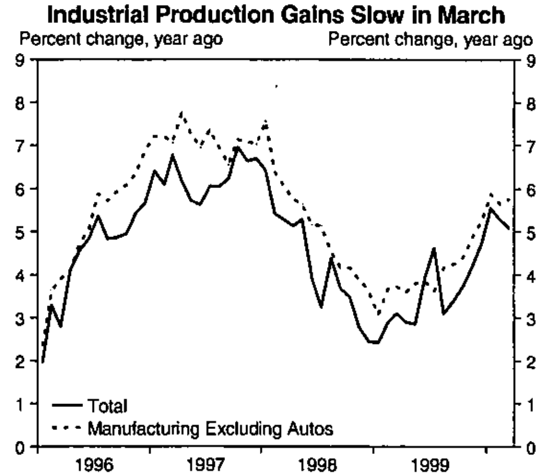
Although we have been thinking hard about getting outright short, the turbulence in the stock market is giving us pause for the time being. Thus, we would stick with our curve disinversion trade—long the 2-year and short the 5-year Treasury, which reflects our bearish bias. It strikes us that the news implies a more persistent series of rate hikes than currently priced into the market.

Pipeline Inflation Pressures Gradually Increasing



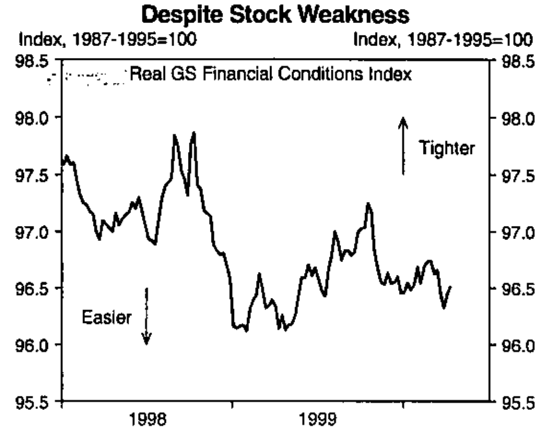
Source: Department of Labor.

Industrial Production Gains Slow in March



Source: Federal Reserve Board.

Financial Conditions Still Accommodative Despite Stock Weakness



Note: See page 7 for additional detail.
Source: Goldman Sachs.

II. Grounds for Concern About Labor Cost Pressures

The risks of an acceleration in employment compensation cost growth are unusually high presently. Labor supplies are exceedingly thin and getting leaner, judging from a host of statistical indicators and anecdotal business reports. There are signs that both sides of the pay-bargaining process recognize enhanced leverage for employees, with job quitters representing a higher proportion of the unemployed, while fresh lows in unemployment insurance claims hint at labor hoarding by firms. These conditions should promote continued strong increases in real wages and benefits. Meanwhile, lagged effects from the substantial rise in the headline inflation rate are soon apt to give an upward impulse to labor expenses.

There already are signs of faster pay increases, in a fairly diffuse escalation of average hourly earnings last quarter. We expect total nonfarm business compensation to rise 5.5%-6.0% over the next year, compared to 4.8% in 1999.

Appreciably faster labor compensation increases likely would prove unfavorable for the inflation and monetary policy outlooks. A further pickup in productivity growth could mitigate or offset high labor expense gains, but this will be problematic considering that output per hour tends to track final demand and Federal Reserve officials have made clear their determination to foster slower spending. Thus, financial market participants should be on guard for signs of cost-related profit margin compression or weakness in the dollar, either of which could foreshadow firmer pricing activity.

Real Wage Gains Should Stay Firm . . .

There are at least three reasons to anticipate continued hefty increases in real employment costs over the coming quarters:

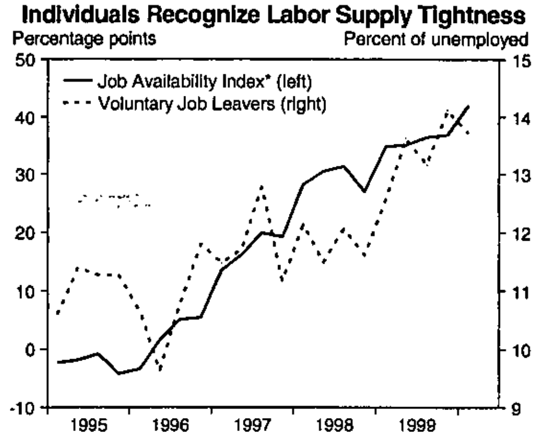
1. **Labor supplies are broadly very tight, and getting tighter.** The unemployment rate is still eroding, hitting a new quarterly-average low in the first period (4.07%). Similarly, the count of persons working part-time for economic reasons in the nonagricultural economy continues to fall; it is down 11% year to year, with an even faster drop taking place over the past few months. While the total adjusted pool of available workers has increased slightly of late, this entirely reflects persons who have not tried to find work in the past 12 months despite a red-hot job market.

2. **There are some hints of labor hoarding.** Initial claims for jobless insurance have declined further, suggesting a lower layoff rate. Also, the intensity of business commentary about worker scarcity has increased. In the March edition of the Federal Reserve's "beige book," the summary characterized labor markets as "very tight in most areas," and noted, "reports of recruitment obstacles were widespread." In the Atlanta area, one restaurant was said to have posted a sign stating, "Now hiring—must have a pulse."

3. **Individuals appear to recognize enhanced leverage over firms.** In the Conference Board's monthly survey of consumers, the differential between the percentage of respondents who view jobs as plentiful versus hard to get has regularly exceeded 40% (see chart below), after never once reaching that level in the poll's prior 32-year history. Persons who had left jobs voluntarily comprised 13.9% of total unemployment in the latest six months, up nearly 2 percentage points from the same period a year earlier. This higher "quit ratio" suggests a perception of greater competition for workers.

Spreading recognition of thin labor supplies should help to sustain or extend the elevated trends in real compensation that have developed over the past two years. As we have discussed previously,[1] the linkage between a low unemployment rate and rising real wages and salaries has stayed very close in this business cycle, when real wages are calculated using

Individuals Recognize Labor Supply Tightness



* Percent of people saying jobs are plentiful less those saying jobs are hard to get.
Source: Conference Board, Department of Labor.

[1] See "The Phillips Curve: Alive but Not Kicking," *U.S. Economics Analyst*, February 11, 2000.

the personal consumption expenditures deflator lagged six quarters. Therefore, based on our expectation that the unemployment rate will decline to around 3¾% later this year and remain there through 2001, real wage and salary growth is apt to stay close to 2% over the next year and a half (see chart at right).

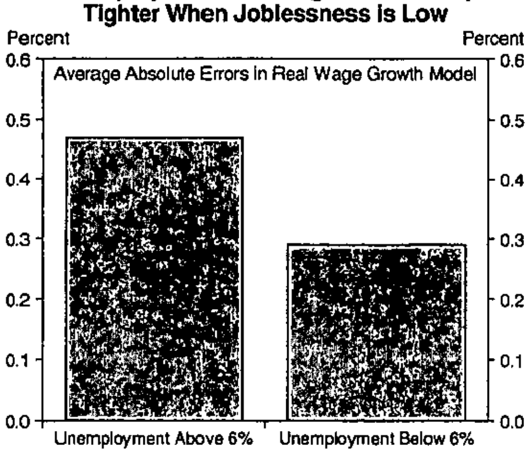
. . . While Higher Actual and Expected Inflation Affect Compensation Bargaining

Employers also are under pressure to grant bigger pay awards to reflect the rebound in consumer price inflation and a firming of inflationary expectations since early 1999. Prices as measured by the PCE deflator climbed 2.5% in the 12 months ending February 2000, up from just 1.2% during the prior year. This has been the biggest upward adjustment in broad PCE price behavior since 1990. Meanwhile, the household sector has become somewhat less optimistic about the medium-term price outlook. Median five-year inflation expectations lately have risen somewhat in the University of Michigan Survey Research Center's poll of consumer attitudes.

A taut labor market gives individuals greater power to secure pay supplements to offset cost of living increases. When a six-quarter-lagged PCE deflator is used as a proxy for the inflation component of nominal wage hikes, the inverse relationship between real wage increases and the unemployment rate has been somewhat tighter at low levels of joblessness. Over the past 15 years, using annual data, the absolute errors in a simple regression model designed to predict real wage gains based on unemployment are almost 40% smaller in years when unemployment was below 6% (see chart below).

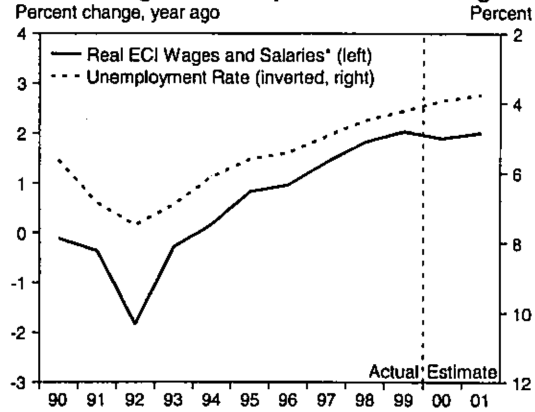
Taking together the probability of continued sturdy real wage demands and some catch-up for firmer

Unemployment/Real Wage Relationship Tighter When Joblessness is Low



Source: Our calculations.

Real Wage Growth Apt to Remain Strong



* Deflated by PCE deflator lagged six quarters.
Source: Department of Labor. Department of Commerce. Our estimates.

overall price behavior and expectations, there is a high probability that total business labor expenses will rise more rapidly in coming quarters. We project that the year-to-year change in the total ECI for civilian workers will climb more than 1% by mid-2001, to 4.5% from 3.4% at the end of 1999. Over the same timeframe, increases in total nonfarm compensation are expected to rise by 1½ percentage points, to 5.8%.

Wage Growth Upturn Could Be Underway

Already there is evidence pointing to an upturn in wage compensation. Between December 1999 and March 2000, average hourly earnings rose 0.4% each month, or 4.8% at an annual rate, compared to 3.5% in the previous 12 months. There have been only two other increases in the pace of average hourly earnings gains of this magnitude on a similar comparison since 1993—in June 1996 (to 5.2% on a three-month annualized change, from 2.9% year to year as of three months earlier) and October 1997 (to 5.3% from 3.7%). Both of those instances were precursors to a substantial escalation in hourly earnings growth.

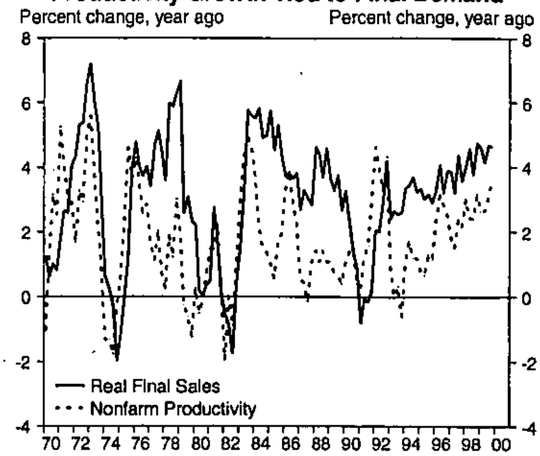
The diffusion of this pickup in average hourly earnings across industry groups also is noteworthy (see table at the top of page 6). The annualized pace of gain in the past three months has increased versus the prior year/year figure by a full percent or more in manufacturing (excluding overtime pay), mining, and financial, insurance, and real estate service firms; by 0.5%-0.9% for construction and business services organizations; and by about a quarter-point for transportation and public utilities employees. Among the eight major industry classes for which adjusted data are available, growth in average hourly earnings has slowed recently in just two: wholesale and retail trade. These sectors comprise less than one-fourth of total payroll employment.

A Widespread Upturn In Average Hourly Earnings Growth
(seasonally adjusted, annual rates)

	Dec 98/ Dec 99	Dec 99/ Mar 00	Change
Total	3.5%	4.8%	1.3%
Goods-producing:			
Manufacturing Ex. Overtime	3.5	4.6	1.1
Mining	-1.0	4.3	5.3
Construction	3.7	4.4	0.7
Service-producing:			
Transportation/ Public Utilities	3.0	3.3	0.3
Wholesale Trade	4.1	3.5	-0.6
Retail Trade	4.2	3.5	-0.7
Finance, Insurance, and Real Estate	2.4	4.7	2.3
Other Private Services	4.0	4.5	0.5

Source: Department of Labor. Our calculations.

Productivity Growth Tied to Final Demand



Source: Department of Commerce. Department of Labor.

Productivity Offsets to Higher Labor Costs May Prove More Elusive

Unit labor cost pressures have not posed a problem for business in this expansion to date because productivity enhancements have more than kept pace with the rise in nominal compensation. In fact, due to extraordinarily rapid gains in output per hour during 1999, unit labor cost growth slowed throughout the year, to 1.7% on an annual-average basis and a mere 0.7% on a fourth-quarter to fourth-quarter comparison. The latter figure marked a three-year low for this key component of total expenses.

It is questionable, however, whether the anticipated strengthening of current-dollar compensation expenses in 2000-2001 will prove similarly benign for total business costs. It will be difficult for firms to sustain productivity on an accelerating path during the coming quarters, for two reasons:

1. **Gains in output per hour already are high for a mature stage of a business expansion.** The 3.6% year-to-year rise in nonfarm productivity for the fourth quarter was at the upper end of what has been achieved in the past 30 years, outside the late-recession and early-recovery intervals of the economic cycle. Whereas production can readily outstrip hours worked when economic resources are plentiful, this becomes harder to sustain when labor and capital resources are being more fully utilized.

2. **Financial conditions are apt to tighten, which should suppress both demand and productivity growth.** Federal Reserve officials have repeatedly stressed their desire to see a slowdown in U.S. spending growth and their inclination to keep ratcheting up pressure on financial conditions until this occurs, so as to mitigate the dangers of economic and financial imbalances. Nonfarm productivity growth usually moves in sympathy with domestic spending vigor (see chart above). Therefore, if the Fed is ultimately successful in achieving their stated macroeconomic policy objectives, then output per hour is more likely to moderate going forward rather than gain speed.

Profits and the Dollar May Give Early Core Inflation Warnings

The primary risks of a prospective strengthening in underlying inflation pressures derive from the potential for sturdy labor cost increases to motivate more aggressive pricing behavior by firms. Particular attention in this regard should be paid to service-producing industries, where the labor cost component of total variable expenses tends to be highest and limited competition from imports provides less resistance to price hikes than in the tradable-goods arena. Even in the merchandise sector, domestic pricing flexibility could be enhanced if nonpetroleum import prices continue to move up.

Therefore, if labor costs show greater momentum soon, as we expect, there are two variables that are particularly appropriate for focus as potential leading indicators of a core inflation upturn:

1. **Corporate profits.** Any material erosion in profit margins, especially in services, may spur faster cost-based price increases.

2. **The trade-weighted dollar exchange rate.** A weaker U.S. currency would help to sustain the recent upswing in foreign goods prices, which in turn could grant domestic producers more opportunities to pass through their cost increases to customers.

John Youngdahl

Goldman Sachs Financial Conditions Index

	Latest Week*	Mar	Feb	Jan	Contribution to GSFCI Change 3 mo	6 mo	12 mo
GSFCI (index 1987-95=100)	96.52	96.51	96.67	96.56	-0.03	-0.52	0.38
3-month LIBOR (%)	6.28	6.20	6.10	6.04	0.06	-0.02	0.35
A-Rated Corporate Bond Yield (%)	8.00	8.07	8.06	8.15	-0.13	-0.06	0.37
Real GS Trade-Weighted $ (index 1990=100)	121.84	121.79	120.82	117.85	0.19	0.17	0.05
Market Cap**/GDP (%)	195.42	199.07	189.69	190.58	-0.14	-0.61	-0.39

* Ending Wednesday ** Wilshire 5000

Key U.S. Economic Data

	Latest Monthly Data '00 Mar	'00 Feb	'00 Jan	'99 Dec	6 Mo Trend	12 Mo Trend	Next Release
Nonfarm Payrolls (ch. thousands)	416	7	394	309	278	242	May 5
Unemployment Rate (%)	4.1	4.1	4.0	4.1	4.1	4.2	
Index of Hours Worked (% ch)	0.3	-0.2	0.6	0.1	3.1	2.5	
Average Hourly Earnings (% ch)	0.4	0.4	0.4	0.3	3.8	3.7	
Producer Price Finished Goods Index (% ch)	1.0	1.0	0.0	0.2	4.7	4.6	May 12
Excluding food and energy	0.1	0.3	-0.2	0.1	1.0	1.2	
Consumer Price Index (% ch)	0.7	0.5	0.2	0.2	4.1	3.7	May 16
Excluding food and energy (% ch)	0.4	0.2	0.2	0.1	2.5	2.4	
Retail Sales (% ch)	0.4	1.8	0.7	1.9	13.4	10.5	May 11
Excluding motor vehicles (% ch)	1.4	1.8	-0.2	2.0	13.9	10.3	
Industrial Production (% ch)	0.3	0.1	1.0	0.5	5.8	5.1	May 16
Manufacturing	0.4	0.1	0.8	0.4	6.6	5.7	
Capacity Utilization (%)	81.4	81.5	81.6	81.1	81.3	80.9	May 16
Manufacturing	80.6	80.6	80.7	80.3	80.5	80.1	
Housing Starts (annual rate, thousands)	–	1781	1758	1769	1706	1675	Apr 18
Single-family	–	1310	1363	1441	1349	1332	
Trade Balance (billions, monthly)	–	--	-28.0	-24.6	-25.1	-23.3	Apr 19
Merchandise	–	--	-34.7	-31.5	-31.9	-29.9	
Factory Orders (% ch)	–	-0.8	-1.2	3.8	4.2	8.4	May 3
Durable Goods	–	-2.7	-1.9	6.5	0.7	7.4	Apr 26
Personal Income (% ch)	--	0.4	0.7	0.3	6.5	5.9	Apr 28
Wages and Salaries	–	0.3	0.9	0.7	6.6	6.3	
Purchasing Managers' Index (%)	55.8	56.9	56.3	56.8	56.6	55.7	May 1
Consumer Sentiment U Mich (Feb 66=100)	107.1	111.3	112.0	105.4	107.7	106.9	Apr 28
Conference Board (1985=100)	136.7	140.8	144.7	141.7	138.6	137.5	Apr 25

Note: Percentage changes are month to month for last four months, annualized for 6- and 12-month trends. 6- and 12-month figures for levels (e.g., unemployment rate) are averages over those periods.

U.S. Calendar

Focus for the Week Ahead

- Housing starts are likely to have declined modestly last month, as multifamily starts ease after climbing sharply in February (April 18).
- The trade balance may narrow slightly, as nonpetroleum merchandise imports decline after recent large gains. The impressive strength of consumer outlays, however, suggests that the risks lie mainly on the side of a wider deficit than our forecast (April 19).
- A projected small year-to-year deterioration in the March federal budget balance will mask significant underlying improvement in the budget outlook. The deficit will be boosted by a calendar quirk that raised outlays in March and the fact that tax refunds are going out more quickly than a year ago. Receipts should be up sharply, aided by a big jump in corporate remittances (April 20).

Economic Releases and Other Events

			Estimate		
Date	Time	Indicator	GS	Consensus	Last Report
Tue Apr 18	8:30	Housing Starts (Mar)	-2.0%	-2.4%	+1.3%
Wed Apr 19	8:30	Trade Balance (Feb)	$-27.5 bn	$-28.5 bn	$-28.0 bn
Thu Apr 20	10:00	Philadelphia Fed Survey (Apr)	+10.0%	+21.0%	+25.0%
	2:00	Federal Budget Balance (Mar)	$-23.5 bn	$-23.6 bn	$-41.7 bn

- G7 Meeting (Sat, April15)
- Homebuilders' Survey (Mon, Apr 17)
- Treasury Announces 2-Year Note (Wed, Apr 19 – 2:30)

Interest Rates: Forecast vs. Forward Yields

	3 mo	6 mo	12 mo
LIBOR 3-month	6.6%	6.8%	7.0%
Forward	6.6	6.9	7.0
2-Year T-Note	6.6	6.6	6.9
Forward	6.4	6.4	6.5
10-Year T-Note	6.6	6.6	6.9
Forward	6.0	6.0	6.0

Key Numbers in the Business Outlook

	1999	2000			
	Q4	Q1E	Q2E	1999	2000E
Real GDP	7.3%	6.0%	3.7%	4.1%	5.3%
Ind. Prod., Mfg.	7.1	6.2A	8.2	4.2	6.8
CPI	2.9	4.0A	3.7	2.2	3.2
After-Tax Profits*	6.7	2.8	2.3	4.1	1.9
Unemployment	4.1	4.1A	3.9	4.2	3.9

* Excluding inventory profits; adjusted for depreciation distortions.

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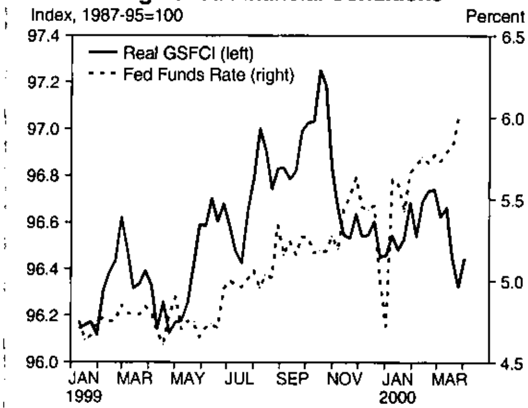
U.S. Economics Analyst

Tighter Financial Conditions Needed to Slow Growth

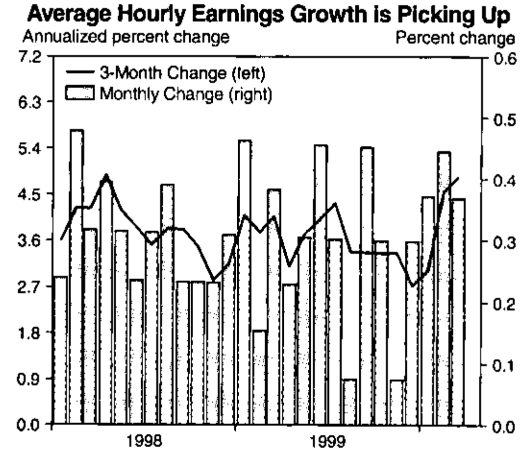
- Despite a 125-basis-point rise in the target federal funds rate since last June, with more to come, financial conditions have not tightened. This implies that the economy will stay stronger for longer than generally expected, and that financial conditions will need to be tightened. Interest rates will probably be the primary mechanism, with both short- and long-term rates rising significantly over the next 18 months.
- The expectation that the economy will slow in response to Fed tightening is misplaced when the rise in the federal funds rate target does not result in changes in those variables—such as the private sector interest rates, the exchange value of the dollar, and the level of equity prices—that constitute the key transmission mechanisms of monetary policy.
- Chairman Greenspan's speech at the White House Conference on the New Economy contained one important new element: He made it crystal clear that the FOMC has no intention of targeting stock prices. Otherwise, the message was the same. More tightening lies ahead as long as the economy continues to grow at a rate inconsistent with a stable unemployment rate and current account imbalance.
- The economy retains considerable forward momentum. In fact, given the strength of construction spending and the strong trend of hours worked, our 5% real GDP growth estimate for the first quarter may be too low. Moreover, there are signs that compensation cost inflation is picking up. If this were to continue, Fed officials might conclude that the current employment rate already is too low.

Rate Hikes Have Not Tightened Financial Conditions



Source: Federal Reserve Board, Goldman Sachs.

Average Hourly Earnings Growth is Picking Up



Source: Department of Labor.

Trade Recommendations

- We were stopped out on our short T-note futures trade at 99.01.
- Put on a curve steepener, long the 2-year T-note (6 1/2% of March '02) and short the 5-year T-note (5 7/8% of November '04), currently -15 basis points, with a target of +5 basis points, and a stop on a close wider than -25 basis points.

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Issue No: 00/14
April 7, 2000

I. Weekly Wrap-Up

Q1 Growth May Top Our 5.0% Estimate

Markets paid little attention to economic news this week. Rather, bonds and equities went on a wild ride driven by fears of overvaluation in the tech sector, but ended up roughly flat from week-earlier levels.

In the economic arena, consumer spending appears to have moderated in March from its surprisingly strong growth pace in January and February, as we have been anticipating. The Goldman Sachs Retail Index of comparable chain-store sales was only 1.5% in March, indicating the slowest year-to-year growth pace since January 1996. Furthermore, annualized domestic motor vehicle sales fell to about 15.1 million from the February peak of 16.3 million.

Growth in the manufacturing sector, while still strong, also appears to have eased slightly in March. The NAPM composite index receded a bit to 55.8 from 56.9 in February. Nonetheless, this index has now been above 55.0 for seven consecutive months, a feat unparalleled since early 1995. The March NAPM report also suggests that trade drag may not ease as rapidly as implied by the February report, since the spread between the NAPM export and import indexes narrowed to nearly zero from a peak of five percentage points in February.

