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Goldman Sachs Weekly May 1998 - [May 2000] [3]

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Goldman Sachs

U.S. Economics Analyst

Our Views Have Changed

Fed Easing Imminent

■ Chairman Greenspan has telegraphed his desire to lower interest rates soon. We therefore expect the FOMC to cut the federal funds rate target by 25 basis points—to 5¼%—on September 29, and it is conceivable that a more aggressive step may be taken.

■ We have adjusted our interest-rate outlook to reflect this expedited schedule of monetary easing. The federal funds target is likely to end this year at 5% and to drop to 4½% by yearend 1999.

■ We still expect bond yields to back up modestly this year as investors reassess downside risks, but only to about 5¼% on 30-year Treasuries. This should be seen as a buying opportunity, as these yields are eventually likely to break through 5% by late next year.

■ A more detailed discussion of our interest-rate views will be the focus of the next issue of the *U.S. Economics Analyst*.

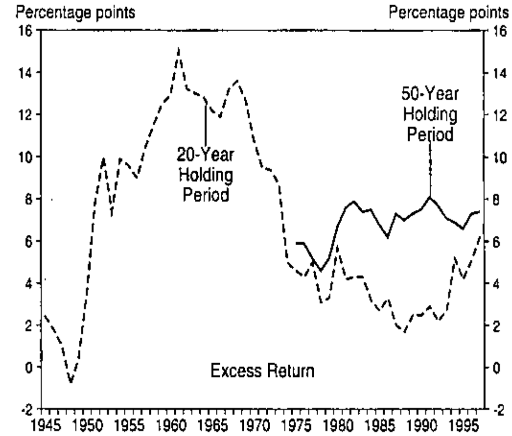
■ Fresh data on consumer spending, durable goods orders, and jobless benefit claims have all been at least as strong as expected. Thus, our view that U.S. growth will remain strong through yearend is on track, and our expectation of a slowing in 1999 is still very much a forecast.

■ In this week's center section—***Social Security Reform: The Lure of Equity Investment***—we note that prospects for reform have improved as a result of the emergence of a budget surplus and a consensus to permit some social security funds to be diverted to equity investments in search of higher returns. However, the impeachment imbroglio and the lack of a bipartisan consensus on how to proceed are still significant obstacles to overcome.

Interest-Rate Forecast (percent)

	1998		1999			
	Current	Q4	Q1	Q2	Q3	Q4
Fed Funds	5.50	5.00	5.00	5.00	4.75	4.50
3-mo LIBOR	5.44	5.10	5.00	4.95	4.75	4.70
Treasury Yields						
2-Year	4.43	4.75	4.70	4.70	4.60	4.50
10-Year	4.62	4.90	4.80	4.75	4.70	4.65
30-Year	5.15	5.30	5.20	5.15	5.00	4.90

Excess Return of S&P 500 Stocks Over T-Bonds



Source: Ibbotson Associates.

Trade Recommendations

■ We would remain neutral for the time being.

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September 25, 1998

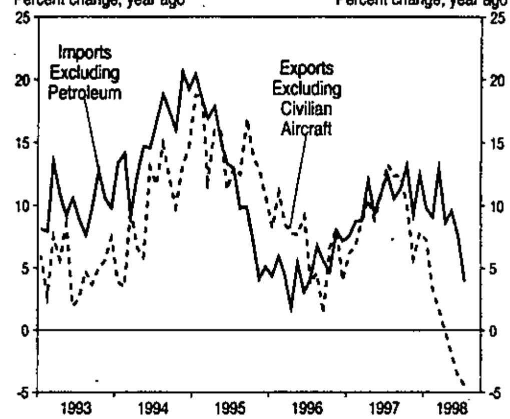
Goldman Sachs

U.S. Economics Analyst

Markets Whispering "The R-Word"

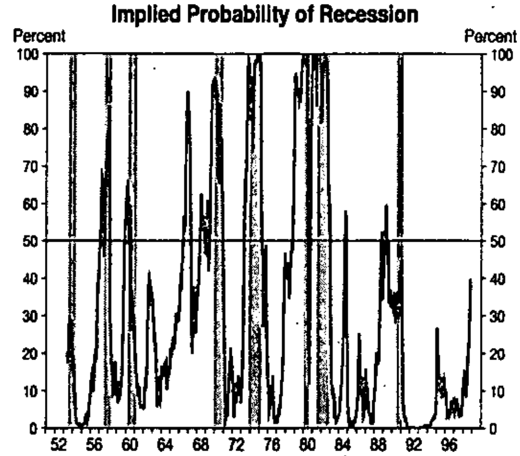
- Chairman Greenspan's remarks before Congress indicate that a consensus for an immediate rate cut has not yet formed within the Fed. This is understandable, given fresh data showing that private spending momentum remains solid and retail price trends have firmed a bit lately.
- His testimony, however, betrayed a high degree of anxiety about the possible spread of capital and exchange controls, and he noted continuing "deflationary forces" in Asia as well as signs of weakening domestic factory conditions. Thus, while the probabilities still tilt slightly against an easing at the September 29 FOMC meeting, such a step certainly cannot be ruled out, and the chairman might be granted unusual latitude to make an inter-meeting rate adjustment.
- Over the past couple of months stocks have sold off, the yield curve has flattened, and credit spreads have widened. Historically, such moves have often signaled the onset of a recession. This week's center section investigates the predictive power of these indicators. We find that the S&P 500 has sounded several false recession alarms in the past. The flatness of the yield curve is consistent with an economy flirting with recession. Finally, the recent corporate spread widening has been largely the result of a sharp Treasury rally, rather than a corporate bond selloff.
- We estimate a probability model and conclude that current stock, Treasury, and corporate prices are consistent with a 40% probability of recession over the next 12 months. The deterioration in market expectations has been rapid and furious, with the implied probability of recession standing at its highest levels since the early 1990s. Fixed-income markets seem to be more pessimistic than equities.

Import and Export Growth



Source: Department of Commerce.

Implied Probability of Recession



Source: Our calculations.

Trade Recommendations

- We would remain neutral for the time being.

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September 18, 1998

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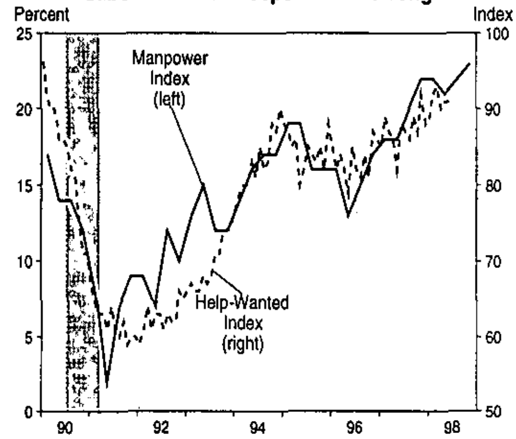
Goldman Sachs

U.S. Economics Analyst

Emerging Markets Turmoil Raises U.S. Risks

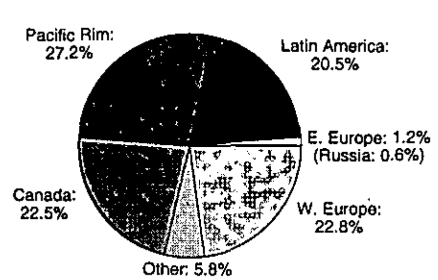
- Although we still expect U.S. monetary policy to remain on hold, easing cannot be ruled out if financial conditions continue to deteriorate. Fed officials would lower rates if they felt that the turmoil in world markets posed a significant danger of systemic financial collapse.
- For this reason, the Fed's near-