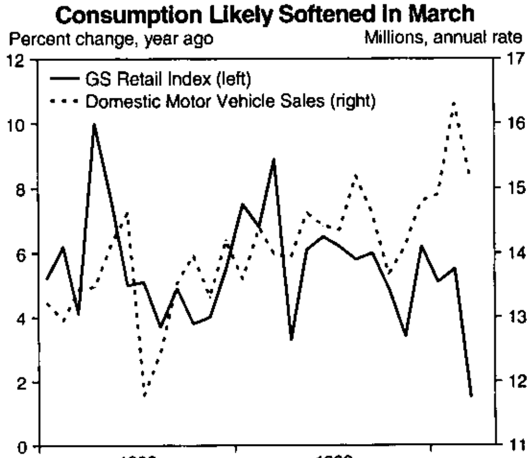
The construction sector continues to surprise on the upside, implying that interest rate hikes are not having much of an effect on building activity. Real construction spending is currently trending at a 21.8% annual rate in Q1, a figure unseen since 1984. This figure is extraordinarily high and therefore susceptible to a setback in March or a downward revision to data for prior months.

Meanwhile, the labor market remains tight, potentially fueling labor cost pressures. Nonfarm payrolls rose by 416,000 in March following a meager gain of 7,000 in February, although excluding the temporary rise in census workers, payrolls grew by only 299,000. The unemployment rate also remained at 4.1%. However, the third consecutive 0.4% increase in average hourly earnings is a sign that extremely tight labor supplies may finally be leading to an acceleration in wage growth.

Fed Unlikely to Be Swayed by Stock Price Swings

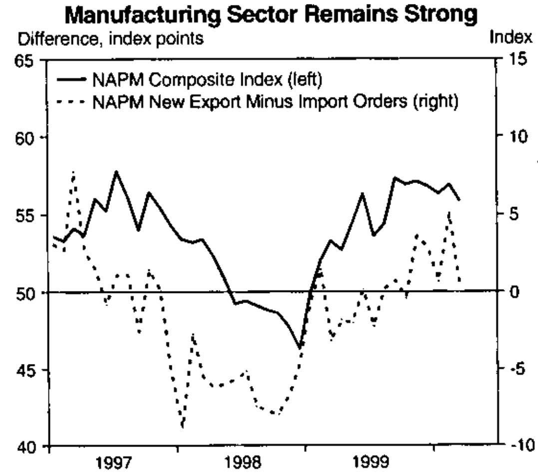
In our view, the wild swings that have occurred in stock prices in the past week—especially the huge intraday sell-off on Tuesday, April 4—are unlikely to have much effect on monetary policy. First, the market's behavior does not reflect new information about the prospects for economic growth or corporate profits, both of which remain good. Second, even the large intraday setbacks have been small relative to prior gains, and the evidence suggests that longer-term stock price gains are what matter for economic activity. Third, the sell-off has had compensating effects on conditions in other financial markets, so that the GSFCI has only tightened a little. Fourth, Chairman Greenspan and other Fed officials implied this week that they continue to see a need for tighter financial conditions, the stock market gyrations notwithstanding. Mr. Greenspan made it clear in his speech at the White House Conference on the New Economy that he had no intention of targeting asset prices.

Consumption Likely Softened In March



Source: Department of Commerce. Goldman Sachs.

Manufacturing Sector Remains Strong



Source: National Association of Purchasing Management.

Improved Prospects for U.S.-China Trade Accord Approval

By scheduling the House vote on permanent normal trade relations (PNTR) with China for late May, the Republican leadership has strengthened the probability that the measure will pass, clearing the way for China's entry into the World Trade Organization. House Speaker Dennis Hastert (R-IL) and Majority Leader Dick Armey (R-TX) are strong supporters of trade barrier reduction, and this matter presents them with an opportunity to display willingness to work with the Clinton Administration, insulating them from charges of excessive partisanship. Thus, they have exercised their discretion to set the vote relatively early in this legislative session. Resistance to PNTR for China likely would grow over time among House Democrats, who already are uncomfortable casting a vote against organized labor's expressed preferences and will feel even greater pressure during the run-up to the fall elections.

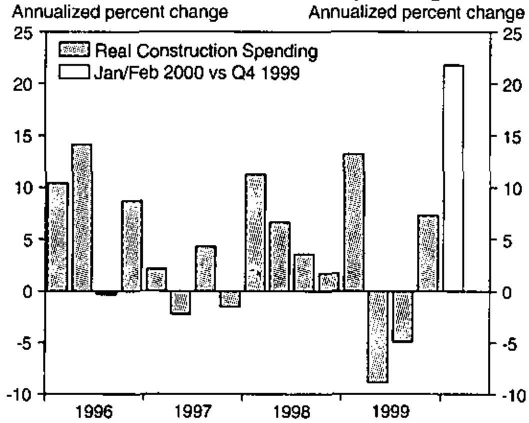
At the White House Conference on the New Economy, President Clinton highlighted the importance he places on a positive vote for PNTR for China as a further step toward global trade expansion. He also gave no evidence of increased strains between the administration and the Federal Reserve as a consequence of the central bank's monetary tightening strategy. We continue to believe that the Fed possesses a relatively free hand to push up interest rates as it sees fit based on economic conditions, despite the approach of the 2000 presidential and congressional elections.

Yield Curve Inversion Has Gone Too Far

Note: The following comments reflect trading views and may differ from our longer-term interest rate forecast.

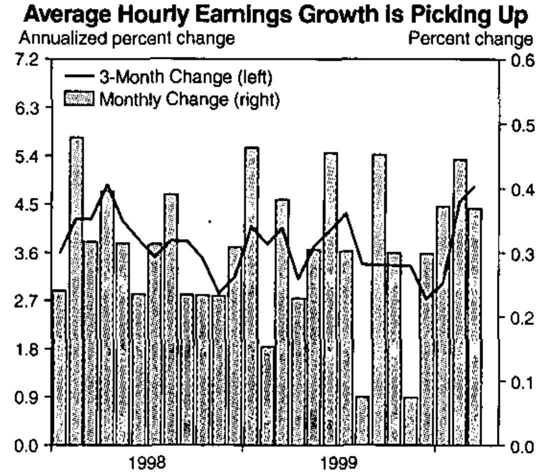
The volatility in the equity market on Tuesday caused us to be narrowly stopped out on our short June T-note futures trade. Despite this, we retain a bearish bias. As we discuss in more detail in the center section article, financial conditions have not been tightened yet, which implies that the FOMC will raise its federal funds rate target higher, for longer than generally anticipated. This suggests that the yield inversion of the Treasury note market is overdone. On April 6, we recommended implementing a yield curve "disinversion" trade—long the 2-year T-note (6 1/2% of March '02) and short the 5-year T-note (5 7/8% of November '04), at the current yield spread of -15 basis points. Our target for the trade is +5 basis points, and we would stop out the trade on a close wider than -25 basis points.

Rate Hikes Do Not Appear to Have Affected Construction Spending



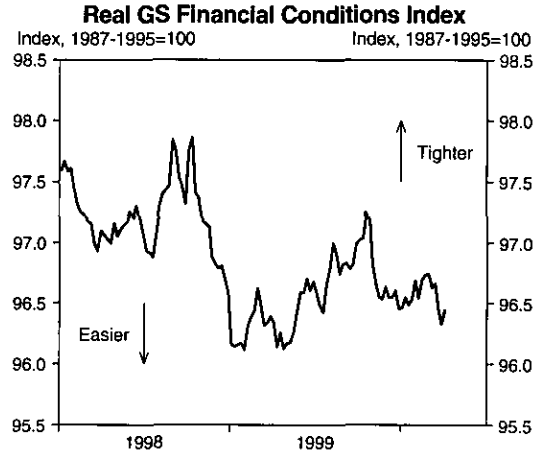
Source: Department of Commerce.

Average Hourly Earnings Growth Is Picking Up



Source: Department of Labor.

Real GS Financial Conditions Index



Note: See page 7 for additional detail.
Source: Goldman Sachs.

II. Tighter Financial Conditions Needed to Slow Growth

The consensus is that the Federal Open Market Committee will raise its federal funds rate target to 6.50%-6.75% by year-end and that this will be sufficient to slow real GDP growth to a sustainable pace. We strongly disagree with this assessment because past rate hikes have not tightened financial conditions and the expected tightening moves are also not likely to have much impact.

In our view, the notion that the economy will slow because the FOMC has pushed up its federal funds rate target is based upon a misconception of how a tighter monetary policy generates slower economic growth. The impact of monetary policy tightening on economic activity depends upon its impact on those variables—such as private-sector interest rates and stock prices—that act as the major transmission mechanisms of monetary policy. If a higher federal funds rate target does not lead to a tightening of financial conditions, then it is unlikely to lead to slower growth.

This implies that financial conditions will need to be tightened significantly further. Because we believe that the stock market will prove resistant to higher interest rates and expect the dollar to weaken as the pace of growth outside the United States climbs, this means the burden is likely to fall on short- and long-term interest rates. Over the next 18 months, Fed officials are likely to be forced to tighten monetary policy significantly more than expected. Given the flatness of the yield curve, this should also lead to a rise in longer-term interest rates.

Financial Conditions Are What Matters

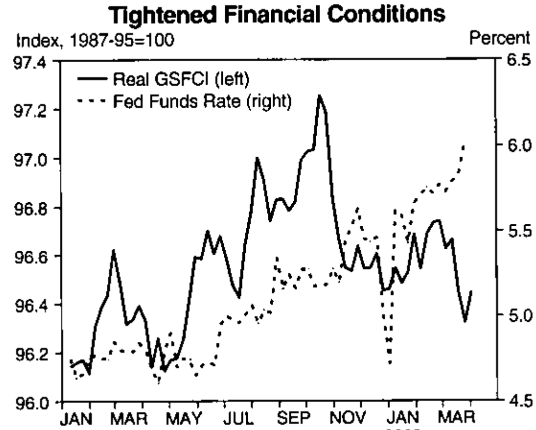
The impact of monetary policy on economic activity is exerted through four transmission mechanisms:

1. **Spending on housing and consumer durables.** Higher short- and long-term interest rates dampen the demand for housing and consumer durables.
2. **The foreign exchange value of the dollar and trade.** Higher interest rate differentials between the United States and its leading trading partners can cause the dollar to appreciate. This appreciation then can dampen economic growth by leading to deterioration in trade performance.
3. **Wealth and consumption.** Higher interest rates can dampen the pace of equity and real estate price appreciation. If wealth then grows more slowly than disposable income, the result is likely to be a rise in the desired household saving rate and slower consumer spending growth.
4. **Business fixed investment spending.** Higher interest rates and lower stock prices increase the cost of capital, and this can inhibit investment spending.

The impact of monetary policy on the real economy depends upon how changes in the target federal funds rate affect the variables that drive these monetary transmission mechanisms. Often the linkages between the federal funds rate and long-term interest rates, the exchange value of the dollar, and stock market valuation are loose. When this is the case, a focus on the federal funds rate can paint a very misleading picture of how changes in monetary policy are likely to affect the economy. Also, the impact of changes in the nominal federal funds rate may be undermined by changes in the rate of inflation. When inflation is rising, this will tend to dampen the magnitude of the rise in the real federal funds rate (and other real interest rates), which will undercut the impact on the economy.

Both of these factors have tended to undermine the power of monetary policy since the FOMC began its tightening moves last June. The 125-basis-point rise in the nominal federal funds rate target has not tightened the Goldman Sachs Financial Conditions Index (GSFCI) as seen in the chart below. The rise in inflation caused by higher oil prices has offset some of the rise in the nominal federal funds rate target. For example, in the year ending the first quarter of 1999, the GDP deflator was rising at a 1.4% annual rate on a year-over-year basis. By the fourth quarter, the GDP deflator had climbed to a 1.6% annual rate. More importantly, the strength of the U.S. equity market has offset the rise in real 3-month LIBOR and A-rated corporate bond yields. As can be seen in the

Rate Hikes Have Not Tightened Financial Conditions



Source: Federal Reserve Board, Goldman Sachs.

chart at right, the restraining influence of higher real short- and long-term interest rates has been offset by the robust equity market.

Nor is this situation likely to be changed by the additional 50-75 basis points of tightening anticipated by market participants. This reflects the fact that such tightening cannot be expected to affect the dollar, bond, or stock values significantly as it is already anticipated, and thus, discounted in current prices. For example, if real 3-month LIBOR were to increase by 75 basis points, holding the other variables in the GSFCI constant, the GSFCI would increase by about 1/4 percentage point (see chart at bottom right). Thus, financial conditions would only be marginally tighter.

Why Higher Interest Rates Are Likely

Our analysis leads to four major conclusions:

1. **The economy is likely to remain more robust than expected.**

If financial conditions have not been tightened, then expectations that the economy will slow because the federal funds rate target has been increased are apt to be disappointed.

This conclusion does not mean that the monetary policy tightening will not restrain activity in certain sectors of the economy. For example, the rise in short- and long-term interest rates can be expected to dampen activity in the housing sector. The point is that the negative impact on growth in one area may be offset by stimulus in other areas. In the current situation, the restraint exerted by higher interest rates on housing and consumer durable goods outlays is likely to be offset by the consumption encouraged by the rapid buildup of wealth created by the strong equity market.

The wealth/disposable income ratio is still rising and this has been associated with a falling household saving rate, which signals that consumer spending is growing faster than income. For example, in February the household saving rate dropped to 0.8%, a post-World War II low.

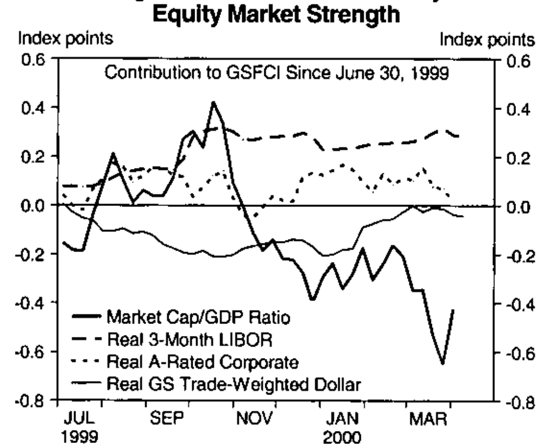
The fact that financial conditions have not been tightened also does not mean that the economy cannot slow somewhat. That is because the economy will soon lose the benefits of the easing of financial conditions that occurred in late 1998 and early 1999. Thus, GDP growth will probably moderate somewhat, just not enough to reach the 3 1/2%-4% annualized growth pace sought by Fed officials.

2. **Financial conditions will likely need to be tightened further.**

The anticipated trajectory of the GSFCI (assuming future tightening moves of about 75 basis points) implies that real GDP growth on a year-over-year basis will remain well above a 4% rate through 2001. Based upon the relationship between the GSFCI and real GDP growth, we calculate (all else equal) that the GSFCI would need to be tightened by about one percentage point this year to push real GDP in 2001 down into a 3 1/2%-4% range on a fourth quarter to fourth quarter basis.[1]

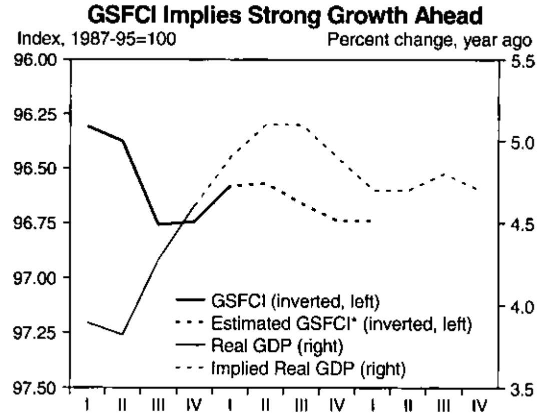
Of course, all else is not equal. Factors that affect the economy that are not captured by the GSFCI such as fiscal policy and trade are becoming less restrictive. This suggests that an even larger tightening in

Higher Interest Rates Offset by Equity Market Strength



Source: Goldman Sachs.

GSFCI Implies Strong Growth Ahead



* Assuming three 25 basis point rises in real 3-month LIBOR over next six months.
Source: Our estimates.

[1] Given the lags between changes in financial conditions and the impact on economic activity, the growth path for 2000 is largely "baked in the cake."

financial conditions may be required to bring real GDP growth down below 4% next year.

The appetite for further fiscal restraint is being eroded by the large budget surpluses that are already in train. The overall budget surplus is likely to substantially exceed the surplus in the Social Security trust fund accounts this year. This means that even if the Social Security surplus is off-limits, scope remains for spending increases and tax reduction. Already, both the administration and the Republican Congress have proposed scrapping the spending caps on discretionary outlays. Thus, a further rapid rise in the federal budget surplus appears very unlikely after this fiscal year.

On the trade front, the story is the recovery in activity abroad. As growth is expected to continue to climb abroad—we recently raised our global growth forecast for 2001 to 4.2%—this points to much diminished trade drag going forward.

3. The tightening in financial conditions will mainly occur via higher short- and long-term interest rates.

In particular, the dollar appears unlikely to appreciate in light of the growing current account deficit and the narrowing in relative economic performance between the United States and the rest of the world. Moreover, the stock market is not likely to be very vulnerable to higher interest rates. Despite 125 basis points of tightening to date and an expectation of a further 50-75 basis points of tightening ahead, the Wilshire 5000 index has advanced by about 16% over the past year.

The historical track record also suggests that the bulk of tightening will occur via higher interest rates. Since 1973, there have been six episodes in which the GSFCI has been tightened by 1 percentage point or more for at least three quarters (we set this standard to avoid those episodes in which the tightening was either trivial or not of sufficient duration to have much impact on the real GDP growth rate).

As can be seen in the table below, these episodes can be divided into two general types: tightening during the early stages of economic recovery (1975-1976 and 1983-1984) and episodes in which the economy was at risk of overheating (1977-1978, 1980-1982, 1987, and 1993-1994). On average, a rise in interest rates accounted for nearly 80% of the tightening of financial conditions. The smallest contribution from interest rates occurred in 1983-1984, when a strong dollar and a weak equity market also helped to tighten financial conditions. But even in this case, the two interest rate components accounted for 60% of the tightening in the GSFCI.

The equity market played a dominant role only once, namely when the 1987 stock market crash tightened financial conditions significantly. However, even then interest rates played an important role, because a dramatic rise in the yields on longer-dated fixed income instruments triggered the 1987 stock crash, and the reversal of that yield spike cushioned the economy afterwards.

4. The bond market is vulnerable.

Higher bond yields will likely be an important aspect of any tightening in financial conditions. First, market expectations concerning the path of short-term interest rates appear to be overly optimistic. Not only do market participants not expect much further tightening, but they also think that the rise in short-term interest rates will be short-lived. This can be inferred from the flatness of the Eurodollar futures market yield curve beyond December 2000.

Second, the risk premium embodied in long-dated assets is low. This can be seen in the shape of the Treasury yield curve beyond two years. Market participants appear to be confident that Fed officials will be able to achieve a soft landing without difficulty. If the economy continues to barrel ahead and inflation begins to drift higher, these expectations could be challenged, pushing longer-dated yields higher.

Bill Dudley

Past GSFCI Tightening Episodes

Period	Magnitude of GSFCI Tightening (basis points)	Contribution from Real 3M LIBOR (% of total)	Contribution from Real A Corporate (% of total)	Contribution from Log of Real TWI (% of total)	Contribution from Log of Market Cap/GDP (% of total)	Total Change in Nominal Fed Funds Rate (basis points)
1975Q2-1976Q3	351	33.6	53.7	9.3	3.3	-14
1977Q2-1978Q4	267	67.2	10.3	-17.0	39.4	442
1980Q3-1982Q2	763	30.6	42.0	14.2	13.0	467
1983Q2-1984Q3	372	29.8	30.2	11.0	29.2	259
1987Q1-1987Q4	145	26.6	40.6	-19.7	52.8	70
1993Q4-1994Q4	250	46.6	53.0	-9.3	9.4	218

Goldman Sachs Financial Conditions Index

	Latest Week*	Mar	Feb	Jan	Contribution to GSFCI Change 3 mo	6 mo	12 mo
GSFCI (index 1987-95=100)	96.45	96.51	96.67	96.56	-0.01	-0.58	0.12
3-month LIBOR (%)	6.29	6.20	6.10	6.04	0.06	0.01	0.35
A-Rated Corporate Bond Yield (%)	8.00	8.07	8.06	8.15	-0.11	-0.02	0.32
Real GS Trade-Weighted $ (index 1990=100)	121.27	121.79	120.82	117.85	0.17	0.16	0.01
Market Cap**/GDP (%)	197.41	199.07	189.69	190.58	-0.13	-0.73	-0.56

* Ending Wednesday ** Wilshire 5000

Key U.S. Economic Data

	Latest Monthly Data '00 Mar	'00 Feb	'00 Jan	'99 Dec	6 Mo Trend	12 Mo Trend	Next Release
Nonfarm Payrolls (ch. thousands)	416	7	394	309	278	242	May 5
Unemployment Rate (%)	4.1	4.1	4.0	4.1	4.1	4.2	
Index of Hours Worked (% ch)	0.3	-0.2	0.6	0.1	3.1	2.5	
Average Hourly Earnings (% ch)	0.4	0.4	0.4	0.3	3.8	3.7	
Producer Price Finished Goods Index (% ch)	--	1.0	0.0	0.1	4.4	4.0	Apr 13
Excluding food and energy	--	0.3	-0.2	0.1	1.9	1.0	
Consumer Price Index (% ch)	--	0.5	0.2	0.2	3.4	3.2	Apr 14
Excluding food and energy (% ch)	--	0.2	0.2	0.1	2.3	2.1	
Retail Sales (% ch)	--	1.1	0.4	1.9	10.5	9.4	Apr 13
Excluding motor vehicles (% ch)	--	1.0	-0.5	2.0	9.9	8.1	
Industrial Production (% ch)	--	0.3	1.1	0.5	6.4	5.6	Apr 14
Manufacturing	--	0.3	1.0	0.4	7.1	5.9	
Capacity Utilization (%)	--	81.7	81.7	81.1	81.2	80.9	Apr 14
Manufacturing	--	80.9	80.9	80.4	80.4	80.0	
Housing Starts (annual rate, thousands)	--	1781	1758	1769	1706	1675	Apr 18
Single-family	--	1310	1363	1441	1349	1332	
Trade Balance (billions, monthly)	--	--	-28.0	-24.6	-25.1	-23.3	Apr 19
Merchandise	--	--	-34.7	-31.5	-31.9	-29.9	
Factory Orders (% ch)	--	-0.8	-1.2	3.8	4.2	8.4	May 3
Durable Goods	--	-2.7	-1.9	6.5	0.7	7.4	Apr 26
Personal Income (% ch)	--	0.4	0.7	0.3	6.5	5.9	Apr 28
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Note: Percentage changes are month to month for last four months, annualized for 6- and 12-month trends. 6- and 12-month figures for levels (e.g., unemployment rate) are averages over those periods.

U.S. Calendar

Focus for the Week Ahead

- Producer prices will again be boosted sharply by higher gasoline prices. The core reading, however, should be well-behaved (April 13).
- Retail sales are likely to have grown more slowly due to a decline in motor vehicle sales in March from February's lofty rate. However, higher gasoline prices will help increase sales outside of the motor vehicle sector (April 13).
- Consumer prices will also increase sharply due to higher gasoline prices. However, the core inflation reading should be very soft as some of the spikes in prices last month (e.g., airlines and shelter costs) moderate (April 14).
- Industrial production is likely to rise only slightly given the drop in factory production hours in the payroll employment report. The capacity utilization rate should dip as a result (April 14).

Economic Releases and Other Events

Date	Time	Indicator	Estimate GS	Estimate Consensus	Last Report
Thu Apr 13	8:30	Producer Price Index (Mar)	+0.6%	+0.6%	+1.0%
		Excluding Food & Energy	+0.1%	+0.1%	+0.3%
	8:30	Retail Sales (Mar)	+0.2%	+0.3%	+1.1%
		Excluding Autos	+0.6%	+0.6%	+1.0%
Fri Apr 14	8:30	Consumer Price Index (Mar)	+0.5%	+0.5%	+0.5%
		Excluding Food & Energy	+0.1%	+0.2%	+0.2%
	8:30	Business Inventories (Feb)	+0.7%	+0.5%	+0.5%
	9:15	Industrial Production (Mar)	+0.1%	+0.5%	+0.3%
	9:15	Capacity Utilization (Mar)	81.5%	81.8%	81.7%

- Richmond Fed Survey (Tue, Apr 11 – 10:00)
- Import and Export Prices (Wed, Apr 12 – 8:30)
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- FHLMC 30-Year Bond Settlement (Fri, Apr 14)
- Chairman Greenspan speaks on Technology and Financial Services before the Journal of Financial Services Research and American Enterprise Institute (Fri, Apr 14 – 12:00)
- G7 Meeting, Washington, D.C. (Sat, Apr 15)

Interest Rates: Forecast vs. Forward Yields

	3 mo	6 mo	12 mo
LIBOR 3-month	6.6%	6.8%	7.0%
Forward	6.6	7.0	6.9
2-Year T-Note	6.6	6.6	6.9
Forward	6.4	6.4	6.4
10-Year T-Note	6.6	6.6	6.9
Forward	5.9	5.9	5.9

Key Numbers in the Business Outlook

	1999 Q4	2000 Q1E	Q2E	1999	2000E
Real GDP	7.3%	5.0%	3.7%	4.1%	5.0%
Ind. Prod., Mfg.	7.1	7.1	8.2	4.2	7.0
CPI	2.9	3.7	2.5	2.2	2.9
After-Tax Profits*	6.7	2.8	2.3	4.1	1.9
Unemployment	4.1	4.1A	3.9	4.2	3.9

* Excluding inventory profits; adjusted for depreciation distortions.

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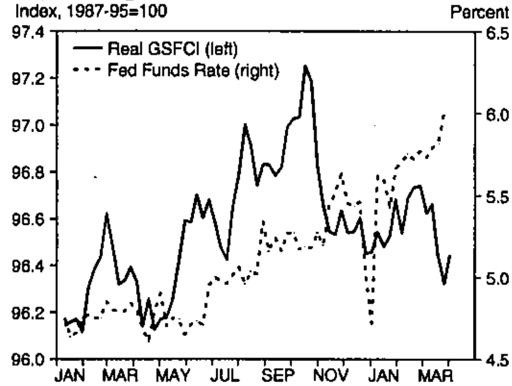
U.S. Economics Analyst

Tighter Financial Conditions Needed to Slow Growth

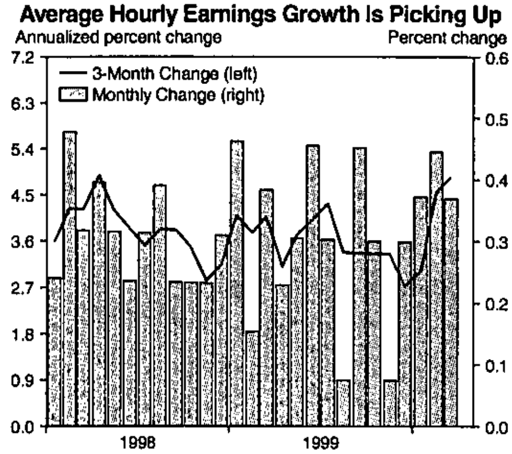
- Despite a 125-basis-point rise in the target federal funds rate since last June, with more to come, financial conditions have not tightened. This implies that the economy will stay stronger for longer than generally expected, and that financial conditions will need to be tightened. Interest rates will probably be the primary mechanism, with both short- and long-term rates rising significantly over the next 18 months.
- The expectation that the economy will slow in response to Fed tightening is misplaced when the rise in the federal funds rate target does not result in changes in those variables—such as the private sector interest rates, the exchange value of the dollar, and the level of equity prices—that constitute the key transmission mechanisms of monetary policy.
- Chairman Greenspan's speech at the White House Conference on the New Economy contained one important new element: He made it crystal clear that the FOMC has no intention of targeting stock prices. Otherwise, the message was the same. More tightening lies ahead as long as the economy continues to grow at a rate inconsistent with a stable unemployment rate and current account imbalance.
- The economy retains considerable forward momentum. In fact, given the strength of construction spending and the strong trend of hours worked, our 5% real GDP growth estimate for the first quarter may be too low. Moreover, there are signs that compensation cost inflation is picking up. If this were to continue, Fed officials might conclude that the current employment rate already is too low.

Rate Hikes Have Not Tightened Financial Conditions



Source: Federal Reserve Board. Goldman Sachs.

Average Hourly Earnings Growth Is Picking Up



Source: Department of Labor.

Trade Recommendations

- We were stopped out on our short T-note futures trade at 99.01.
- Put on a curve steepener, long the 2-year T-note (6 1/2% of March '02) and short the 5-year T-note (5 7/8% of November '04), currently -15 basis points, with a target of +5 basis points, and a stop on a close wider than -25 basis points.

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Issue No: 00/14
April 7, 2000

I. Weekly Wrap-Up

Q1 Growth May Top Our 5.0% Estimate

Markets paid little attention to economic news this week. Rather, bonds and equities went on a wild ride driven by fears of overvaluation in the tech sector, but ended up roughly flat from week-earlier levels.

In the economic arena, consumer spending appears to have moderated in March from its surprisingly strong growth pace in January and February, as we have been anticipating. The Goldman Sachs Retail Index of comparable chain-store sales was only 1.5% in March, indicating the slowest year-to-year growth pace since January 1996. Furthermore, annualized domestic motor vehicle sales fell to about 15.1 million from the February peak of 16.3 million.

Growth in the manufacturing sector, while still strong, also appears to have eased slightly in March. The NAPM composite index receded a bit to 55.8 from 56.9 in February. Nonetheless, this index has now been above 55.0 for seven consecutive months, a feat unparalleled since early 1995. The March NAPM report also suggests that trade drag may not ease as rapidly as implied by the February report, since the spread between the NAPM export and import indexes narrowed to nearly zero from a peak of five percentage points in February.

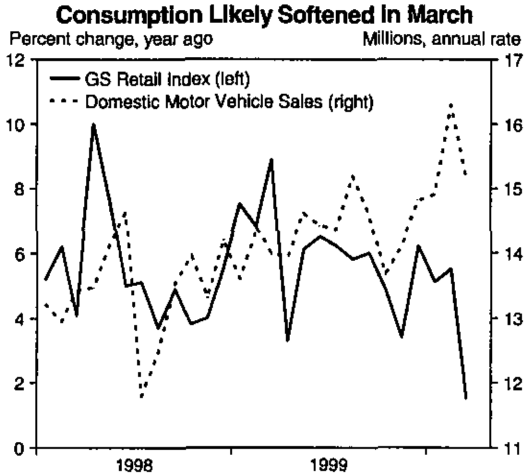
The construction sector continues to surprise on the upside, implying that interest rate hikes are not having much of an effect on building activity. Real construction spending is currently trending at a 21.8% annual rate in Q1, a figure unseen since 1984. This figure is extraordinarily high and therefore susceptible to a setback in March or a downward revision to data for prior months.

Meanwhile, the labor market remains tight, potentially fueling labor cost pressures. Nonfarm payrolls rose by 416,000 in March following a meager gain of 7,000 in February, although excluding the temporary rise in census workers, payrolls grew by only 299,000. The unemployment rate also remained at 4.1%. However, the third consecutive 0.4% increase in average hourly earnings is a sign that extremely tight labor supplies may finally be leading to an acceleration in wage growth.

Fed Unlikely to Be Swayed by Stock Price Swings

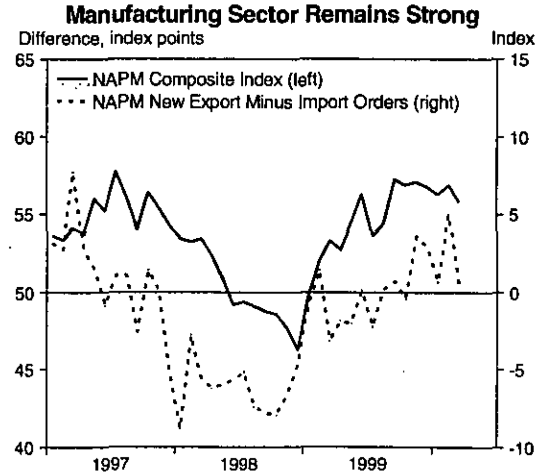
In our view, the wild swings that have occurred in stock prices in the past week—especially the huge intraday sell-off on Tuesday, April 4—are unlikely to have much effect on monetary policy. First, the market's behavior does not reflect new information about the prospects for economic growth or corporate profits, both of which remain good. Second, even the large intraday setbacks have been small relative to prior gains, and the evidence suggests that longer-term stock price gains are what matter for economic activity. Third, the sell-off has had compensating effects on conditions in other financial markets, so that the GSFCI has only tightened a little. Fourth, Chairman Greenspan and other Fed officials implied this week that they continue to see a need for tighter financial conditions, the stock market gyrations notwithstanding. Mr. Greenspan made it clear in his speech at the White House Conference on the New Economy that he had no intention of targeting asset prices.

Consumption Likely Softened in March



Source: Department of Commerce. Goldman Sachs.

Manufacturing Sector Remains Strong



Source: National Association of Purchasing Management.

Improved Prospects for U.S.-China Trade Accord Approval

By scheduling the House vote on permanent normal trade relations (PNTR) with China for late May, the Republican leadership has strengthened the probability that the measure will pass, clearing the way for China's entry into the World Trade Organization. House Speaker Dennis Hastert (R-IL) and Majority Leader Dick Armey (R-TX) are strong supporters of trade barrier reduction, and this matter presents them with an opportunity to display willingness to work with the Clinton Administration, insulating them from charges of excessive partisanship. Thus, they have exercised their discretion to set the vote relatively early in this legislative session. Resistance to PNTR for China likely would grow over time among House Democrats, who already are uncomfortable casting a vote against organized labor's expressed preferences and will feel even greater pressure during the run-up to the fall elections.

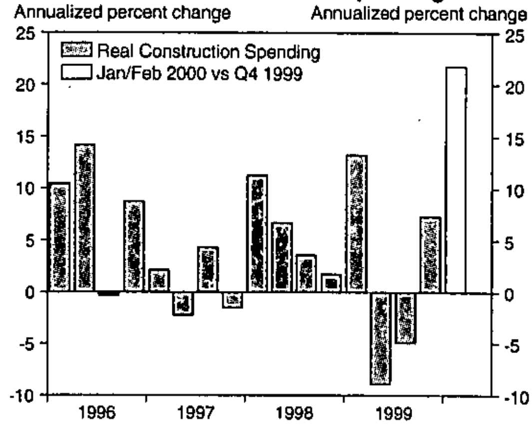
At the White House Conference on the New Economy, President Clinton highlighted the importance he places on a positive vote for PNTR for China as a further step toward global trade expansion. He also gave no evidence of increased strains between the administration and the Federal Reserve as a consequence of the central bank's monetary tightening strategy. We continue to believe that the Fed possesses a relatively free hand to push up interest rates as it sees fit based on economic conditions, despite the approach of the 2000 presidential and congressional elections.

Yield Curve Inversion Has Gone Too Far

Note: The following comments reflect trading views and may differ from our longer-term interest rate forecast.

The volatility in the equity market on Tuesday caused us to be narrowly stopped out on our short June T-note futures trade. Despite this, we retain a bearish bias. As we discuss in more detail in the center section article, financial conditions have not been tightened yet, which implies that the FOMC will raise its federal funds rate target higher, for longer than generally anticipated. This suggests that the yield inversion of the Treasury note market is overdone. On April 6, we recommended implementing a yield curve "disinversion" trade—long the 2-year T-note (6 1/2% of March '02) and short the 5-year T-note (5 7/8% of November '04), at the current yield spread of -15 basis points. Our target for the trade is +5 basis points, and we would stop out the trade on a close wider than -25 basis points.

Rate Hikes Do Not Appear to Have Affected Construction Spending



Source: Department of Commerce.

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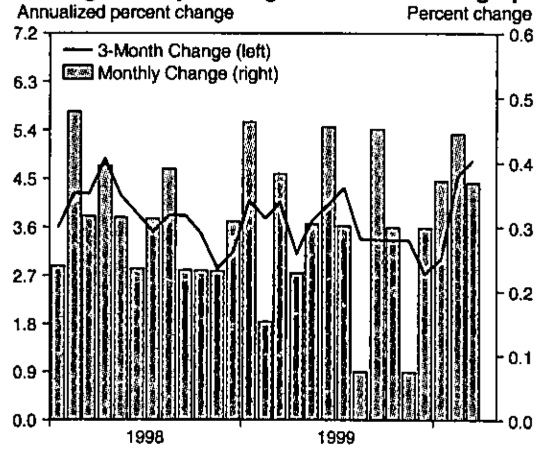
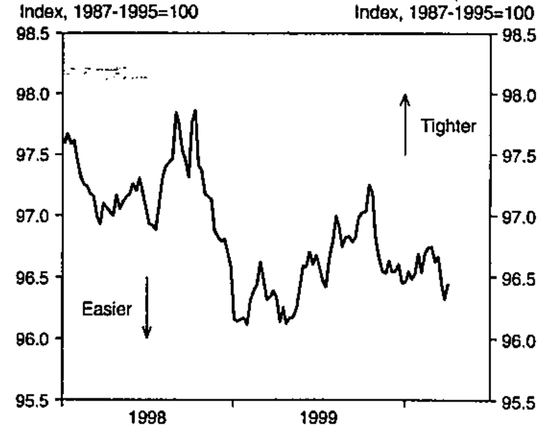


Source: Department of Labor.

Real GS Financial Conditions Index



Note: See page 7 for additional detail.
Source: Goldman Sachs.

II. Tighter Financial Conditions Needed to Slow Growth

The consensus is that the Federal Open Market Committee will raise its federal funds rate target to 6.50%-6.75% by year-end and that this will be sufficient to slow real GDP growth to a sustainable pace. We strongly disagree with this assessment because past rate hikes have not tightened financial conditions and the expected tightening moves are also not likely to have much impact.

In our view, the notion that the economy will slow because the FOMC has pushed up its federal funds rate target is based upon a misconception of how a tighter monetary policy generates slower economic growth. The impact of monetary policy tightening on economic activity depends upon its impact on those variables—such as private-sector interest rates and stock prices—that act as the major transmission mechanisms of monetary policy. If a higher federal funds rate target does not lead to a tightening of financial conditions, then it is unlikely to lead to slower growth.

This implies that financial conditions will need to be tightened significantly further. Because we believe that the stock market will prove resistant to higher interest rates and expect the dollar to weaken as the pace of growth outside the United States climbs, this means the burden is likely to fall on short- and long-term interest rates. Over the next 18 months, Fed officials are likely to be forced to tighten monetary policy significantly more than expected. Given the flatness of the yield curve, this should also lead to a rise in longer-term interest rates.

Financial Conditions Are What Matters

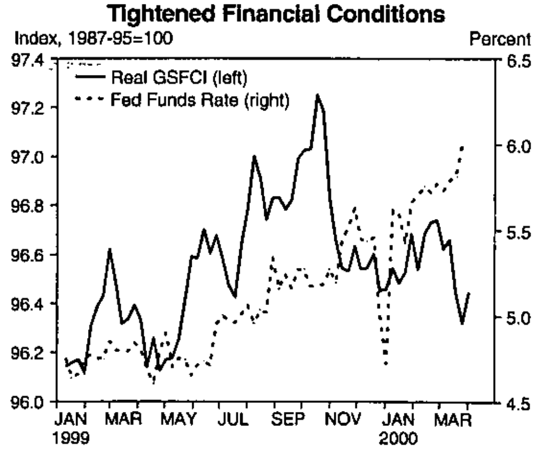
The impact of monetary policy on economic activity is exerted through four transmission mechanisms:

1. **Spending on housing and consumer durables.** Higher short- and long-term interest rates dampen the demand for housing and consumer durables.
2. **The foreign exchange value of the dollar and trade.** Higher interest rate differentials between the United States and its leading trading partners can cause the dollar to appreciate. This appreciation then can dampen economic growth by leading to deterioration in trade performance.
3. **Wealth and consumption.** Higher interest rates can dampen the pace of equity and real estate price appreciation. If wealth then grows more slowly than disposable income, the result is likely to be a rise in the desired household saving rate and slower consumer spending growth.
4. **Business fixed investment spending.** Higher interest rates and lower stock prices increase the cost of capital, and this can inhibit investment spending.

The impact of monetary policy on the real economy depends upon how changes in the target federal funds rate affect the variables that drive these monetary transmission mechanisms. Often the linkages between the federal funds rate and long-term interest rates, the exchange value of the dollar, and stock market valuation are loose. When this is the case, a focus on the federal funds rate can paint a very misleading picture of how changes in monetary policy are likely to affect the economy. Also, the impact of changes in the nominal federal funds rate may be undermined by changes in the rate of inflation. When inflation is rising, this will tend to dampen the magnitude of the rise in the real federal funds rate (and other real interest rates), which will undercut the impact on the economy.

Both of these factors have tended to undermine the power of monetary policy since the FOMC began its tightening moves last June. The 125-basis-point rise in the nominal federal funds rate target has not tightened the Goldman Sachs Financial Conditions Index (GSFCI) as seen in the chart below. The rise in inflation caused by higher oil prices has offset some of the rise in the nominal federal funds rate target. For example, in the year ending the first quarter of 1999, the GDP deflator was rising at a 1.4% annual rate on a year-over-year basis. By the fourth quarter, the GDP deflator had climbed to a 1.6% annual rate. More importantly, the strength of the U.S. equity market has offset the rise in real 3-month LIBOR and A-rated corporate bond yields. As can be seen in the

Rate Hikes Have Not Tightened Financial Conditions



Source: Federal Reserve Board. Goldman Sachs.

chart at right, the restraining influence of higher real short- and long-term interest rates has been offset by the robust equity market.

Nor is this situation likely to be changed by the additional 50-75 basis points of tightening anticipated by market participants. This reflects the fact that such tightening cannot be expected to affect the dollar, bond, or stock values significantly as it is already anticipated, and thus, discounted in current prices. For example, if real 3-month LIBOR were to increase by 75 basis points, holding the other variables in the GSFCI constant, the GSFCI would increase by about 1/4 percentage point (see chart at bottom right). Thus, financial conditions would only be marginally tighter.

Why Higher Interest Rates Are Likely

Our analysis leads to four major conclusions:

1. **The economy is likely to remain more robust than expected.**

If financial conditions have not been tightened, then expectations that the economy will slow because the federal funds rate target has been increased are apt to be disappointed.

This conclusion does not mean that the monetary policy tightening will not restrain activity in certain sectors of the economy. For example, the rise in short- and long-term interest rates can be expected to dampen activity in the housing sector. The point is that the negative impact on growth in one area may be offset by stimulus in other areas. In the current situation, the restraint exerted by higher interest rates on housing and consumer durable goods outlays is likely to be offset by the consumption encouraged by the rapid buildup of wealth created by the strong equity market.

The wealth/disposable income ratio is still rising and this has been associated with a falling household saving rate, which signals that consumer spending is growing faster than income. For example, in February the household saving rate dropped to 0.8%, a post-World War II low.

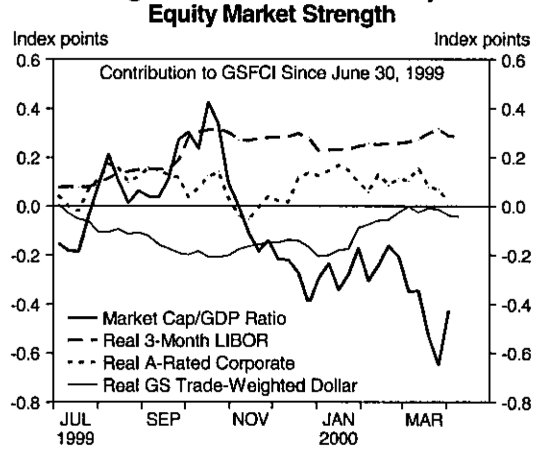
The fact that financial conditions have not been tightened also does not mean that the economy cannot slow somewhat. That is because the economy will soon lose the benefits of the easing of financial conditions that occurred in late 1998 and early 1999. Thus, GDP growth will probably moderate somewhat, just not enough to reach the 3 1/2%-4% annualized growth pace sought by Fed officials.

2. **Financial conditions will likely need to be tightened further.**

The anticipated trajectory of the GSFCI (assuming future tightening moves of about 75 basis points) implies that real GDP growth on a year-over-year basis will remain well above a 4% rate through 2001. Based upon the relationship between the GSFCI and real GDP growth, we calculate (all else equal) that the GSFCI would need to be tightened by about one percentage point this year to push real GDP in 2001 down into a 3 1/2%-4% range on a fourth quarter to fourth quarter basis.[1]

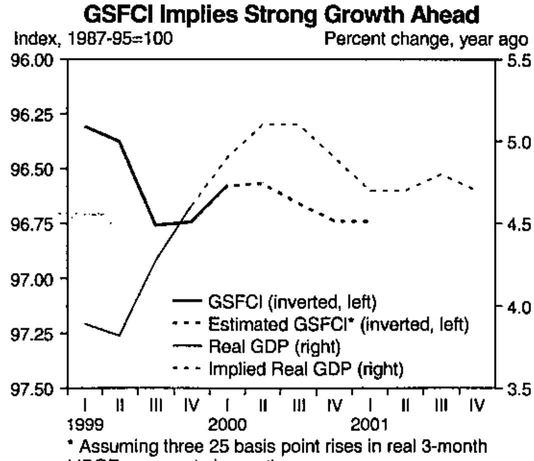
Of course, all else is not equal. Factors that affect the economy that are not captured by the GSFCI such as fiscal policy and trade are becoming less restrictive. This suggests that an even larger tightening in

Higher Interest Rates Offset by Equity Market Strength



Source: Goldman Sachs.

GSFCI Implies Strong Growth Ahead



* Assuming three 25 basis point rises in real 3-month LIBOR over next six months.
Source: Our estimates.

[1] Given the lags between changes in financial conditions and the impact on economic activity, the growth path for 2000 is largely "baked in the cake."

financial conditions may be required to bring real GDP growth down below 4% next year.

The appetite for further fiscal restraint is being eroded by the large budget surpluses that are already in train. The overall budget surplus is likely to substantially exceed the surplus in the Social Security trust fund accounts this year. This means that even if the Social Security surplus is off-limits, scope remains for spending increases and tax reduction. Already, both the administration and the Republican Congress have proposed scrapping the spending caps on discretionary outlays. Thus, a further rapid rise in the federal budget surplus appears very unlikely after this fiscal year.

On the trade front, the story is the recovery in activity abroad. As growth is expected to continue to climb abroad—we recently raised our global growth forecast for 2001 to 4.2%—this points to much diminished trade drag going forward.

3. The tightening in financial conditions will mainly occur via higher short- and long-term interest rates.

In particular, the dollar appears unlikely to appreciate in light of the growing current account deficit and the narrowing in relative economic performance between the United States and the rest of the world. Moreover, the stock market is not likely to be very vulnerable to higher interest rates. Despite 125 basis points of tightening to date and an expectation of a further 50-75 basis points of tightening ahead, the Wilshire 5000 index has advanced by about 16% over the past year.

The historical track record also suggests that the bulk of tightening will occur via higher interest rates. Since 1973, there have been six episodes in which the GSFCI has been tightened by 1 percentage point or more for at least three quarters (we set this standard to avoid those episodes in which the tightening was either trivial or not of sufficient duration to have much impact on the real GDP growth rate).

As can be seen in the table below, these episodes can be divided into two general types: tightening during the early stages of economic recovery (1975-1976 and 1983-1984) and episodes in which the economy was at risk of overheating (1977-1978, 1980-1982, 1987, and 1993-1994). On average, a rise in interest rates accounted for nearly 80% of the tightening of financial conditions. The smallest contribution from interest rates occurred in 1983-1984, when a strong dollar and a weak equity market also helped to tighten financial conditions. But even in this case, the two interest rate components accounted for 60% of the tightening in the GSFCI.

The equity market played a dominant role only once, namely when the 1987 stock market crash tightened financial conditions significantly. However, even then interest rates played an important role, because a dramatic rise in the yields on longer-dated fixed income instruments triggered the 1987 stock crash, and the reversal of that yield spike cushioned the economy afterwards.

4. The bond market is vulnerable.

Higher bond yields will likely be an important aspect of any tightening in financial conditions. First, market expectations concerning the path of short-term interest rates appear to be overly optimistic. Not only do market participants not expect much further tightening, but they also think that the rise in short-term interest rates will be short-lived. This can be inferred from the flatness of the Eurodollar futures market yield curve beyond December 2000.

Second, the risk premium embodied in long-dated assets is low. This can be seen in the shape of the Treasury yield curve beyond two years. Market participants appear to be confident that Fed officials will be able to achieve a soft landing without difficulty. If the economy continues to barrel ahead and inflation begins to drift higher, these expectations could be challenged, pushing longer-dated yields higher.

Bill Dudley

Past GSFCI Tightening Episodes

Period	Magnitude of GSFCI Tightening (basis points)	Contribution from Real 3M LIBOR (% of total)	Contribution from Real A Corporate (% of total)	Contribution from Log of Real TWI (% of total)	Contribution from Log of Market Cap/GDP (% of total)	Total Change in Nominal Fed Funds Rate (basis points)
1975Q2-1976Q3	351	33.6	53.7	9.3	3.3	-14
1977Q2-1978Q4	267	67.2	10.3	-17.0	39.4	442
1980Q3-1982Q2	763	30.6	42.0	14.2	13.0	467
1983Q2-1984Q3	372	29.8	30.2	11.0	29.2	259
1987Q1-1987Q4	145	26.6	40.6	-19.7	52.8	70
1993Q4-1994Q4	250	46.6	53.0	-9.3	9.4	218

Goldman Sachs Financial Conditions Index

	Latest Week*	Mar	Feb	Jan	Contribution to GSFCI Change 3 mo	6 mo	12 mo
GSFCI (index 1987-95=100)	96.45	96.51	96.67	96.56	-0.01	-0.58	0.12
3-month LIBOR (%)	6.29	6.20	6.10	6.04	0.06	0.01	0.35
A-Rated Corporate Bond Yield (%)	8.00	8.07	8.06	8.15	-0.11	-0.02	0.32
Real GS Trade-Weighted $ (index 1990=100)	121.27	121.79	120.82	117.85	0.17	0.16	0.01
Market Cap**/GDP (%)	197.41	199.07	189.69	190.58	-0.13	-0.73	-0.56

* Ending Wednesday ** Wilshire 5000

Key U.S. Economic Data

	Latest Monthly Data '00 Mar	'00 Feb	'00 Jan	'99 Dec	6 Mo Trend	12 Mo Trend	Next Release
Nonfarm Payrolls (ch. thousands)	416	7	394	309	278	242	May 5
Unemployment Rate (%)	4.1	4.1	4.0	4.1	4.1	4.2	
Index of Hours Worked (% ch)	0.3	-0.2	0.6	0.1	3.1	2.5	
Average Hourly Earnings (% ch)	0.4	0.4	0.4	0.3	3.8	3.7	
Producer Price Finished Goods Index (% ch)	--	1.0	0.0	0.1	4.4	4.0	Apr 13
Excluding food and energy	--	0.3	-0.2	0.1	1.9	1.0	
Consumer Price Index (% ch)	--	0.5	0.2	0.2	3.4	3.2	Apr 14
Excluding food and energy (% ch)	--	0.2	0.2	0.1	2.3	2.1	
Retail Sales (% ch)	--	1.1	0.4	1.9	10.5	9.4	Apr 13
Excluding motor vehicles (% ch)	--	1.0	-0.5	2.0	9.9	8.1	
Industrial Production (% ch)	--	0.3	1.1	0.5	6.4	5.6	Apr 14
Manufacturing	--	0.3	1.0	0.4	7.1	5.9	
Capacity Utilization (%)	--	81.7	81.7	81.1	81.2	80.9	Apr 14
Manufacturing	--	80.9	80.9	80.4	80.4	80.0	
Housing Starts (annual rate, thousands)	--	1781	1758	1769	1706	1675	Apr 18
Single-family	--	1310	1363	1441	1349	1332	
Trade Balance (billions, monthly)	--	--	-28.0	-24.6	-25.1	-23.3	Apr 19
Merchandise	--	--	-34.7	-31.5	-31.9	-29.9	
Factory Orders (% ch)	--	-0.8	-1.2	3.8	4.2	8.4	May 3
Durable Goods	--	-2.7	-1.9	6.5	0.7	7.4	Apr 26
Personal Income (% ch)	--	0.4	0.7	0.3	6.5	5.9	Apr 28
Wages and Salaries	--	0.3	0.9	0.7	6.6	6.3	
Purchasing Managers' Index (%)	55.8	56.9	56.3	56.8	56.6	55.7	May 1
Consumer Sentiment U Mich (Feb 66=100)	107.1	111.3	112.0	105.4	107.7	106.9	Apr 28
Conference Board (1985=100)	136.7	140.8	144.7	141.7	138.6	137.5	Apr 25

Note: Percentage changes are month to month for last four months, annualized for 6- and 12-month trends. 6- and 12-month figures for levels (e.g., unemployment rate) are averages over those periods.

U.S. Calendar

Focus for the Week Ahead

- Producer prices will again be boosted sharply by higher gasoline prices. The core reading, however, should be well-behaved (April 13).
- Retail sales are likely to have grown more slowly due to a decline in motor vehicle sales in March from February's lofty rate. However, higher gasoline prices will help increase sales outside of the motor vehicle sector (April 13).
- Consumer prices will also increase sharply due to higher gasoline prices. However, the core inflation reading should be very soft as some of the spikes in prices last month (e.g., airlines and shelter costs) moderate (April 14).
- Industrial production is likely to rise only slightly given the drop in factory production hours in the payroll employment report. The capacity utilization rate should dip as a result (April 14).

Economic Releases and Other Events

Date	Time	Indicator	Estimate: GS	Estimate: Consensus	Last Report
Thu Apr 13	8:30	Producer Price Index (Mar)	+0.6%	+0.6%	+1.0%
		Excluding Food & Energy	+0.1%	+0.1%	+0.3%
	8:30	Retail Sales (Mar)	+0.2%	+0.3%	+1.1%
		Excluding Autos	+0.6%	+0.6%	+1.0%
Fri Apr 14	8:30	Consumer Price Index (Mar)	+0.5%	+0.5%	+0.5%
		Excluding Food & Energy	+0.1%	+0.2%	+0.2%
	8:30	Business Inventories (Feb)	+0.7%	+0.5%	+0.5%
	9:15	Industrial Production (Mar)	+0.1%	+0.5%	+0.3%
	9:15	Capacity Utilization (Mar)	81.5%	81.8%	81.7%

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	1999 Q4	2000 Q1E	2000 Q2E	1999	2000E
Real GDP	7.3%	5.0%	3.7%	4.1%	5.0%
Ind. Prod., Mfg.	7.1	7.1	8.2	4.2	7.0
CPI	2.9	3.7	2.5	2.2	2.9
After-Tax Profits*	6.7	2.8	2.3	4.1	1.9
Unemployment	4.1	4.1A	3.9	4.2	3.9

* Excluding inventory profits; adjusted for depreciation distortions.

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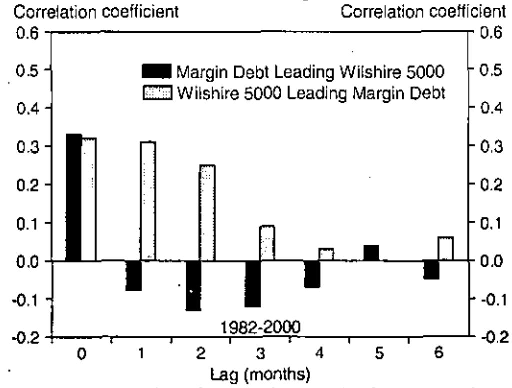
U.S. Economics Analyst

The Case Against Raising Margin Requirements

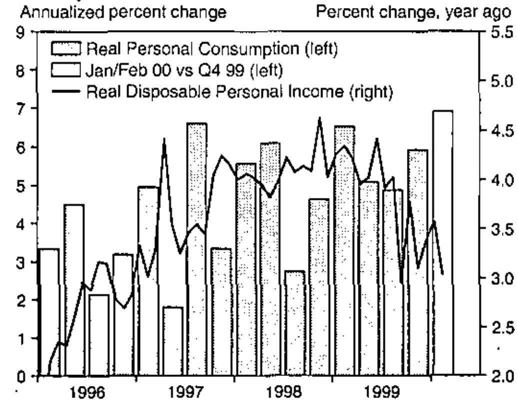
- Calls for raising margin requirements for stock purchase are misplaced for several reasons. Chief among them is the fact that investors can obtain leverage in other ways, including the purchase of derivative instruments and/or greater reliance on other forms of debt.
- Moreover, as Chairman Greenspan has noted recently, changes in margin debt do not appear to have a material effect on stock prices. The one discernible effect is that announcements of higher margin requirements can depress prices for a few days. This, coupled with the fact that margin requirements have not changed since 1974 and the Fed's concern about the effect of a soaring stock market on growth, creates a clear risk of unwanted effects should the Fed rethink its inclination to leave margin requirements alone.
- However, Fed officials appear to be focusing on other aspects of margin lending—in particular, lenders' obligations to ensure that investors with margin accounts possess suitable resources, experience, and appetites for the risks inherent in assuming the leverage involved in such activity. Maintaining vigilance on these matters will go a long way toward reducing the market's and the economy's vulnerability to a surge in margin calls if and when one develops.
- Demand for U.S. output remains firm, with real spending on a 6%-7% annualized growth track, home sales high despite rising interest rates, and backlogs of unfilled orders rising in the factory sector. Thus, our 5.0% estimate of growth in the first quarter remains subject to upside risk despite last week's report of a sharp deterioration in the U.S. trade balance.
- The economy's strength continues to buoy tax revenues. As a result, we now expect the federal surplus to top $200 billion in fiscal 2000.

Stock Price Changes Lead Margin Debt Changes, Not the Other Way Around



Source: New York Stock Exchange. Wall Street Journal. Our calculations.

Consumption Trend Remains Strong, Despite Moderation in Real Income Growth



Source: Department of Commerce.

Trade Recommendations

- Stay short June T-note futures, with a target of 92.16 and a stop on a close above 99.00.

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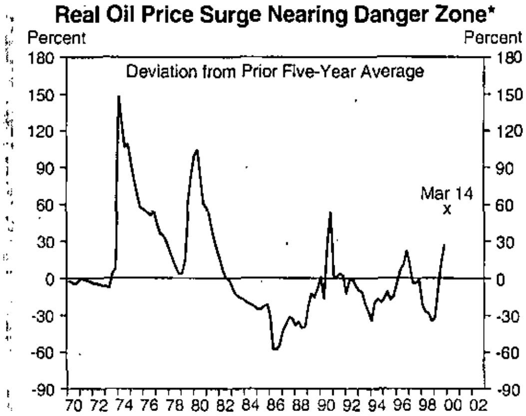
Thin Oil Supplies Pose Risk of Economic Hard Landing

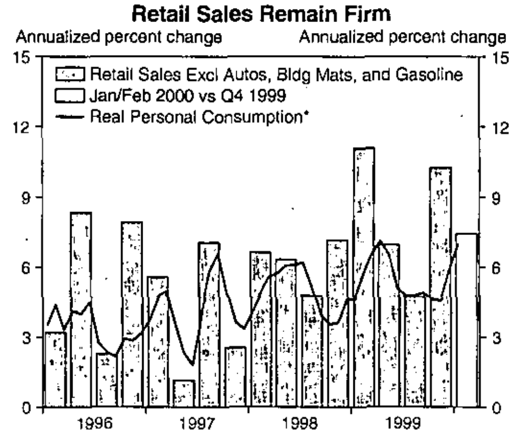
- In the past, higher oil prices have often preceded economic downturns. Thus, the current surge in prices represents a threat to a sustained economic expansion that should be taken seriously. This is particularly true because unusually lean inventories of crude oil and gasoline mean that supply and demand are finely balanced. Even small supply disruptions could lead to much higher oil prices, at least temporarily.
- Despite this, the risks that higher oil prices will generate a recession still appear to be low. That is because OPEC is likely to increase supply, causing oil prices to weaken somewhat over time. Moreover, the size of the shock that has occurred so far is small compared to past episodes that have led to recession. Oil prices would have to climb into a $50- to $60-barrel range for the shock to be of comparable magnitude.
- Meanwhile, the economy retains significant forward momentum. The strength in retail sales and solid gains in manufacturing output suggest that our 5% estimate for annualized real GDP growth in the first quarter could be too low. Although headline inflation climbed sharply for both producer and consumer prices, the pressures were mostly due to higher energy prices and one-off special factors.
- ***The Goldman Sachs Financial Conditions Index (GSFCI) will now be highlighted in this publication in two ways: A chart on page 3 will illustrate the recent behavior of the index, while a table at the top of page 7 will provide more detailed data including the contribution of the four components of the index over the past 12 months.***

Real Oil Price Surge Nearing Danger Zone*



* Price of West Texas Intermediate crude oil adjusted using the GDP price deflator.
Source: Department of Commerce. WEFA. Our estimates.

Retail Sales Remain Firm



* 3-month moving average versus 3 months ago.
Source: Department of Commerce.

Trade Recommendations

- Get short June T-note futures (currently 97.00), with a target of 92.16 and a stop on a close above 99.00.
- Maintain a long position in the December 2000/December 2002 Eurodollar futures spread, with a target of 80 basis points and a stop on a close below 10 basis points.

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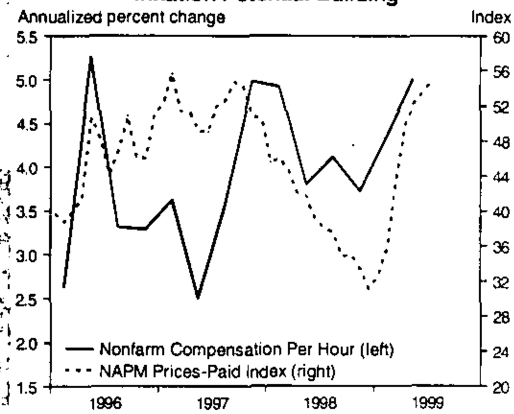
U.S. Economics Analyst

The Economic Impact of Y2K—An Update

- The latest economic data indicate that the U.S. growth trend has not weakened materially, and they suggest that prices could accelerate. Thus, we now believe that the FOMC will boost its federal funds rate target by another 25 basis points at its August 24 meeting. We have also revised our bond rate forecast to a year-end level of 6.1%, versus 5.8% previously.
- Further signs of potential inflation pressure have shown up in average hourly earnings, which rose 0.5% in June, in the productivity and cost report, which featured a 5.1% annualized surge in hourly compensation in the second quarter, and in the latest NAPM survey, which revealed increases in delivery lags and prices paid.
- Solid gains in nonfarm payrolls and in hours worked imply that real GDP is rising at a 3½%-4% annual rate this quarter, if not faster. Large gains in factory employment, coupled with all-time lows in inventories relative to sales, point to an acceleration in manufacturing output.
- We continue to expect Y2K to have a noticeable but not a cataclysmic effect on U.S. economic growth. In particular, we expect some defensive stockpiling of goods to boost annualized growth in the fourth quarter by about one percentage point, followed by a payback early next year.
- A survey of our industry analysts indicates that: (1) Systems fix-up outlays have peaked, (2) such outlays largely displaced other spending, (3) defensive stockpiling is apt to occur in some sectors, and (4) large and prolonged disruptions to output are unlikely early next year.

Inflation Potential Building



Source: Federal Reserve Board. National Association of Purchasing Management.

Industries Where a Y2K Impact on Inventory Building Is Likely

Industry	Analyst Comment
Industries where an impact is foreseen:	
Steel	Up to 10% for some firms
Paper	Up to 10% for some firms
Oil	Probably not more than 10%
Utilities (coal stocks)	Up 10% to one-third
Discount Stores	Extra stocks of selected items
Aerospace	Very modest buildup
Electrical Equipment	Very modest and selective
Newspapers	About 10% extra newsprint stock
Building Materials	Raw materials up 3% to 5%
Autos	A bit at the margin
Enterprise Hardware & Technical Software	Some firms plan buildups
Industries where additional customer buying is foreseen:	
Packaging	Anticipate increased orders
Food	Retailers pushing consumers to stockpile
Household Products	Expect higher shipments in Q3, Q4

Souce: Goldman Sachs research analysts.

Trade Recommendations

- Hold curve-steepening position, long 2-year T-notes and short 30-year T-bonds, with a target of 75 basis points. Move the stop to a close below 40 basis points, from 35 basis points previously.

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I. Weekly Wrapup

Economic and Market Overview

Markets have remained on edge as fresh data reveal a continued strong growth trend, persistent tightness in the labor market, and the potential for a higher inflation trend—all factors that make another Fed tightening likely later this month. It now seems unlikely that 30-year bond yields can move much below 6% this year, and we have modified our interest rate views accordingly (see page 8).

Manufacturing indicators remain buoyant. Although the NAPM composite index declined to 53.4% in July, led by sharp drops in the output and new orders indexes, all of these indicators remain firmly above 50%. Factory orders also rose a larger-than-expected 0.7% in June, bringing the year-over-year change to its highest level since December 1997. Furthermore, factory inventories declined for the seventh time in the last eight months, pushing the ratio of inventories to shipments to a new all-time low of 1.31. Such leanness in inventories portends strong growth in the months to come, especially given the potential for Y2K-related precautionary stockpiling (see pages 4-6).

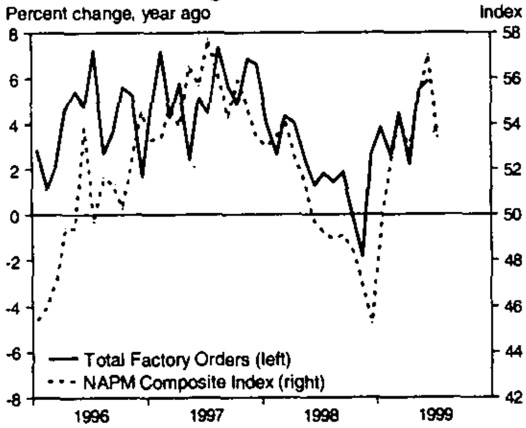
Ongoing strength in U.S. growth is certainly the main message in the latest labor data. Nonfarm payrolls rose 310,000 in July, from a June level that was revised up 38,000. Firms in the factory sector added 31,000 workers, and they boosted their production-line count by 48,000—the largest such increase in five years, abstracting from an auto strike rebound in the summer of 1998. Workweeks also lengthened in this sector, implying acceleration in industrial output. Likewise, the fact that hours worked in the nonfarm private sector were 3½% (at an annual rate) above their second-quarter average in July implies that the growth trend for real GDP has not softened. The number of jobless workers fell slightly in July, but not by enough to push the jobless rate down from its 4.3% June reading.

Average hourly earnings rose 0.5% in July to a level 4.6% at an annual rate above their level three months earlier and 3.8% above their level one year earlier. This was just the latest indication of a reversal of the deceleration in wages and labor costs that began in mid-1998. The Labor Department's index of hourly compensation jumped 5.1% at an annual rate in the second quarter. Coupled with a meager 1.3% gain in labor productivity that was largely foreshadowed by the GDP report, this pushed unit labor costs up at a 3.8% annual rate, marginally lifting the four-quarter trend to 1.4% from 1.3%. Meanwhile, the NAPM prices-paid index ticked up to 54.7%, its seventh consecutive rise, suggesting that costs of other inputs are rising as well.

Federal Reserve Policy

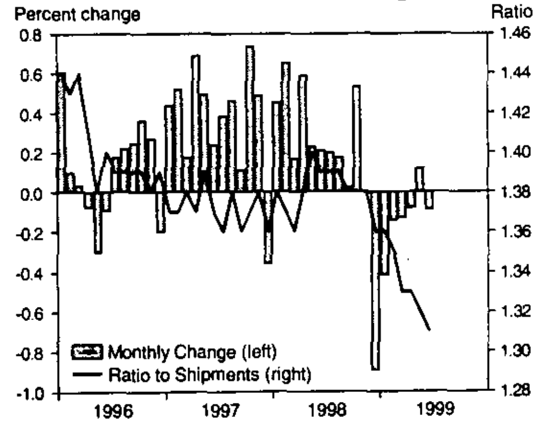
With all three major labor cost indicators looking firmer now than they did a few months ago, and with signs that overall economic growth may actually be picking up again, Fed officials will be hard-pressed to conclude that their recent slight monetary tightening is enough to forestall the development of inflationary imbalances. Thus, even if the coming monthly price reports prove to be relatively benign, we now assign a greater-than-50% probability to another 25-basis-point rate increase at the August 24 FOMC meeting. The July employment report suggests that unused labor supplies are still being slowly whittled down, and the upswing in factory activity should help to

Manufacturing Sector Remains Firm



Source: Department of Commerce, National Association of Purchasing Management.

Declining Factory Inventories Suggest Continued Economic Strength



Source: Department of Commerce.

sustain this trend awhile longer. Although inflation remains very low, the risks of an eventual upturn are rising as domestic resource strains intensify and business conditions overseas improve. Financial markets are now braced for higher short-term rates, so the path of least resistance would appear to lead toward a further tightening step later this month.

Fiscal and Political Developments

Just prior to adjourning for their month-long summer recess, the House and Senate each passed the compromise tax cut legislation hammered out by negotiators from the two chambers earlier this week. The 10-year, $792-billion plan would have almost no net fiscal balance impact in the first two years, and then would reduce federal revenues steadily by small annual increments amounting to 0.1%-0.3% of GDP over fiscal 2002-2008. These changes would include a gradual lowering of all income tax rates by 1%, a trimming of capital gains levies, reduced tax penalties for two-earner married couples, and a gradual elimination of estate taxes.

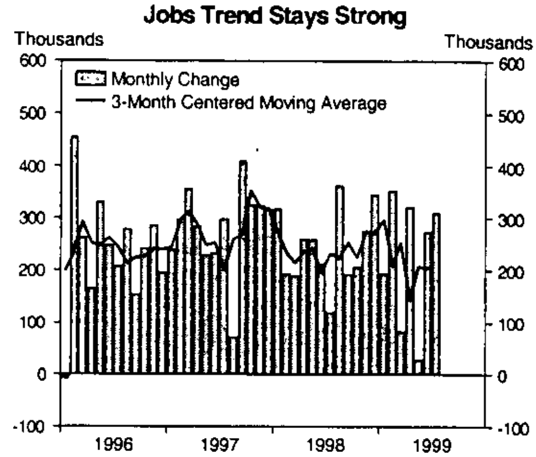
This bill will be withheld from the White House between now and September, while lawmakers use the interval to tout the measure and try to drum up pressure on President Clinton to sign it into law. However, these efforts should ultimately prove fruitless, as the president is committed to rejecting this tax package because it leaves very little money on the table for use in supporting and expanding the Medicare program or enhancing discretionary outlays. Thus, this week's developments simply move the budget process one step closer to a possible broad bipartisan negotiation later in the year.

Market Outlook and Comments on Value

Note: The following comments reflect trading views and may differ from our longer-term interest rate forecast.

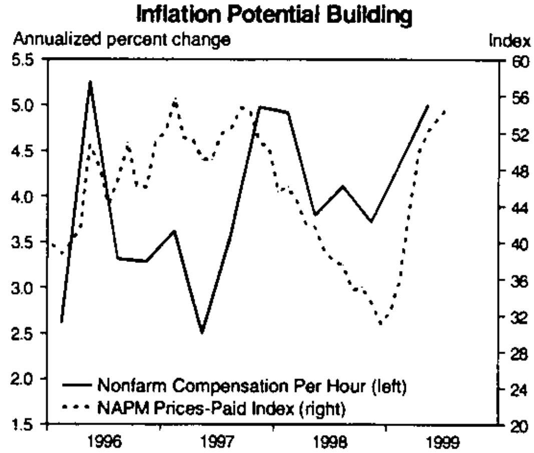
Although the increasing likelihood of a near-term Fed tightening has diminished our enthusiasm for the curve steepening trade we have been recommending (long 2-year/short 30-year), we would keep it on for a bit longer for two reasons. First, market sentiment is building in even more near-term tightening than we think is likely, including the possibility of a 50-basis-point hike in August. Second, in this jittery setting, the distribution of two long-duration issues in the quarterly Treasury refunding over the next few days could generate some further upward bond yield pressure. However, to reduce risk in this trade, we would move the stop to a close below 40 basis points, from 35 basis points previously.

Jobs Trend Stays Strong



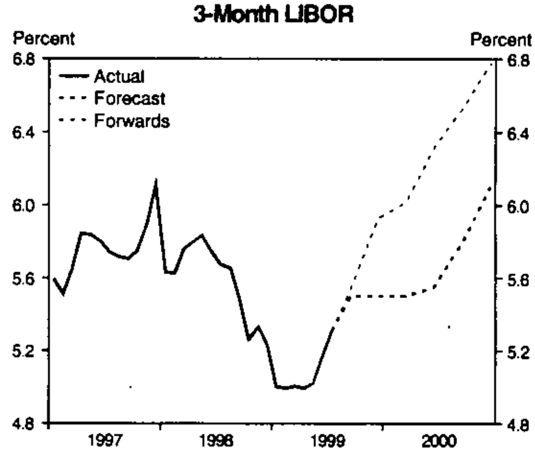
Source: Department of Labor.

Inflation Potential Building



Source: Federal Reserve Board. National Association of Purchasing Management.

3-Month LIBOR



Source: International Financial Statistics. Bloomberg. Our estimates.

II. The Economic Impact of Y2K—An Update

With the year 2000 less than five months away, it is time to review and update our expectations about how Y2K problems and the efforts to avoid them are apt to affect the U.S. economy. We have supplemented this analysis with a survey of our industry analysts. Their expectations and the information they have gathered from the companies they follow fit well with what we had already been projecting. Thus, we are not changing our outlook at this time.

In brief, we think that Y2K will have noticeable but far from cataclysmic effects on U.S. growth. The strongest impact on the pattern of near-term growth comes from the defensive stockpiling we expect later this year. Even a modest buildup of precautionary stocks would push growth in the fourth quarter about one percentage point above the underlying trend and take an even bigger bite out of the first quarter. These effects should overwhelm the effects of expenditures to fix computer systems, which appear to have peaked and are therefore likely to exert a slight drag on growth over the next two years as they wind down—barring serious disruptions early in the new year. Ironically, those disruptions, the avoidance of which is at the root of the whole problem, are unlikely to have a visible effect on real GDP growth even in the first quarter of next year.

Although another round of monetary tightening now looks quite likely later this month, the large potential for transitory disturbances to the trend of economic growth during the second half of 1999, coupled with the need to provide an elastic supply of liquidity over the turn of the year, suggest that Fed officials will endeavor to keep policy on an even keel in late 1999 and early 2000. Meanwhile, the financing of added inventory, coupled with the desire to maintain large liquidity positions, should keep corporate quality spreads at elevated levels through year-end, as discussed recently on these pages.[1]

First Principles: How Y2K Affects Growth

In our view, the appropriate framework for analyzing the effect of Y2K on economic growth is that of a natural disaster, as noted in our original treatment of this subject.[2] Typically, disasters such as hurricanes or earthquakes disrupt output for a short period and destroy part of the nation's capital stock. In their aftermath, growth usually picks up for awhile, as output losses are made up and the capital stock is repaired. In short, disasters usually stimulate economic activity rather than depress it (because destruction of the capital stock is not counted as negative output).

Y2K fits this model in the sense that we have recently discovered that part of the nation's capital stock—old computer code—is apt to break down on January 1. However, there is one critical difference: The timing of this particular disaster is known in advance. This has accelerated the fix-up, as firms have scrambled to head off the disaster. It may also induce both firms and individuals to try to shield themselves from its anticipated effects. Thus, we can conceptualize the economic impact into three major stages—the fix-up of computer systems that has long been underway, defensive stockpiling, and disruption.

These three stages are charted in the left column of page 5. Each panel shows the impact on the level of GDP; the effect on growth is shown as the slope of each curve. Vertical scales are purposely omitted, to emphasize the lack of reliable information on the magnitude of each factor. If such information were available, the charts could be scaled proportionately and "added up" to show the net impact on real GDP, before multiplier effects on employment, income and spending.

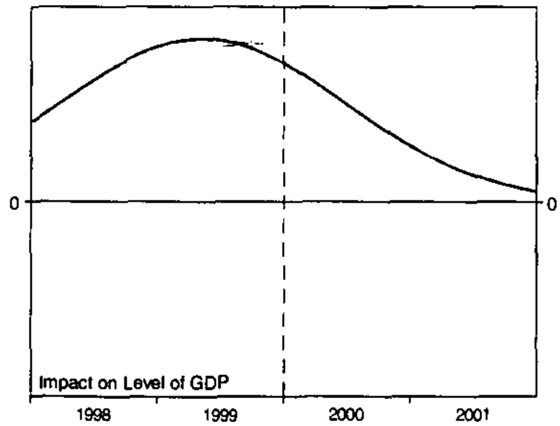
1. **Systems fix-up.** This is the part of the Y2K problem referred to in most estimates of its size—for example, the Gartner Group's widely quoted estimate that the fix-up in the United States would cost \$150-\$200 billion. These outlays are for labor, new software, and new hardware. They boost real GDP to the extent that: (a) they are not merely diversions of money that would have been spent anyway, and (b) recipients of payments for labor services spend some of the extra income on goods and services. The effect on real U.S. GDP would be reduced to the extent that the purchases were imports rather than domestic output. In principle, the final result would then be the area under the curve at the top of page 5.

   Our working assumption is that the level of such expenditure has probably just passed its peak. If so, then this component of the Y2K effect will be a drag on growth over the next couple of years as these outlays wind down—that is, unless large disruptions cause a spike in fix-up activity in

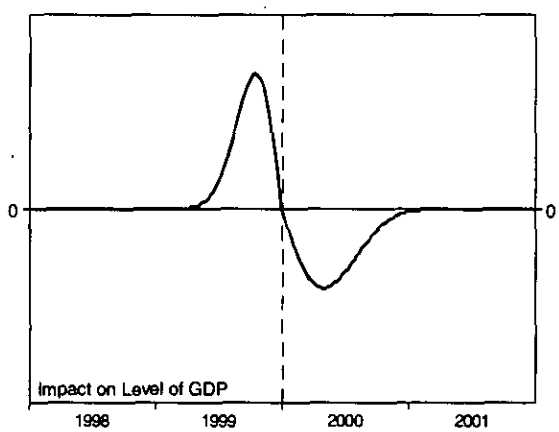
[1] See "Y2K Keeps Corporate Spreads Wide," *U.S. Economics Analyst*, July 16, 1999, pp. 4-6.

[2] See "Y2K: A Tremor, Not a Quake," *U.S. Economics Analyst*, June 5, 1998, pp. 4-6.

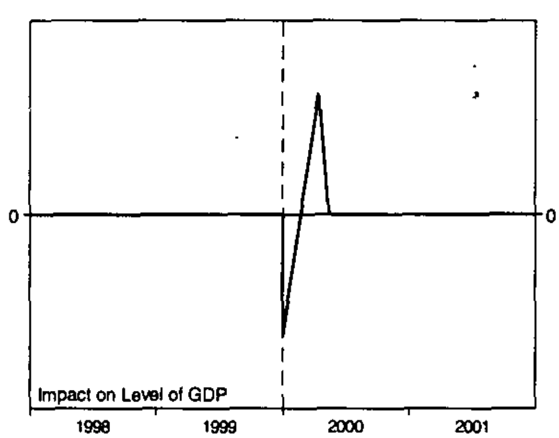
How Y2K Might Affect the Economy: Systems Fix-Up



How Y2K Might Affect the Economy: Defensive Stockpiling



How Y2K Might Affect the Economy: Disruption of Output



early 2000 (not shown in the chart). However, barring that possibility, the drag should be quite small. For example, even if all of the $200 billion were new outlays spread over the five years from 1997 through 2001, we estimate that the average impact on annualized growth would be on the order of 0.3 percentage points. The true figure is probably a lot lower given indications from our analysts that much of the expenditure has, in fact, been diverted from other projects.

2. **Defensive stockpiling.** To be safe, many firms and families are apt to stock up on items whose supplies they cannot afford to have interrupted, even if the probability of such an interruption is judged to be low. Examples for households include medicine, food, batteries, and candles. Examples for firms include any materials and supplies that are critical to maintaining their own operations, ranging from newsprint for newspaper publishers to energy for all firms.

   Unlike the outlays for systems fix-ups, defensive stockpiling of even modest dimensions can have a huge impact on growth patterns around the turn of the year. For example, if U.S. businesses were to add an extra $10 billion to their inventories during the fourth quarter, an increase of 0.7% in total stocks and about 6.5% if concentrated in stocks of materials and supplies, then annualized growth for the quarter will be 1.2 points higher if one-third of the additional goods were imported. Growth in the first quarter of 2000 would be suppressed by even more, as the accumulation of inventory would swing from above to below its underlying rate. Lacking hard information about the extra margins firms and individuals might want to build, we have arbitrarily been assuming an increase of about 5% in materials and supplies inventories—a growth increase of about one point in the fourth quarter, net of imports. We also assume that consumers will buy more essentials but that such purchases will be offset by the postponement of computer purchases.

3. **Disruptions to output.** Ironically, the problem that gives rise to all this activity—the potential for disruptions to output as computer systems fail—is unlikely to have a visible impact on real GDP growth, which is calculated on a quarterly basis. Disruptions that do occur are likely to be for much shorter periods of time, as illustrated in the chart. Thus, industrial production and other monthly indicators of activity may drop sharply in January and then rise sharply in February as production comes back on line. However, by the time the books close on first-quarter GDP at the

end of March, companies should have ample time to make up for lost output, with only minimal impact from sectors (like some services or time-sensitive goods such as newspapers) where losses in output cannot be recovered.

Perspective from the Industry Analysts

To check our assumptions, we surveyed the Goldman Sachs industry analysts. Specifically, we asked: (1) whether they foresaw precautionary stockpiling later this year and, if so, by what approximate percentage, (2) what changes they expected in spending on Y2K-related information technology, employment, or other items, and (3) whether they anticipated disruptions in output of a scale that would hurt earnings—*i.e.*, ones that would reduce revenues for an entire quarter and hence represent a material net loss of output.

As best we can judge, their responses are broadly in line with our assumptions. In the case of systems fix-ups, the analysts made two points. First, the rate of such spending has already peaked. Thus, its impact on near-term growth should be negative. Second, most such spending has displaced other projects, to which firms will now turn as the Y2K effort winds down. Thus, the impact will be considerably lower than the 0.3-point per year drag that would be implied if all of this spending were *de novo*.

With respect to defensive stockpiling, the analysts' views were mixed. Of the 26 responses for which the question was relevant (excluding financial and other services), 11 indicated that some inventory buildup was likely. Three more said that they or the firms they follow could see the potential for purchases by customers farther along the pipeline. Their comments are summarized in the table above. Even some of those not listed did not foreclose the possibility such stockpiling.

The extent of such stockpiling is obviously still a matter of considerable conjecture, as illustrated by the indefinite nature of the assessments. Likewise, the link between these responses and economy-wide inventory accumulation is tenuous. Nevertheless, we see enough support in these responses, which often cited the potential for a 10% add-on, to stick with the belief that such behavior will have a noticeable effect on the growth rates of real GDP beginning later this year and extending into early 2000.

Finally, the analysts overwhelmingly indicated that disruptions to output on a scale large enough to hurt corporate earnings were unlikely, although this view was not unanimous. As already noted, the newspaper analyst observed that shutdowns in that industry could not be made up, given the time-sensitive nature

Industries Where a Y2K Impact on Inventory Building Is Likely

Industry	Analyst Comment
Industries where an impact is foreseen:	
Steel	Up to 10% for some firms
Paper	Up to 10% for some firms
Oil	Probably not more than 10%
Utilities (coal stocks)	Up 10% to one-third
Discount Stores	Extra stocks of selected items
Aerospace	Very modest buildup
Electrical Equipment	Very modest and selective
Newspapers	About 10% extra newsprint stock
Building Materials	Raw materials up 3% to 5%
Autos	A bit at the margin
Enterprise Hardware & Technical Software	Some firms plan buildups
Industries where additional customer buying is foreseen:	
Packaging	Anticipate increased orders
Food	Retailers pushing consumers to stockpile
Household Products	Expect higher shipments in Q3, Q4

Souce: Goldman Sachs research analysts.

of the output. Although no one else voiced this view, it presumably applies in other industries where timeliness is essential to the consumption of the output. Several analysts, in building materials, apparel and footwear, and packaging also noted risks associated with the possibility of disruptions to activity outside the United States. However, as a whole, the responses suggest that the amount of output permanently lost to Y2K disruptions would be hard to measure in an economy producing more than $8-trillion worth of goods and services per year.

Bad for "PR"(ofits), (oductivity), and (ices)

Although our analysis has focused on the impact of Y2K-related activity on national output, this is not the only aspect of economic performance that is affected. In principle, Y2K is bad for productivity and profits as neither normally benefits from fixing something that is broken—in this case, some of the old computer code that is embedded in the nation's stock of physical capital. These effects should be concentrated in 2000, as the shifting of production forward from 2000 into 1999 to satisfy precautionary demand will help hold productivity and profits up this year.

Short-term spikes in prices of items in high demand could also occur around the turn of the year. However, given the large amount of slack that prevails in the global economy, we do not anticipate any lasting effect on inflation from the Y2K episode.

Ed McKelvey

Key U.S. Economic Data

	'99 Jul	'99 Jun	'99 May	'99 Apr	6 Mo Trend	12 Mo Trend	Next Release
	Latest Monthly Data						
Nonfarm Payrolls (ch. thousands)	310	273	28	321	228	245	Sep 3
Unemployment Rate (%)	4.3	4.3	4.2	4.3	4.3	4.4	
Index of Hours Worked (% ch)	0.3	0.3	0.1	0.1	1.9	2.1	
Average Hourly Earnings (% ch)	0.5	0.4	0.3	0.2	3.9	3.8	
Producer Price Finished Goods Index (% ch)	--	-0.1	0.2	0.5	1.5	1.5	Aug 13
Excluding food and energy	--	-0.2	0.1	0.1	-0.4	1.5	
Consumer Price Index (% ch)	--	0.0	0.0	0.7	2.2	2.0	Aug 17
Excluding food and energy (% ch)	--	0.1	0.1	0.4	1.6	2.0	
Retail Sales (% ch)	--	0.1	1.1	0.6	9.4	7.9	Aug 12
Excluding motor vehicles (% ch)	--	0.4	0.4	0.9	9.7	8.0	
Industrial Production (% ch)	--	0.2	0.2	0.3	2.9	2.7	Aug 17
Manufacturing	--	0.1	0.3	0.4	2.8	3.7	
Capacity Utilization (%)	--	80.3	80.4	80.5	80.4	80.8	Aug 17
Manufacturing	--	79.4	79.6	79.6	79.5	79.8	
Housing Starts (annual rate, thousands)	--	1571	1665	1577	1689	1679	Aug 17
Single-family	--	1274	1395	1260	1349	1331	
Trade Balance (billions, monthly)	--	--	-21.3	-18.6	-18.0	-16.4	Aug 19
Merchandise	--	--	-28.2	-25.3	-24.8	-23.1	
Factory Orders (% ch)	--	0.7	1.0	-1.4	4.0	5.9	Sep 2
Durable Goods	--	0.3	0.8	-2.4	1.4	7.6	Aug 25
Personal Income (% ch)	--	0.7	0.3	0.5	5.8	5.4	Aug 27
Wages and Salaries	--	0.5	0.5	0.6	6.4	6.5	
urchasing Managers' Index (%)	53.4	57.0	55.2	52.8	54.2	51.1	Sep 1
onsumer Sentiment U Mich (Feb 66=100)	106.0	107.3	106.8	104.6	106.1	104.0	Aug 27
nference Board (1985=100)	135.6	139.0	137.7	135.5	135.8	131.3	Aug 31

Note: Percentage changes are month to month for last four months, annualized for 6- and 12-month trends. 6- and 12-month figures for levels (e.g., unemployment rate) are averages over those periods.

U.S. Calendar

Focus for the Week Ahead

- The producer price index for July is apt to be stickier than recent reports, with energy contributing about half of the expected 0.4% increase and the rest coming from a reversal of downside surprises in the June core index. The intermediate goods index, which jumped 0.5% in June and has risen for four months, bears close watching for signs of price pressures that might be developing in the production pipeline (August 13).
- Gains in nominal retail sales in July should be slightly below the average rate of recent months and more so in real terms in view of the bounce in energy prices that occurred in that month (August 12).
- With markets on edge about the potential for another rate hike at the August 24 FOMC meeting, the Federal Reserve's Beige Book will be scrutinized especially closely for changes in the flavor of the anecdotal input into that session (August 10).

Economic Releases and Other Events

Date	Time	Indicator	Estimate GS	Estimate Consensus	Last Report
Thu Aug 12	8:30	Retail Sales (Jul)	+0.4%	+0.2%	+0.1%
		Excluding Autos	+0.4%	+0.4%	+0.4%
Fri Aug 13	8:30	Producer Price Index (Jul)	+0.4%	+0.3%	-0.1%
		Excluding Food & Energy	+0.2%	+0.1%	-0.2%
	8:30	Business Inventories (Jun)	+0.3%	+0.2%	+0.3%

- Wholesale Trade (Mon, Aug 9 – 10:00)
- Richmond Fed Survey (Tue, Aug 10 – 10:00)
- Treasury 5-Year Note Auction (Tue, Aug 10)
- Fed "Beige Book" (Wed, Aug 11 – 2:00)
- Treasury 10-Year Note Auction (Wed, Aug 11)
- Atlanta Fed Survey (Thu, Aug 12 – 9:00)
- Import & Export Prices (Thu, Aug 12 – 10:00)
- Treasury Announces 1-Year Bill (Thu, Aug 12 – 2:30)
- Treasury 30-Year Bond Auction (Thu, Aug 12)
- U. of Michigan Consumer Sentiment—Preliminary (Fri, Aug 13 – 10:00)

Interest Rates: Forecast vs. Forward Yields

	3 mo	6 mo	12 mo
LIBOR 3-Month	5.7%	5.5%	5.6%
Forward	6.1	5.7	6.4
2-Year T-Note	5.5	5.5	5.8
Forward	5.8	5.9	6.2
10-Year T-Note	5.9	5.8	6.0
Forward	6.1	6.1	6.2

Key Numbers in the Business Outlook

	1999 Q2	1999 Q3E	1999 Q4E	1999E	2000E
Real GDP	2.3%	3.7%	4.2%	3.9%	2.6%
Ind. Prod., Mfg.	4.1	3.0	3.9	2.9	2.6
CPI	3.5	2.1	2.4	2.1	2.5
After-Tax Profits*	3.6E	5.9	5.4	5.0	-3.3
Unemployment	4.3	4.2	4.0	4.2	3.9

* Excluding inventory profits; adjusted for depreciation distortions.

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U.S. Economics Analyst

Dividing the Spoils from Prolonged Fiscal Austerity

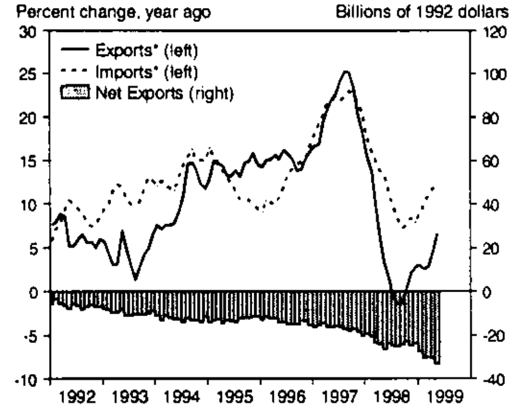
- The sell-off triggered by Chairman Greenspan's Humphrey-Hawkins testimony underscores just how much the markets had come to assume that recent benign data would forestall any further tightening. In fact, Mr. Greenspan's warnings were carefully conditioned on the data flow from here forward. On balance, they leave us comfortable with our view that one more rate hike is likely this year, probably in early October.

- We have cut our estimate of second-quarter growth in real GDP, to 3.0% at an annual rate from 3.9%, in the wake of the record trade deficit reported for May. The figure may be even lower given the potential for low-side surprises in inventory accumulation, but growth in real domestic private final sales remains robust, at a 4½%-5% rate.

- In the wake of the CBO's latest forecast of a $1-trillion, 10-year surplus outside Social Security, the House has passed a bill earmarking about four-fifths of this money to cut taxes, and the Senate is on the verge of following suit. However, the Democratic minority insists that the funds be applied first to strengthen and expand Medicare and other mandatory federal programs. Bipartisan support also exists to lift discretionary outlays above current legal caps.

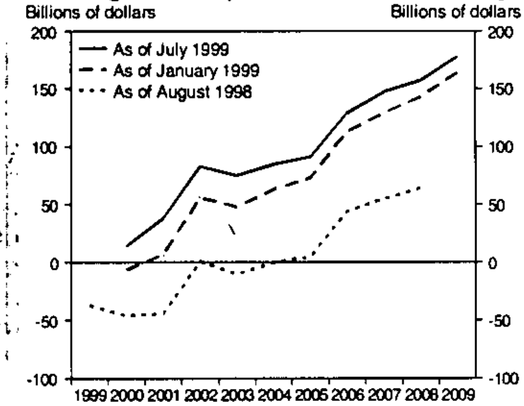
- On paper, the resources are there to permit a settlement that substantially addresses all of these competing desires. However, posturing ahead of the 2000 elections constrains both the willingness to strike deals and the time frame in which that could be done. The outcome of this battle will carry important implications for the interest rate outlook through its effects on Treasury supply and the conduct of monetary policy.

Real Merchandise Trade Balance



* 3-month moving average.
Source: Department of Commerce.

A Rising Fiscal Surplus Outside Social Security



Source: Congressional Budget Office.

Trade Recommendations

- Maintain spread position in federal funds futures (long January '00/short December '99) with a target of zero basis points and a stop on a close above 20 basis points. Otherwise, we would be neutral for now.

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Issue No: 99/29
July 23, 1999

I. Weekly Wrapup

Economic and Market Overview

Prices of U.S. equity and fixed income securities suffered setbacks following Chairman Greenspan's Humphrey-Hawkins testimony, as market participants were evidently surprised by hints of potential further tightening down the road. Meanwhile, two key economic indicators came in weaker than expected.

Housing starts fell 5.6% in June, led by an 8.7% drop in the high-value-added, single-family sector. For the second quarter as a whole, starts of single-family units averaged 1.31 million units at an annual rate, down from 1.39 million in the first quarter, while total starts dropped to 1.60 million from 1.77 million. We do not see this decline as the beginning of a trend for three reasons: (1) It follows unusually strong weather-related gains earlier this year; (2) building permits rose by 1.9% in June, suggesting a near-term rebound in starts; and (3) anecdotal reports of strength in demand and shortage of supplies, coupled with a near-record low ratio of unsold to sold homes in the single-family category, also point to firm starts in the immediate future.

The U.S. trade deficit soared to a record $21.3 billion in May, as imports rose 2.2% and exports fell 0.8%. The jump in imports was led by a price-related $640-million rise in crude petroleum purchases, and the decline in exports included a $220-million drop in aircraft shipments. The real merchandise trade deficit also widened to a record $33.5 billion, higher than our expectations. Largely as a result of this surprise, and also because of the potential for inventory accumulation to surprise on the downside, we have lowered our real GDP growth estimate for the second quarter to 3.0% from 3.9%. Our estimate for growth in private domestic final sales remains unchanged, at 4.7% in real terms.

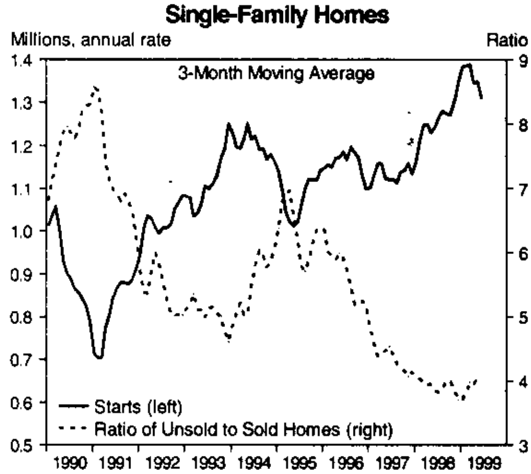
Finally, conditions in the U.S. labor market remain extremely tight. Claims for jobless benefits ticked up only slightly in the week ending July 17, to 313,000 from 309,000. On a four-week average basis, these claims have been within 10,000 of the 300,000 mark for almost six months.

Federal Reserve Policy

The sell-off in financial markets provoked by the first round of Chairman Greenspan's Humphrey-Hawkins testimony reveals more about the complacency in the markets regarding future rate hikes that had developed ahead of the testimony than it does about the central bank's intentions. Although his remarks were a bit more cautionary than we had expected, most of the worrisome headlines that flashed across the newswires were couched in conditional terms. Thus, we have not changed our view that one more rate hike is likely this year, probably in early October.

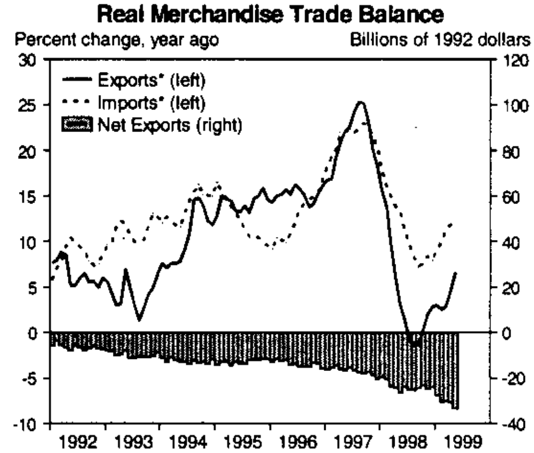
The main messages we distill from Mr. Greenspan's remarks are these: (1) The Federal Reserve should be preemptive whenever it can be, a message pointedly repeated, almost verbatim, from his June 17 Joint Economic Committee testimony. (2) In an economy where productivity trends have clearly been in flux, the labor market provides the most useful information as to whether the economy is growing at a sustainable pace. (3) It is conceivable that the U.S. labor market is already too tight. (4) However, future decisions to tighten depend on the data. (5) The removal of the bias from FOMC's intermeeting policy directive was meant to signal this and, hence, not just a mindless

Single-Family Homes



Source: Department of Commerce.

Real Merchandise Trade Balance



* 3-month moving average.
Source: Department of Commerce.

repeat of past patterns. (6) The panel's benign CPI forecast for 2000—an increase of 2% to 2½% from fourth quarter to fourth quarter—may incorporate the anticipation of more tightening: ". . . policymakers' forecasts also reflect their determination to hold the line on inflation, through policy actions if necessary."

Fiscal and Political Developments

In the wake of recent upward revisions to official projections of federal budget surpluses, the first steps have been taken to dispose of that part that exceeds the surplus in Social Security accounts. The House of Representatives has passed a bill cutting personal and corporate taxes by $792 billion over a 10-year period. The Senate Finance Committee has approved a much different bill, though of comparable size.

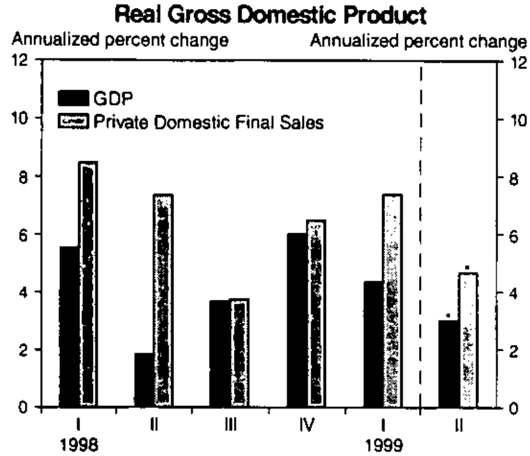
However, beyond the inevitable horse-trading to work out differences between the two bills, the threat of a presidential veto assures that the final outcome will be quite different, at least in terms of how the surplus outside Social Security is divided between tax cuts and higher-than-projected outlays. President Clinton favors a much smaller tax cut, of about $250 billion, with the remainder going to shore up Medicare and increase spending in various discretionary categories. Although we can imagine a compromise roughly half way between these two positions, it is also quite conceivable that both parties will see it in their best interests to bypass an agreement altogether and put the issue to the voters in the 2000 elections, as discussed more fully in the center section.

Market Outlook and Comments on Value

Note: The following comments reflect trading views and may differ from our longer-term interest rate forecast.

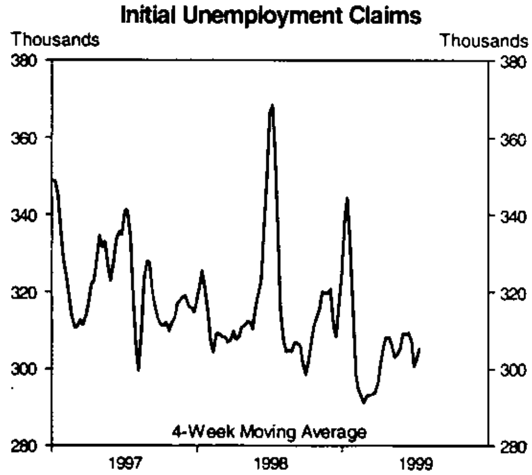
The market reaction to Chairman Greenspan's testimony strikes us as a bit overdone. He said that further Fed tightening depends on the data. This means that further moves are not preordained at this point. Moreover, as long as inflation is well-behaved as seems likely given the climb in productivity growth, any Fed tightening will be modest. This suggests that a favorable risk/reward situation may soon develop for initiating long positions in March '00 or June '00 Eurodollar futures contracts if the market slides much lower. Y2K is also a factor that should limit the amount of tightening over the next year. First, it will tend to put the Fed on hold toward the end of the year by increasing the degree of uncertainty about the economy's underlying trajectory. Second, in early 2000, it is likely to lead to a sharp slowing in the growth pace as businesses run down precautionary inventories built up because of worries about Y2K supply disruptions.

Real Gross Domestic Product



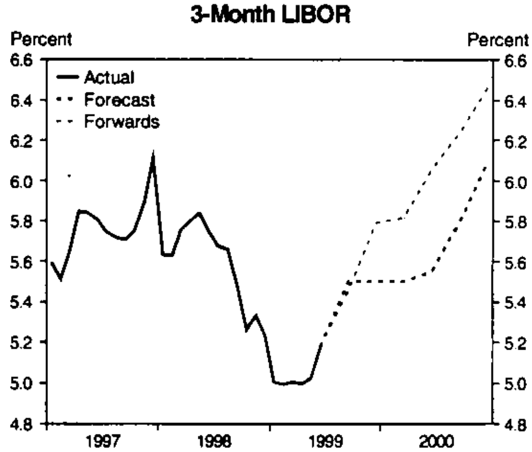
* Our estimates.
Source: Department of Commerce.

Initial Unemployment Claims



Source: Department of Labor.

3-Month LIBOR



Source: International Financial Statistics. Bloomberg. Our estimates.

II. Dividing the Spoils from Prolonged Fiscal Austerity

The recent announcement by the Congressional Budget Office of modestly higher budget surplus forecasts has sparked much greater legislative interest in a division of financial spoils from a lengthy and successful war against government red ink. Congressional Republicans have coalesced around a multi-year tax reduction that would absorb the vast bulk of the estimated surfeit outside Social Security accounts. The Clinton Administration, meanwhile, is strongly opposed to such a large tax cut in advance of agreement on how to shore up the health of Social Security and strengthen and expand the Medicare entitlement. Voices for increased discretionary domestic spending are being heard as well, from both parties. Jockeying for political advantage heading into the crucial 2000 elections is greatly complicating efforts to bridge partisan strategic differences.

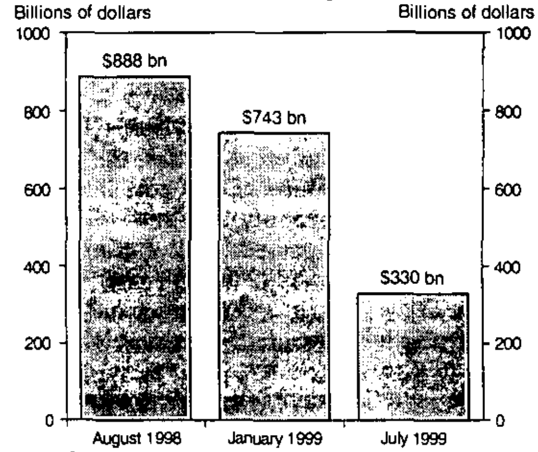
These conditions create a high degree of uncertainty about how budgetary influences on interest rates might evolve over the period ahead. If both sides in this debate conclude later this year that it is in their best political interests to reach a settlement, then some compromise incorporating elements of all positions could easily emerge, in view of the large volume of funds available for distribution. This might add fuel to the economy's engine at a time when the Federal Reserve is already trying to brake growth via tighter monetary policy. Alternatively, in the absence of such an accord the projected surpluses will continue to be applied exclusively toward debt retirement, sustaining an important positive influence on the U.S. debt securities market.

Surpluses Breach Key Psychological Barrier

At first blush, the latest upward revisions to CBO budget surplus forecasts do not appear impressive. For fiscal years 2000-2009, the cumulative projected surplus was boosted by $330 billion, or 13%. This was a much smaller positive adjustment to the 10-year budget balance than had been made in either of the prior two semi-annual updates—$743 billion last January, and $888 billion in August 1998 (see chart at the top of the page).

What made these changes very significant from a political standpoint—and a catalyst for multiple budget policy initiatives—was that for the first time they pointed to an imminent and sustained surplus in federal accounts outside Social Security (see chart at right). The CBO now foresees a $14-billion surplus outside Social Security in fiscal 2000, rather than a $6-billion deficit as in the previous forecast issued six months earlier.

Revisions to 10-Year CBO Budget Balance Forecast



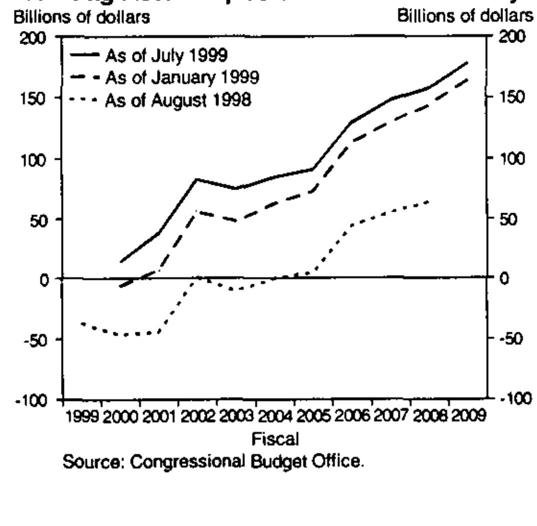
Source: Congressional Budget Office. Our calculations.

Throughout 1998, President Clinton insisted that the paramount budget priority was to ensure the long-term actuarial soundness of Social Security, which at a minimum required strictly guarding the program's full operating surpluses. Since during that time more than all of the projected unified federal budget surpluses for fiscal years 1999-2001 derived from the Social Security accounts, GOP officials reasonably feared that any tax cut with early effectiveness would be branded by Democrats as a direct raid on the federal retirement program. Principally for that reason, tax cut proposals throughout last year were never able to gain any traction.

GOP Tax Plans Would Absorb Bulk of Available Funds

In light of the new CBO report, however, Republicans sense they are much better protected

A Rising Fiscal Surplus Outside Social Security



Source: Congressional Budget Office.

from such charges, and consequently they are fashioning tax-reduction packages that essentially match the projected upward trajectory of the non-Social Security surplus estimates. On July 22, the House on partisan lines narrowly approved a plan that would reduce federal levies on balance by $792 billion over 10 years. The Senate Finance Committee this week also adopted a different plan of roughly the same dimensions, which gained some support from Democrats on the panel. These plans would allot almost 80% of the predicted budget surpluses outside Social Security over the next decade toward tax abatements, leaving little on the table for increased spending or debt paydowns.

Both the Senate and the House have been careful to back-load their tax cut proposals so that they escalate over time and have the biggest marginal impact beyond the next few years. Not only does this help avoid political pitfalls, as noted above, but it also skews the associated stimulative effects on domestic demand outside the next few years, which is the period in which strains on domestic economic resources are expected to be most intense. In theory, it should be easier for the Federal Reserve and other policy makers to adjust to a schedule of steady, relatively small tax changes than to a sudden drop in the full-employment fiscal balance.

Powerful Pressures for Additional Spending

At the same time that Republican leaders wish to put tax cuts firmly at the top of the political agenda, there are diverse and intense pressures for increased spending. Lawmakers earlier this year approved a hefty package of "emergency" funds for a variety of purposes, including agricultural assistance and increased military readiness. Sizable constituencies in both parties support a continuation of at least some of those outlays into the future, and the existence of a large surplus has made supplements to discretionary spending seem far more defensible after years of relative austerity.

These desires, however, cannot be accommodated within the confines of the existing outlay caps, which were established in the 1997 budget accord and extend through fiscal 2002. As shown in the chart to the right, current law would require a net $11-billion (1.9%) *reduction* to nominal discretionary federal expenditures between fiscal years 2000 and 2002 in a context of large overall surpluses. The prospects for elected officials to accept such a squeeze were dubious from the outset, but the probability that they will live within these caps declined appreciably further once the overall budget moved into surplus position in fiscal 1998, four years ahead of schedule.

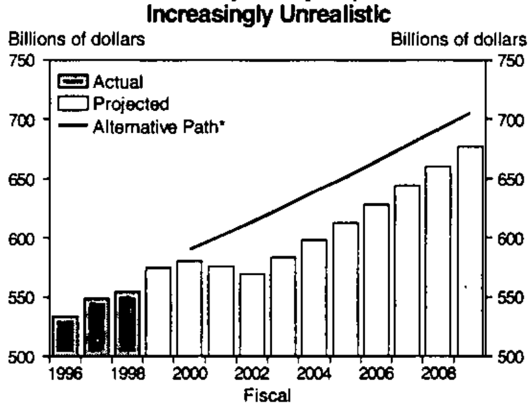
Despite the politicians' regular statements of strong opposition to raising the spending caps, it is quite probable that outlays in these areas will be higher than now assumed, either through formal adjustments in the caps or via the oft-used escape hatch of declaring a special spending "emergency." If the discretionary spending limit for fiscal 2000 were formally lifted by just $10 billion, and then were permitted to grow by just 2% per year through 2009, we calculate those changes would add $333 billion to outlays over the next 10 years compared to what the CBO is presently assuming in its budget projections. That would eat up almost exactly one-third of the estimated surplus in excess of Social Security.

It is not just in the discretionary area that demands for greater outlays lately have arisen. President Clinton and congressional Democrats are insisting that some of the expected surplus be devoted to shoring up the actuarial position of the Medicare program, which is currently on a path toward early insolvency. In addition, Clinton and his party are backing an expansion of the Medicare program to include a new prescription drug benefit. According to the administration, this plan would add about $12 billion per year on average to mandatory outlays over fiscal 2002-2011; the CBO estimates these costs to be appreciably higher. Thus, it is easy to imagine that funds for the proposed support and expansion of Medicare could absorb $200 billion or more of the indicated surplus between next year and 2009.

The Outlines of a Budget Deal Are in View . . .

The Washington fiscal levers have been jammed in a restrictive position for many years, first by widespread antipathy toward the unified budget deficit, and subsequently by anxiety about the long-range financial outlook for Social Security. This has forced all positive budget surprises to go almost

Discretionary Outlay Caps Look Increasingly Unrealistic



* Based on $10-billion addition in FY2000 and 2% annual growth thereafter.
Source: Congressional Budget Office.

exclusively toward reduced debt issuance, with increasingly positive influences on the Treasury securities market, as first new debt supplies dried up and then net redemptions mushroomed. Though this state of affairs has had distinctly favorable effects on the U.S. financial environment, the dominance of debt reduction over all other uses of surplus federal funds came about more by accident than design. It has always appeared destined to end once either unified party control of the White House and Congress could be achieved, or some accord could be reached between Republicans and Democrats on alternative applications of the excess monies.

A $1-trillion cumulative projected 10-year surplus outside of Social Security in theory should provide adequate flexibility for the latter scenario—a bipartisan distribution of the budget war's spoils—to play out in the near term. One can imagine how such a deal might be structured: perhaps $450 billion for tax cuts (a bit shy of the midpoint of the current administration and congressional proposals), $250 billion in additional discretionary spending (with some portion specifically dedicated to defense), $200 billion to bolster and expand Medicare (details to be hammered out later), and the balance of around $100 billion for additional net interest expense and/or debt reductions. This outline would provide for an approximately even split between tax cuts and non-interest spending hikes. While it would require the GOP to substantially scale back their tax-cut strategy, such a compromise might be the best result that they can hope to gain from this or any subsequent Democrat-led administration.

. . . But the Political Barriers Are Rising

At the moment, though, the greatest impediment to a comprehensive early budget settlement is the firm hope within each party that a better deal can be obtained after the 2000 elections. Rather than sharply lower their sights on a tax cut, many Republicans would prefer to let President Clinton veto their bill so they can campaign next year on a platform of small government and broad tax relief. They are encouraged in this regard by the current strong poll standings of their leading presidential candidates in theoretical matches against Vice President Al Gore. Democrats, meanwhile, seem perfectly content to let the 2000 presidential and congressional races become a referendum on whether voters prefer strengthening Social Security and Medicare or tax reductions. With only a five-seat pickup now required for capture of the House of Representatives majority next fall, Democrats can taste the opportunity to control the shape and size of future tax legislation, which under the Constitution must originate in the lower chamber of Congress.

Despite these current tough negotiating postures, each side must contemplate the possibility of political disaster if their strategy proves distasteful to the electorate. For Republicans, an all-or-nothing approach to taxes and the budget this year could foster an impression of stubbornness and an inability to effectively manage the legislative branch of government. If they wind up losing the House next year, the GOP may not be able to win even the modest tax reductions now on offer from the White House. As for the Democrats, if control of the presidency passes to the other side after November 2000, then a great deal of leverage over the size and shape of Medicare and Social Security reforms as well as prospective discretionary spending changes will have been lost. Therefore, from their perspective it might be preferable to lock up commitments for extra Medicare and other spending now, particularly if this could be achieved without giving up too much ground on the tax issue.

Implications for Financial Markets

How this latest budget fight is resolved could have important ramifications for the course of interest rates and financial asset values over coming months. If the current fiscal stalemate persists, then the outlook for rapid federal debt liquidation will be extended at least into 2001, implying a continued highly favorable supply backdrop for U.S. Treasury and other debt securities. Additionally, a further escalation of the unified federal budget surplus could give Federal Reserve officials some comfort that fiscal policy is helping to suppress private sector spending at a time when domestic resource margins are stretched relatively thin and business activity overseas may be picking up.

By contrast, should Republican and Democrat leaders strike a deal this year that substantially recycles the anticipated surplus beyond Social Security back into the private economy, that could generate a more cautionary interest rate outlook in two respects. First, the potential for a further indefinite period of sizable Treasury debt reduction would be mitigated, and, consequently, the supply-related forces that have been compressing the risk premium in U.S. bond yields could be reduced. Second, the effective elimination of fiscal drag on household and corporate earnings would add to the risk that domestic demand might stay stronger than desired by Federal Reserve officials, and thus it could lead them to step on the monetary brakes somewhat more quickly and aggressively.

John Youngdahl

Key U.S. Economic Data

	Latest Monthly Data				6 Mo	12 Mo	Next
	'99 Jun	'99 May	'99 Apr	'99 Mar	Trend	Trend	Release
Nonfarm Payrolls (ch. thousands)	268	-5	321	83	202	226	Aug 6
Unemployment Rate (%)	4.3	4.2	4.3	4.2	4.3	4.4	
Index of Hours Worked (% ch)	0.3	0.1	0.1	-0.3	1.4	1.9	
Average Hourly Earnings (% ch)	0.4	0.3	0.2	0.4	3.9	3.7	
Producer Price Finished Goods Index (% ch)	-0.1	0.2	0.5	0.4	1.5	1.5	Aug 13
Excluding food and energy	-0.2	0.1	0.1	0.0	-0.4	1.5	
Consumer Price Index (% ch)	0.0	0.0	0.7	0.2	2.2	2.0	Aug 17
Excluding food and energy (% ch)	0.1	0.1	0.4	0.1	1.6	2.0	
Retail Sales (% ch)	0.1	1.2	0.5	0.0	10.0	8.0	Aug 12
Excluding motor vehicles (% ch)	0.4	0.5	0.8	0.4	10.1	8.0	
Industrial Production (% ch)	0.2	0.2	0.3	0.6	2.9	2.7	Aug 17
Manufacturing	0.1	0.3	0.4	0.4	2.8	3.7	
Capacity Utilization (%)	80.3	80.4	80.5	80.5	80.4	80.8	Aug 17
Manufacturing	79.4	79.6	79.6	79.5	79.5	79.8	
Housing Starts (annual rate, thousands)	1571	1665	1577	1746	1689	1679	Aug 17
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Factory Orders (% ch)	--	1.1	-1.4	1.9	7.7	5.6	Aug 4
Durable Goods	--	1.2	-2.3	2.9	8.5	7.8	Jul 28
Personal Income (% ch)	--	0.4	0.5	0.3	4.6	5.1	Jul 30
Wages and Salaries	--	0.5	0.6	0.2	6.6	6.3	
Purchasing Managers' Index (%)	57.0	55.2	52.8	54.3	53.5	50.8	Aug 2
Consumer Sentiment U Mich (Feb 66=100)	107.3	106.8	104.6	105.7	106.1	104.0	Jul 30
Conference Board (1985=100)	138.4	137.7	135.5	134.0	134.6	131.4	Jul 27

Note: Percentage changes are month to month for last four months, annualized for 6- and 12-month trends. 6- and 12-month figures for levels (e.g., unemployment rate) are averages over those periods.

U.S. Calendar

Focus for the Week Ahead

- Although Chairman Greenspan has the opportunity to modify the tone of his Humphrey-Hawkins testimony in the second-round hearings before the Senate Banking Committee, we do not expect any significant change (July 28).
- We expect the second-quarter employment cost index to revert to its previous trend rate of increase after a first-quarter reading that appeared out of line on the low side relative to changes in average hourly earnings (July 29).
- Another large drag from deteriorating trade is likely to obscure strong growth in domestic final sales in the advance report on real GDP in the second quarter. There is also the potential for downside surprises in inventory accumulation, in which case we would be tempted to push up projections for coming quarters (July 29).

Economic Releases and Other Events

Date	Time	Indicator	Estimate GS	Estimate Consensus	Last Report
Mon Jul 26	10:00	Existing Home Sales (Jun)	+2.0%	0.0%	-4.0%
Tue Jul 27	10:00	Conf. Board Consumer Confidence (Jun)	137.5	138.0	138.4
Wed Jul 28	8:30	Durable Goods Orders (Jun)	+0.6%	+0.5%	+1.2%
Thu Jul 29	8:30	Real GDP (Q2—Advance)	+3.0%	+3.5%	+4.3%
	8:30	Chain-Weight Price Index (Q2—Advance)	+1.1%	+1.4%	+1.6%
	8:30	Employment Cost Index (Q2)	+0.7%	+0.8%	+0.4%
Fri Jul 30	8:30	Personal Income (Jun)	+0.6%	+0.5%	+0.4%
	8:30	Personal Consumption (Jun)	+0.3%	+0.3%	+0.6%
	10:00	Chicago Purchasing Managers Index (Jul)	59.5%	59.5%	60.0%
	10:00	New Home Sales (Jun)	+5.9%	+0.2%	-5.1%

- **Treasury 2-Year Note Auction (Wed, Jul 28)**
- **Greenspan Testifies Before Senate Banking Committee—Humphrey-Hawkins Report (Wed, Jul 28 – 10:00)**
- **APICS Survey (Fri, Jul 30 – 8:30)**
- **U. of Michigan Consumer Sentiment—Final (Fri, Jul 30 – 10:00)**

Interest Rates: Forecast vs. Forward Yields

	3 mo	6 mo	12 mo
LIBOR 3-month	5.5%	5.5%	5.6%
Forward	5.9	5.6	6.1
2 Year T-Note	5.4	5.4	5.6
Forward	5.7	5.9	6.0
10 Year T-Note	5.6	5.6	5.8
Forward	5.9	6.0	6.1

Key Numbers in the Business Outlook

	1999 Q2E	1999 Q3E	1999 Q4E	1999E	2000E
Real GDP	3.0%	3.2%	4.1%	4.0%	2.5%
Ind. Prod., Mfg.	4.1A	3.1	4.0	2.9	2.4
CPI	3.5A	1.9	2.4	2.1	2.5
After-Tax Profits*	3.6	6.0	5.5	5.0	-3.3
Unemployment	4.3A	4.2	4.0	4.2	3.9

* Excluding inventory profits; adjusted for depreciation distortions.

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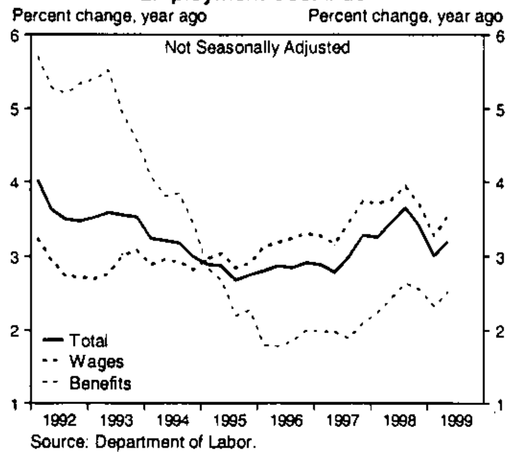
U.S. Economics Analyst

Profits: As Good as It Gets?

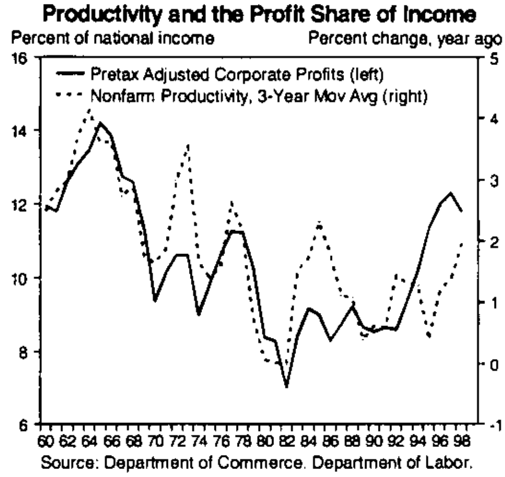
- The sharp rise in compensation costs in the second quarter should be considered in tandem with the first quarter's much smaller increase. Taken together, the trend of wages and compensation does not appear to have changed. However, this is not as favorable as the earlier picture, when compensation trends appeared to be moderating. A flat trend will make Fed officials less tolerant of further declines in the unemployment rate.
- The 2.3% annualized, second-quarter increase in real GDP was weaker than expected. However, this should not be taken as evidence that the long-awaited slowdown has arrived. The shortfall was due to a much slower pace of inventory accumulation. With Y2K fears likely to lead to extra stockpiling, the GDP data set the stage for faster growth in the second half. Thus, we have lifted our third- and fourth-quarter real GDP growth estimates to 3.7% and 4.2%, from 3.2% and 4.1%, respectively.
- Profits are growing quickly this year, boosted by firm domestic demand, a pickup in overseas activity, rising productivity growth, and an absence of wage pressures.
- However, this strong profit performance is not likely to last. Y2K is borrowing growth from next year; productivity growth is likely to falter once the economy slows; and wage pressures should gradually intensify. Profits next year will do well to hold onto this year's gains.
- Conceptually, the outlook for profits is not too good either. Labor markets are tight and capacity is loose. The gap between the return on capital and the cost of capital is very wide. The result should be pressure on profit margins over time.

Employment Cost Index



Source: Department of Labor.

Productivity and the Profit Share of Income



Source: Department of Commerce. Department of Labor.

Trade Recommendations

- Open a curve-steepening trade, buying the new 2-year T-note (currently 5.65%) and selling the 30-year T-bond (currently 6.11%) at a spread of 46 basis points, with a target of 75 basis points and a stop on a close below 35 basis points. We closed out our spread position in federal funds futures (long January '00/short December '99) at 8 basis points earlier this week.

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Issue No: 99/30
July 30, 1999

I. Weekly Wrapup

Economic and Market Overview

Prices of U.S. financial assets slumped in response to reports of higher-than-expected labor costs and lower-than-expected output in the second quarter.

The employment cost index jumped 1.1% between March and June. Although this was a surprisingly large increase, it followed a 0.4% gain for the first quarter—one that was just as surprising on the low side. Thus, the main message in this report is that the ECI is no more immune to short-term volatility than its statistical siblings. Compared to its readings for June 1998, the ECI showed increases of 3.2% for total compensation and 3.6% for wages and salaries (excluding benefits). Both figures are still below the peaks reached in September 1998 (3.7% and 4.0%, respectively).

Even though it was only partial, this reversal in the recent benign trend will focus the markets' attention on indicators of labor market tension. Two such indicators offer fresh indications that the market remains tight. First, in its July survey of consumer confidence, which uncovered a modest retreat in overall sentiment from record levels, the Conference Board reported yet another record gap between those who see jobs as plentiful and those who view them as hard to get. Second, the Labor Department reported a 40,000 drop in claims for unemployment benefits, to 275,000. This pulled the four-week average back down to 300,000.

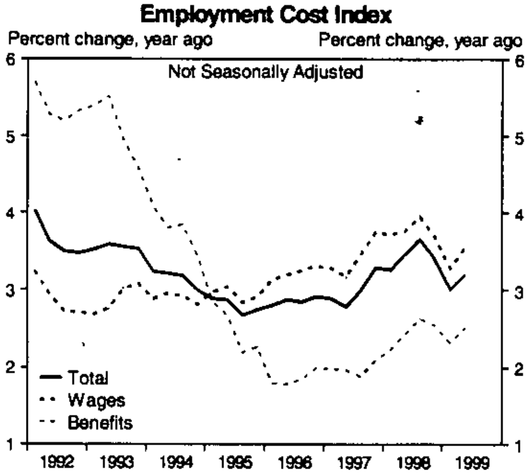
Meanwhile, real GDP rose at a 2.3% annual rate, as reduced inventory accumulation and a rising trade deficit trimmed comparable amounts from a sturdy 3.9% annualized increase in sales of final product to domestic purchasers. The slow pace of inventory building was especially striking when set against a still-strong growth trend in final sales of goods. Even in the absence of Y2K-related inventory building, this gap underscores the potential for strong growth in the second half of 1999. Thus, we have raised our estimates for third- and fourth-quarter real GDP growth to 3.7% and 4.2%, from 3.2% and 4.1%, respectively.

The small size of this revision reflects a presumption that foreign goods will fill a large part of that gap—a proposition that finds some support in the latest data on orders for durable goods. Total bookings for such items rose only 0.3% in June; those for nondefense capital goods other than aircraft—a key indicator of near-term business outlays for equipment—fell 4.0% after dropping 2.8% in May. However, there is little evidence of an abatement in consumer demand. Sales of new and existing homes both rose in the face of higher lending rates (although some of this may have been to avoid even higher rates down the road), and real consumer spending rose 0.4% in June to a level implying 5% annualized growth in the third quarter.

Federal Reserve Policy

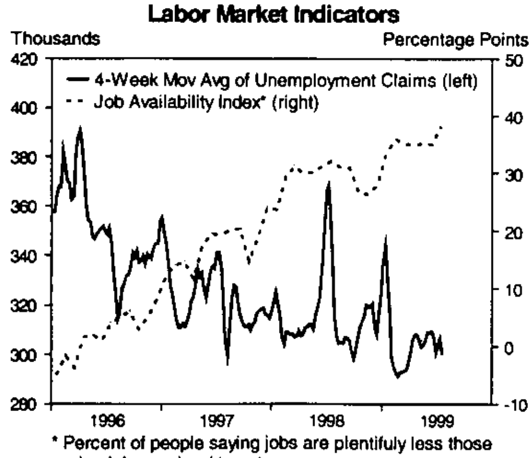
The latest economic reports have made it more difficult for the Fed to justify keeping rates on hold during the second half. Extraordinarily low nonfarm inventory growth last quarter will provide support to output in the second half, making it less likely that the economy will slow on its own without additional monetary braking. Meanwhile, by essentially erasing earlier indications of a slowdown in compensation increases, the ECI data will make FOMC members less patient in the event they are confronted with

Employment Cost Index



Source: Department of Labor.

Labor Market Indicators



* Percent of people saying jobs are plentiful less those saying jobs are hard to get.
Source: Department of Labor, The Conference Board.

signs of intensifying labor market strains. This has further increased the importance to the interest rate outlook of the July employment statistics, which are due for release next Friday, August 6. Should the unemployment rate decline to match or fall below the current business expansion low of 4.2%, then it would become more difficult for central bankers to keep rates on hold through the current quarter.

Fiscal and Political Developments

There has been no reduction of hostilities in the partisan war over budget priorities. While the Senate this week worked toward passing its version of a $792-billion, 10-year tax cut, President Clinton and Vice President Gore took multiple opportunities to express strong opposition to the package. Republican congressional leaders have sharpened their rhetoric as well, averring that they are prepared for an all-out battle with the administration over fiscal priorities.

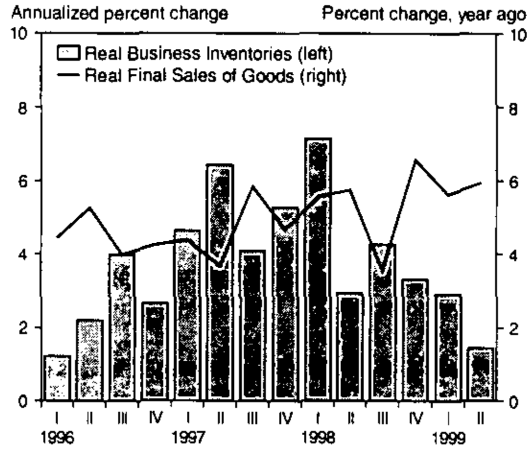
While one could conclude from these developments that the fiscal 2000 budget-writing effort is doomed to failure, there have been some rays of light amid all the hot political rhetoric. A handful of centrist Democrats and Republicans in the Senate are already working together on an alternative tax bill that would total about $500 billion, which is about midway between the latest GOP and White House proposals. Neither side currently is showing any outward willingness to split differences, but this option could be readily embraced by all later this year as part of a broad settlement that includes extra funds for Medicare and discretionary spending enhancements.

Market Outlook and Comments on Value

Note: The following comments reflect trading views and may differ from our longer-term interest rate forecast.

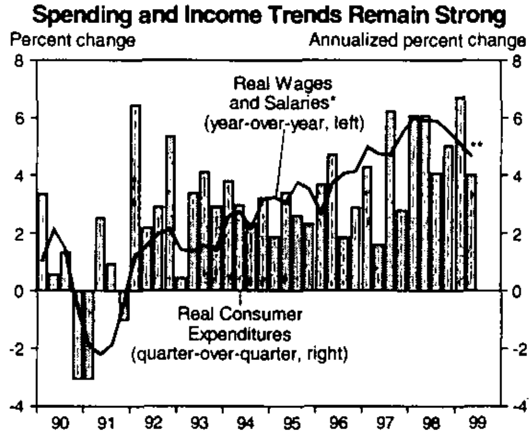
With evidence of stronger global growth proliferating and Y2K uncertainties likely to constrain Fed officials from tightening aggressively this year, we believe there is significant scope for a steepening of the yield curve between 2-year T-notes and 30-year Treasury bonds. Safe-haven concerns associated with Y2K, the potential for dollar weakness, and the possibility of a tax cut package that is heavily back-loaded are also elements why short-dated paper (which already incorporates an expectation of further tightening) may outperform the long end going forward. We would buy the current 2-year T-note (currently 5.65%) and sell the 2/29 long bond (currently 6.11%) at a spread of 46 basis points (appropriately weighted to be neutral to an equivalent change in yield). Our target is 75 basis points and we would establish a stop on a close below 35 basis points.

Inventories and Final Sales



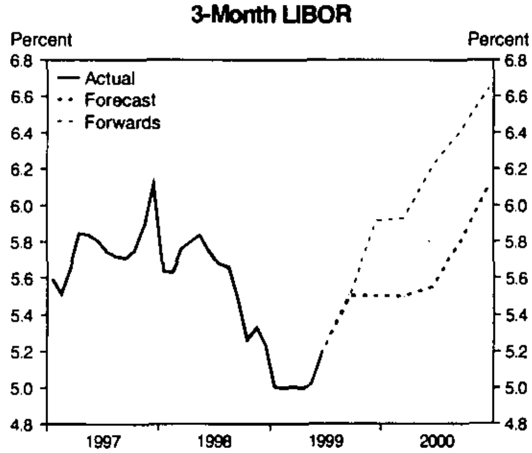
Source: Department of Commerce.

Spending and Income Trends Remain Strong



* Adjusted for tax-induced changes in income realizations.
** June versus Q2.
Source: Department of Commerce.

3-Month LIBOR



Source: International Financial Statistics. Bloomberg. Our estimates.

II. Profits: As Good as It Gets?

Profit growth is surging. For example, for the S&P 500 companies that have already announced, second-quarter earnings have increased by about 15% over a year earlier. Similarly, economy-wide profits appear poised to post healthy gains this year. We expect that aggregate pretax profits (adjusted for the capital consumption allowance and inventory valuation adjustment) are now likely to rise by about 5.6% this year compared to only a 0.8% rise in 1998.

The important question now becomes: Can this last? On that point, we are much less sanguine. Rising wage inflation, depreciation, and interest expense charges coupled with slower productivity growth are likely to dampen profit growth next year. Depending on the severity of the Y2K-related inventory buildup and the scope of Y2K-induced supply disruptions, economy-wide profits next year may do well to hold on to this year's gains.

The Story Behind the Profit Rebound

This pickup in profit growth in 1999 reflects many factors. First, nominal GDP growth has climbed, boosted by faster gains in both prices and real output. Second, labor compensation trends have moderated. This is due both to rapid growth in nonfarm productivity, which has reduced the amount of labor needed to produce a unit of output, and moderation in the trend of hourly compensation costs. Third, non-labor expenses have also been a positive factor. Depreciation expenses and indirect taxes have been growing more slowly than nominal GDP growth. Interest expense has been an essentially neutral factor, rising about as fast as nominal GDP.

But productivity growth is the most important element because it has driven a wedge between the growth rates of nominal GDP and labor compensation costs. Nonfarm business productivity is projected to rise by about 2.6% this year, compared to 2.2% in 1998. Businesses are capturing much of this benefit, and profits are surging as a consequence.

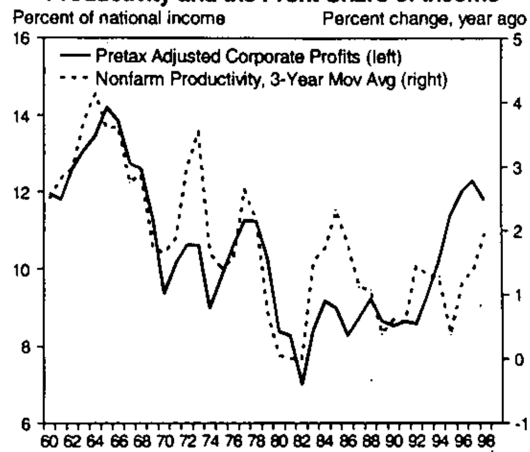
The importance of productivity growth in affecting profits can be illustrated in two ways. First, productivity growth affects the profit share of income. As shown in the accompanying chart, the poor performance of productivity during much of the 1970s and 1980s was accompanied by a decline in the profit share of income. As productivity growth has improved in the 1990s, the profit share of income has climbed sharply. Second, the growth rate of profits is closely related to the growth rate of productivity. We find that each one-percentage-point rise in productivity growth is associated with about a three-percentage-point rise in corporate profits.

Profit Gains Should Fade Next Year

The strong growth in profits that will characterize 1999 is not likely to last. First, the fundamental supports for further gains in the profit share of income are poor. In particular, labor is scarce and capacity is abundant. As shown below, the asymmetry between the utilization rates of labor and industrial capacity is unprecedented, with the unemployment rate at 4.3% and the manufacturing capacity utilization rate at 79.4%. In this environment, one could reasonably expect real wage growth to pick up.

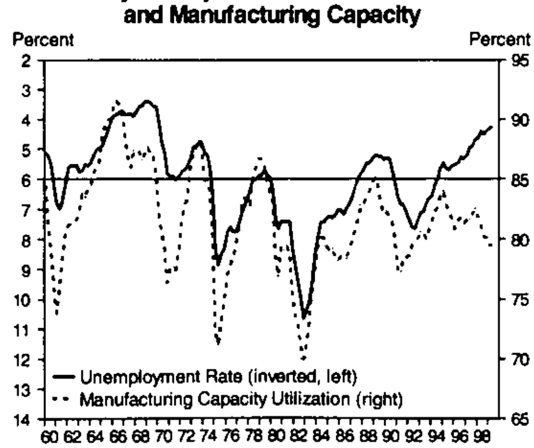
Similarly, there appears to be little scope for profit growth generated by further gains in the return on capital. The gap between the return on capital and the

Productivity and the Profit Share of Income



Source: Department of Commerce, Department of Labor.

The Asymmetry Between the Labor Market and Manufacturing Capacity



Source: Department of Labor, Federal Reserve Board.

cost of capital is already unusually wide (see chart opposite). This is stimulating rapid gains in capital spending, which should put downward pressure on corporate profitability over time.

Second, most elements that underpinned strong profit growth in 1999 are likely to unwind in 2000. In particular, nominal GDP growth is likely to slow; labor compensation growth per hour is likely to rise; and productivity growth is likely to falter. In addition, other elements of business costs such as interest and depreciation expense are likely to climb.

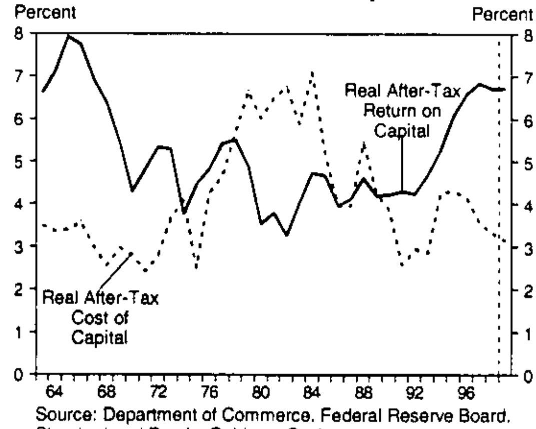
Nominal GDP is likely to slow because Fed officials will not tolerate nominal GDP growth of more than 5%. The FOMC's central tendency projections for nominal GDP growth next year are 4%-5%, down from 5%-5½% for 1999. Slower nominal GDP growth implies slower profit growth, all else equal.

The growth rate of labor compensation costs is likely to rise. Wage inflation will increase because labor markets are tighter and because the moderation in 1999 was caused mainly by the decline in the inflation rate in 1998. With inflation in 1999 boosted by higher oil prices, this should contribute to a rise in wage inflation next year.

Third, productivity growth is likely to decline somewhat. Productivity growth has a strong pro-cyclical element. When the economy grows faster, productivity growth tends to rise as businesses are surprised by the strength of demand for their goods and services (see accompanying chart). Thus, slower real GDP growth implies slower productivity growth. Productivity growth may also be hurt by the Y2K problem. Y2K may hurt productivity via disruptions that it causes to the supply chain. In addition, costs may be incurred in building up precautionary inventories and keeping staff available to deal with potential disruptions.

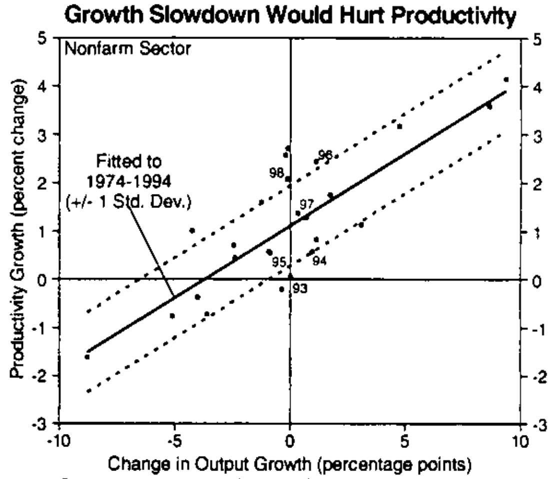
Fourth, nonlabor cost trends may become less favorable. In particular, both depreciation and interest expense growth rates are likely to increase. On the depreciation side, two factors point to higher depreciation: (1) a shortened effective life of the capital stock as spending shifts toward high technology items, and (2) the fact that investment spending has been growing faster than depreciation. As shown in the chart opposite, depreciation has generally lagged behind business fixed investment growth. We would not expect this pattern to persist much longer.

A Large Gap Between the Return and Cost of Capital



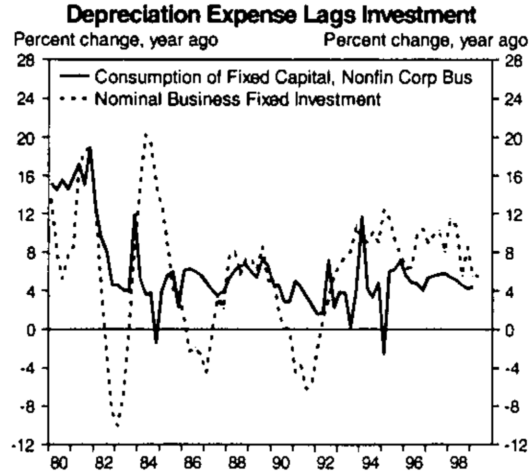
Source: Department of Commerce, Federal Reserve Board, Standard and Poor's, Goldman Sachs.

Growth Slowdown Would Hurt Productivity

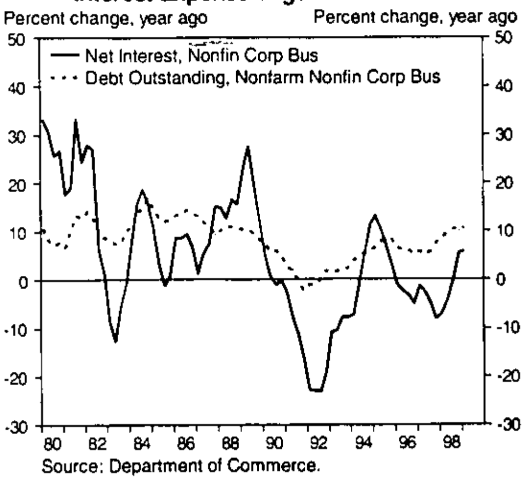


Source: Department of Labor. Our calculations.

Depreciation Expense Lags Investment



Source: Department of Commerce.



Source: Department of Commerce.

On the interest expense side, net interest has been restrained by the secular decline in interest rates that has occurred since the early 1980s. That decline, however, appears to be coming to an end. Moreover, the growth rate of debt outstanding has climbed. Together, this suggests faster growth of net interest expense over the next year or two (see chart above).

Forecasts of the determinants of profits and our profit forecast for the nonfinancial corporate business portion of the economy (about 60% of GDP) are summarized in the table below. We focus on this sector because the analysis is more straight-forward, but similar results would apply if the analysis were broadened to the overall economy. As can be seen, nominal GDP growth for the nonfinancial corporate business sector is expected to decline next year by more than the growth rate of labor compensation expense. Coupled with faster growth of nonlabor expenses such as depreciation and interest, this should cause profits for the nonfinancial corporate business sector to stagnate.

Risks to This Forecast

The outlook for productivity growth poses the major risk to this forecast. If productivity growth were to continue to rise, then profit growth might remain strong. In this respect, the Y2K problem could turn out to be a wild card. Although we view Y2K as more likely to depress rather than boost profits next year, one could argue that Y2K could actually be a positive element for the profit outlook. After all, once the millennium passes, spending on Y2K will soon end, freeing up resources for more productive information technology spending. Moreover, the drag on earnings from Y2K costs such as programming that have to be expensed will also end, supplying a boost to profits.

Profit Determinants for the Nonfinancial Corporate Business Sector

Annual Growth Rates	1998	1999	2000
Nominal Output	5.5 %	6.0 %	5.0 %
Labor Compensation	6.8	6.2	5.8
Depreciation	4.8	5.0	5.5
Indirect Taxes	5.6	6.0	5.0
Interest	-1.3	6.0	8.0
Pretax Profits	0.8	5.7	0.0

Source: Department of Commerce. Our forecasts.

The gap between the growth rate of profits for the S&P 500 index versus the overall economy could widen further next year. Elements that could widen this gap include: (1) share buy-backs that boost earnings per share by shrinking the number of shares outstanding, (2) an economic recovery overseas, which would boost the foreign earnings of S&P 500 companies, and (3) dollar weakness, which would boost the dollar value of those foreign earnings.

Our Portfolio Strategy group forecasts that operating earnings per share for the S&P 500 will rise about 8.2% in 2000. On a historical basis, this would be an unusually wide gap between the growth rates of S&P 500 profits and economy-wide profits. But, given some of the factors highlighted above, it is potentially achievable.

Implications

If corporate profits were to stagnate, this would have four major implications for the economic outlook. First, capital spending would be vulnerable. After all, if profits were weak, the return on capital would suffer. Second, a profit slowdown could contribute to dollar weakness. One element that has encouraged foreign investors to increase their holdings of U.S. financial assets has been the high return on capital in the United States. Third, a profit slowdown could cause the U.S equity market to plateau as investors reevaluated their longer-term earnings forecasts. Fourth, a stagnant equity market could lead to a slowdown in consumer spending growth as the positive wealth effects from stock market strength faded. The result might be a sharper slowdown in real GDP growth than expected and a more favorable interest rate outlook. Put simply, a lot is riding on profits.

Bill Dudley

Key U.S. Economic Data

	Latest Monthly Data				6 Mo	12 Mo	Next
	'99 Jul	'99 Jun	'99 May	'99 Apr	Trend	Trend	Release
Nonfarm Payrolls (ch. thousands)	--	268	-5	321	202	226	Aug 6
Unemployment Rate (%)	--	4.3	4.2	4.3	4.3	4.4	
Index of Hours Worked (% ch)	--	0.3	0.1	0.1	1.4	1.9	
Average Hourly Earnings (% ch)	--	0.4	0.3	0.2	3.9	3.7	
Producer Price Finished Goods Index (% ch)	--	-0.1	0.2	0.5	1.5	1.5	Aug 13
Excluding food and energy	--	-0.2	0.1	0.1	-0.4	1.5	
Consumer Price Index (% ch)	--	0.0	0.0	0.7	2.2	2.0	Aug 17
Excluding food and energy (% ch)	--	0.1	0.1	0.4	1.6	2.0	
Retail Sales (% ch)	--	0.1	1.2	0.5	10.0	8.0	Aug 12
Excluding motor vehicles (% ch)	--	0.4	0.5	0.8	10.1	8.0	
Industrial Production (% ch)	--	0.2	0.2	0.3	2.9	2.7	Aug 17
Manufacturing	--	0.1	0.3	0.4	2.8	3.7	
Capacity Utilization (%)	--	80.3	80.4	80.5	80.4	80.8	Aug 17
Manufacturing	--	79.4	79.6	79.6	79.5	79.8	
Housing Starts (annual rate, thousands)	--	1571	1665	1577	1689	1679	Aug 17
Single-family	--	1274	1395	1260	1349	1331	
Trade Balance (billions, monthly)	--	--	-21.3	-18.6	-18.0	-16.4	Aug 19
Merchandise	--	--	-28.2	-25.3	-24.8	-23.1	
Factory Orders (% ch)	--	--	1.1	-1.4	7.7	5.6	Aug 4
Durable Goods	--	0.3	0.8	-2.4	1.4	7.6	Aug 25
Personal Income (% ch)	--	0.7	0.3	0.5	5.8	5.4	Aug 27
Wages and Salaries	--	0.5	0.5	0.6	6.4	6.5	
Purchasing Managers' Index (%)	--	57.0	55.2	52.8	53.5	50.8	Aug 2
Consumer Sentiment U Mich (Feb 66=100)	106.0	107.3	106.8	104.6	106.1	104.0	Aug 27
Conference Board (1985=100)	135.6	139.0	137.7	135.5	135.8	131.3	Aug 31

Note: Percentage changes are month to month for last four months, annualized for 6- and 12-month trends. 6- and 12-month figures for levels (e.g., unemployment rate) are averages over those periods.

U.S. Calendar

Focus for the Week Ahead

- The National Association of Purchasing Management's index is likely to slip slightly in July. In recent months it has been much firmer than the industrial production data (August 2).
- The growth rate of nonfarm business productivity slipped in the second quarter. Such behavior is typical when real GDP growth slows sharply (August 5).
- Payroll employment should rise sharply in July because the June increase was held back by the early timing of the survey week. The unemployment rate is also due for a fall, reflecting the still vibrant pace of job creation (August 6).

Economic Releases and Other Events

Date	Time	Indicator	Estimate GS	Estimate Consensus	Last Report
Mon Aug 2	10:00	National Purchasing Managers' Index (Jul)	56.0%	56.0%	57.0%
	10:00	Construction Spending (Jun)	+0.8%	+0.2%	-0.9%
		Domestic Motor Vehicle Sales (Jul)	14.2M	14.2M	14.7M
Tue Aug 3	10:00	Leading Indicators (Jun)	+0.2%	+0.2%	+0.3%
Wed Aug 4	10:00	Factory Orders (Jun)	+0.3%	+0.5%	+1.1%
Thu Aug 5	10:00	Nonfarm Productivity (Q2—Preliminary)	+1.5%	+2.6%	+3.5%
Fri Aug 6	8:30	Civilian Unemployment Rate (Jul)	4.2%	4.3%	4.3%
	8:30	Nonfarm Payroll Employment (Jul)	+250,000	+195,000	+268,000
	8:30	Average Hourly Earnings (Jul)	+0.3%	+0.3%	+0.4%
	3:00	Consumer Credit (Jun)	+$2.0 bn	+$6.2 bn	+$12.1 bn

- Treasury Announces Market Borrowing Estimates (Mon, Aug 2 – 3:00)
- Treasury Announces August Refunding (Wed, Aug 4)
- NAPM Nonmanufacturing Survey (Wed, Aug 4 – 10:00)
- Chain-Store Sales Results (Thu, Aug 5)

Interest Rates: Forecast vs. Forward Yields

	3 mo	6 mo	12 mo
LIBOR 3-month	5.5%	5.5%	5.6%
Forward	6.0	5.7	6.2
2-Year T-Note	5.4	5.4	5.6
Forward	5.8	6.0	6.2
10-Year T-Note	5.6	5.6	5.8
Forward	6.0	6.1	6.2

Key Numbers in the Business Outlook

	1999 Q2	1999 Q3E	1999 Q4E	1999E	2000E
Real GDP	2.3%	3.7%	4.2%	3.9%	2.6%
Ind. Prod., Mfg.	4.1	3.0	3.9	2.9	2.6
CPI	3.5	2.1	2.4	2.1	2.5
After-Tax Profits*	3.6E	5.9	5.4	5.0	-3.3
Unemployment	4.3	4.2	4.0	4.2	3.9

* Excluding inventory profits; adjusted for depreciation distortions.

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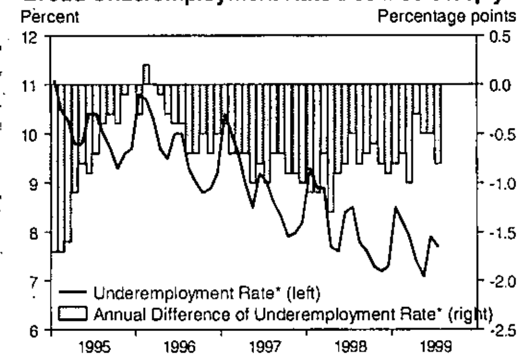
U.S. Economics Analyst

Labor Market Strains Justify Fed Monetary Restraint

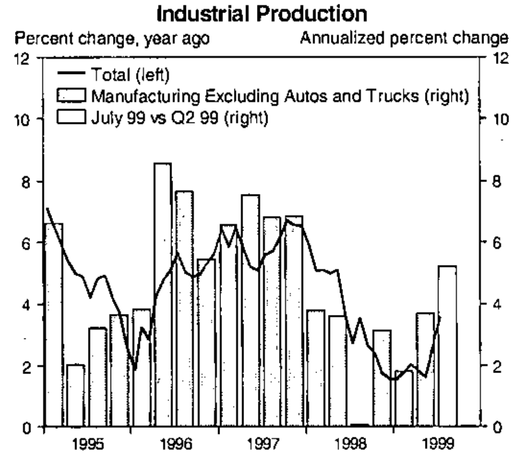
- The Federal Open Market Committee is likely to raise its federal funds rate target at next week's meeting by 25 basis points to 5.25%. Tight labor markets, improving growth prospects overseas, and a market that anticipates such a move should outweigh the fact that inflation remains benign, which gives the FOMC the option of waiting.
- Increased monetary restraint is justified by the spreading evidence of strain on labor supplies. Consumers have exceptionally upbeat attitudes about job availability, yet labor participation has been fairly flat for some time. Broad measures of underemployment are plunging, and joblessness among persons with low educational attainment is virtually absent. Additionally, initial unemployment claims have fallen further, hinting at labor hoarding by firms.
- Although the employment cost index and average hourly earnings are showing only moderate gains, these measures miss some important and rapidly-growing elements of compensation, such as equity-based pay. The more inclusive business labor cost data are clearly accelerating, which raises the risk of profit margin erosion and more pressure for cost-based price increases.
- The production side of the economy remains vigorous, with industrial output and housing starts rising sharply in July. This should support income growth and keep domestic demand from slowing quickly. Meanwhile, the trade gap widened sharply in June to a new record. This implies an increased dependence of the U.S. on foreign capital inflows, which may not be so forthcoming now that foreign economies are doing better. The risk here is that the dollar weakens sharply, increasing inflationary pressures and steepening the yield curve.

Broad Underemployment Rate Declines Steeply



* Total unemployed, plus all marginally attached workers, plus total employed part-time for economic reasons, as a percent of the civilian labor force plus all marginally attached workers.
Source: Department of Labor.

Industrial Production



Source: Federal Reserve Board.

Trade Recommendations

- We would stay neutral for the time being.

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Goldman Sachs

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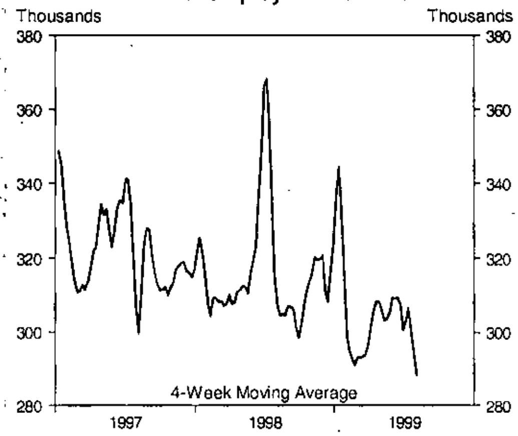
U.S. Economics Analyst

Hot Money Heading Home

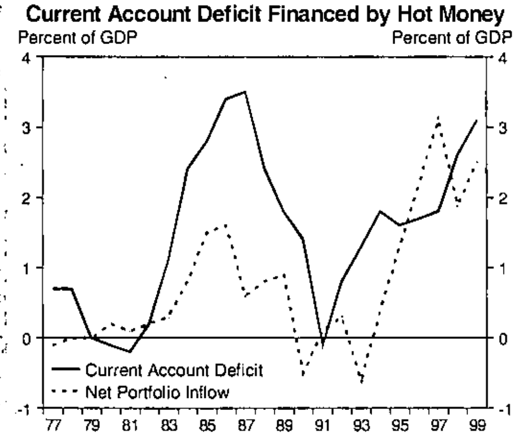
- Retail sales show signs of moderating, despite the big jump in overall sales in July. Downward revisions to June were sizable and imply that consumption growth is slowing to a 3%-4% annualized pace, from more than 5% during the first half of the year.
- Labor markets continue to be very taut. Initial unemployment claims have only recovered a small portion of the earlier huge decline, pushing the four-week moving average down to a low point for the current expansion.
- To date, this labor market tightness has not yet resulted in significant price pressures. Producer prices for finished goods rose only 0.2% in July, despite a sharp spike in gasoline prices, and excluding food and energy they were flat for the month.
- Three-quarters of the current account deficit is financed by net portfolio inflows. These mostly take the form of net bond inflows from Europe and are very responsive to real interest rate differentials.
- With the gap between U.S. and European real rates shrinking, portfolio inflows are likely to wane. The dollar's recent weakness could well be the first consequence of this shift.
- In the remainder of 1999, Y2K concerns and the consensus among global economic policymakers against a sharp dollar depreciation could keep capital inflows reasonably strong. However, both factors are likely to fade in 2000.

Initial Unemployment Claims



Source: Department of Labor.

Current Account Deficit Financed by Hot Money



Note: 1999 values are first quarter.
Source: Department of Commerce.

Trade Recommendations

- Close out curve steepening trade, long 2-year T-note, short old 30-year T-bond (currently a 54-basis-point spread, initiated at 46 basis points).

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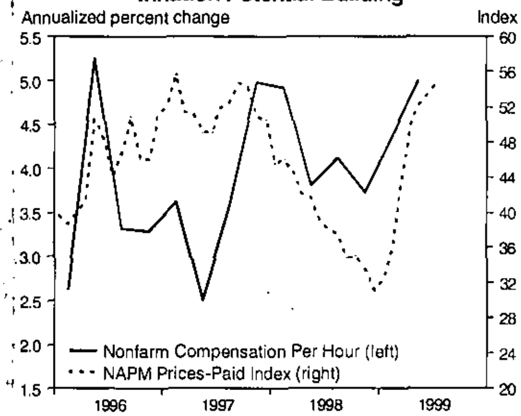
U.S. Economics Analyst

The Economic Impact of Y2K—An Update

- The latest economic data indicate that the U.S. growth trend has not weakened materially, and they suggest that prices could accelerate. Thus, we now believe that the FOMC will boost its federal funds rate target by another 25 basis points at its August 24 meeting. We have also revised our bond rate forecast to a year-end level of 6.1%, versus 5.8% previously.
- Further signs of potential inflation pressure have shown up in average hourly earnings, which rose 0.5% in June, in the productivity and cost report, which featured a 5.1% annualized surge in hourly compensation in the second quarter, and in the latest NAPM survey, which revealed increases in delivery lags and prices paid.
- Solid gains in nonfarm payrolls and in hours worked imply that real GDP is rising at a 3½%-4% annual rate this quarter, if not faster. Large gains in factory employment, coupled with all-time lows in inventories relative to sales, point to an acceleration in manufacturing output.
- We continue to expect Y2K to have a noticeable but not a cataclysmic effect on U.S. economic growth. In particular, we expect some defensive stockpiling of goods to boost annualized growth in the fourth quarter by about one percentage point, followed by a payback early next year.
- A survey of our industry analysts indicates that: (1) Systems fix-up outlays have peaked, (2) such outlays largely displaced other spending, (3) defensive stockpiling is apt to occur in some sectors, and (4) large and prolonged disruptions to output are unlikely early next year.

Inflation Potential Building



Source: Federal Reserve Board, National Association of Purchasing Management.

Industries Where a Y2K Impact on Inventory Building Is Likely

Industry	Analyst Comment
Industries where an impact is foreseen:	
Steel	Up to 10% for some firms
Paper	Up to 10% for some firms
Oil	Probably not more than 10%
Utilities (coal stocks)	Up 10% to one-third
Discount Stores	Extra stocks of selected items
Aerospace	Very modest buildup
Electrical Equipment	Very modest and selective
Newspapers	About 10% extra newsprint stock
Building Materials	Raw materials up 3% to 5%
Autos	A bit at the margin
Enterprise Hardware & Technical Software	Some firms plan buildups
Industries where additional customer buying is foreseen:	
Packaging	Anticipate increased orders
Food	Retailers pushing consumers to stockpile
Household Products	Expect higher shipments in Q3, Q4

Souce: Goldman Sachs research analysts.

Trade Recommendations

- Hold curve-steepening position, long 2-year T-notes and short 30-year T-bonds, with a target of 75 basis points. Move the stop to a close below 40 basis points, from 35 basis points previously.

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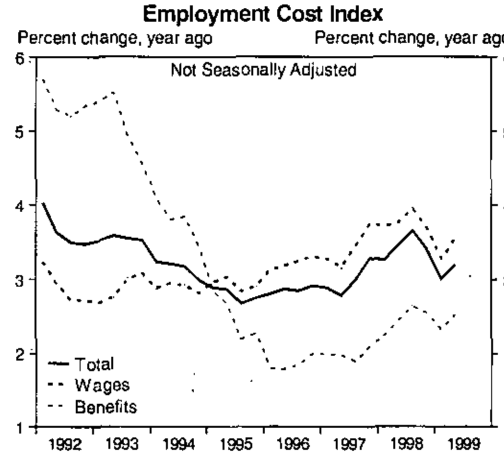
U.S. Economics Analyst

Profits: As Good as It Gets?

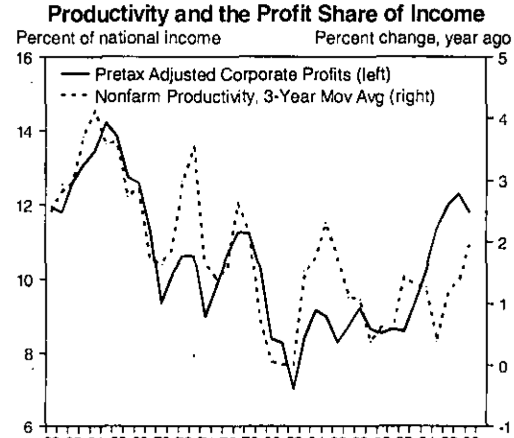
- The sharp rise in compensation costs in the second quarter should be considered in tandem with the first quarter's much smaller increase. Taken together, the trend of wages and compensation does not appear to have changed. However, this is not as favorable as the earlier picture, when compensation trends appeared to be moderating. A flat trend will make Fed officials less tolerant of further declines in the unemployment rate.
- The 2.3% annualized, second-quarter increase in real GDP was weaker than expected. However, this should not be taken as evidence that the long-awaited slowdown has arrived. The shortfall was due to a much slower pace of inventory accumulation. With Y2K fears likely to lead to extra stockpiling, the GDP data set the stage for faster growth in the second half. Thus, we have lifted our third- and fourth-quarter real GDP growth estimates to 3.7% and 4.2%, from 3.2% and 4.1%, respectively.
- Profits are growing quickly this year, boosted by firm domestic demand, a pickup in overseas activity, rising productivity growth, and an absence of wage pressures.
- However, this strong profit performance is not likely to last. Y2K is borrowing growth from next year; productivity growth is likely to falter once the economy slows; and wage pressures should gradually intensify. Profits next year will do well to hold onto this year's gains.
- Conceptually, the outlook for profits is not too good either. Labor markets are tight and capacity is loose. The gap between the return on capital and the cost of capital is very wide. The result should be pressure on profit margins over time.

Employment Cost Index



Source: Department of Labor.

Productivity and the Profit Share of Income



Source: Department of Commerce. Department of Labor.

Trade Recommendations

- Open a curve-steepening trade, buying the new 2-year T-note (currently 5.65%) and selling the 30-year T-bond (currently 6.11%) at a spread of 46 basis points, with a target of 75 basis points and a stop on a close below 35 basis points. We closed out our spread position in federal funds futures (long January '00/short December '99) at 8 basis points earlier this week.

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The Global Economic and Strategy Weekly
July 28, 1999

28 pgs

Goldman Sachs

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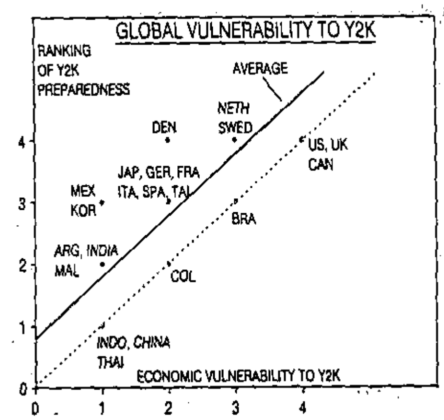
The Global Economic and Strategy Weekly

Who's Afraid of Y2K?

World Economy

- Markets have recently become increasingly focused on the impact of the millennium bug on emerging economies, with some investors seeking to avoid exposures to these markets over the new year period. This publication presents new evidence on whether these worries are justified.
- The vulnerability of an economy to possible disruption is related to its stock of IT capital - the more dependent an economy is on IT, the greater the disruption from computing failures. We present entirely new estimates of the share of physical capital accounted for by IT and thus potentially threatened by Y2K. Industrialised countries are much more vulnerable than emerging countries on this basis.
- But industrialised countries are also doing most to tackle problems caused by Y2K ahead of time. Emerging markets are doing least but are also least vulnerable.
- There are no obvious outliers of countries which are clearly failing to tackle the millennium bug more than their competitors.
- This does not mean that emerging market economies are not vulnerable to disruption. Rather, it is not possible to clearly distinguish countries looking at aggregate data. Broadly speaking, the pattern of work to fix the millennium bug across the world economy mirrors the sensitivity of national economies to the bug.



Strategy

- Recent weakness in global equity prices might be reflecting the weakness in the US dollar.
- Over the last 10 years there is plenty of evidence, both anecdotal as well as statistical, that a weaker dollar has generally been accompanied by the underperformance of equities versus bonds.
- Dollar weakness comes at a bad time for stocks. The equity risk premium on offer is already low relative to historical averages while the expansive liquidity growth of last year has tightened significantly. The combination of a weaker dollar, unattractive valuations and poor liquidity does not bode well for equities.

Gavyn Davies, Martin Brookes, Binit Patel (Global Economy), Neil Williams (Strategy)

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28th July 1999

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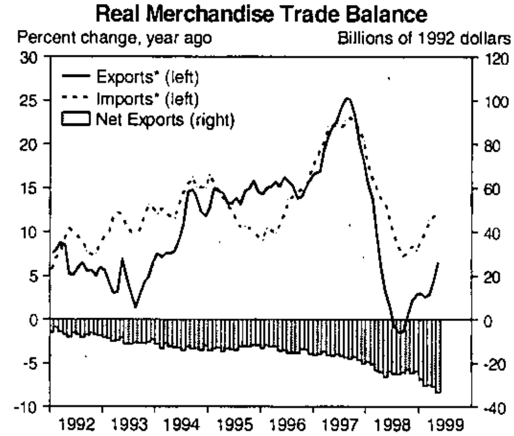
U.S. Economics Analyst

Dividing the Spoils from Prolonged Fiscal Austerity

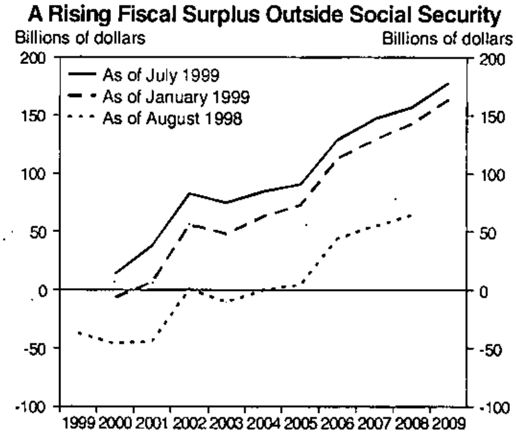
- The sell-off triggered by Chairman Greenspan's Humphrey-Hawkins testimony underscores just how much the markets had come to assume that recent benign data would forestall any further tightening. In fact, Mr. Greenspan's warnings were carefully conditioned on the data flow from here forward. On balance, they leave us comfortable with our view that one more rate hike is likely this year, probably in early October.
- We have cut our estimate of second-quarter growth in real GDP, to 3.0% at an annual rate from 3.9%, in the wake of the record trade deficit reported for May. The figure may be even lower given the potential for low-side surprises in inventory accumulation, but growth in real domestic private final sales remains robust, at a 4½%-5% rate.
- In the wake of the CBO's latest forecast of a $1-trillion, 10-year surplus outside Social Security, the House has passed a bill earmarking about four-fifths of this money to cut taxes, and the Senate is on the verge of following suit. However, the Democratic minority insists that the funds be applied first to strengthen and expand Medicare and other mandatory federal programs. Bipartisan support also exists to lift discretionary outlays above current legal caps.
- On paper, the resources are there to permit a settlement that substantially addresses all of these competing desires. However, posturing ahead of the 2000 elections constrains both the willingness to strike deals and the time frame in which that could be done. The outcome of this battle will carry important implications for the interest rate outlook through its effects on Treasury supply and the conduct of monetary policy.

Real Merchandise Trade Balance



* 3-month moving average.
Source: Department of Commerce.

A Rising Fiscal Surplus Outside Social Security



Source: Congressional Budget Office.

Trade Recommendations

- Maintain spread position in federal funds futures (long January '00/short December '99) with a target of zero basis points and a stop on a close above 20 basis points. Otherwise, we would be neutral for now.

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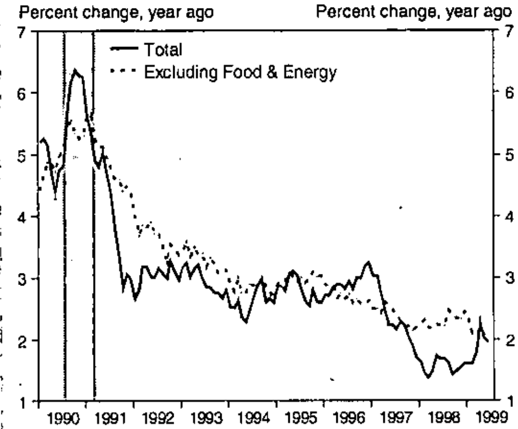
U.S. Economics Analyst

Y2K Keeps Corporate Credit Spreads Wide

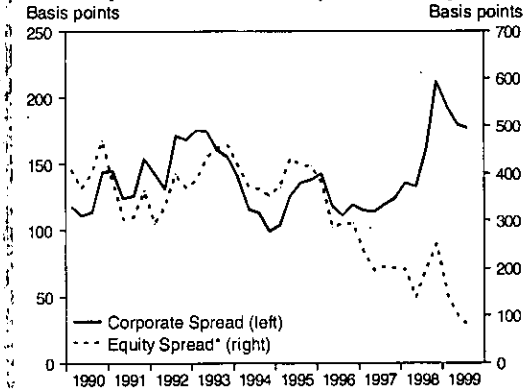
- U.S. inflation remains benign, at least for final goods and services. Consumer prices were flat in June, held down by a retrenchment in energy costs, and producer prices of finished goods fell. Although a 0.5% jump in prices of partly processed goods other than food and energy raises a warning flag, it is not a sure sign of trouble ahead.
- Growth in factory output slowed in June, but consumer spending remained sturdy, with retail sales data confirming that overall outlays rose at a 4%-4½% annual rate in real terms last quarter. These data are consistent with our estimate that real GDP rose nearly as fast (3.9% at an annual rate).
- Against this backdrop, we expect Chairman Greenspan to deliver balanced testimony at the Humphrey-Hawkins hearings on July 22, giving few clues as to the near-term direction of U.S. monetary policy.
- Despite low default rates, corporate credit spreads have widened and decoupled from the equity market in recent years. Although rising credit risk aversion has been a factor, this also reflects falling issuance of Treasury bonds and equities.
- The specter of Y2K is likely to keep credit spreads wide and could well boost them further, with both strong corporate borrowing and investor risk aversion weighing on the market.
- After year-end, the attractive valuations of corporate fixed income securities are likely to set off a strong rally, assuming that any Y2K-related disruptions prove manageable. This should create some good opportunities for less risk-averse investors.

Consumer Price Index



Source: Department of Labor.

Corporate Bonds and Equities Decouple



* S&P 500 earnings yield less real bond yield.
Source: Federal Reserve Board, Standard & Poor's, Federal Reserve Bank of Philadelphia. Our estimates.

Trade Recommendations

- Maintain spread position in federal funds futures (long January '00/short December '99) with a target of 0 basis points and a stop on a close above 20 basis points. Otherwise, we would stay close to shore for now.

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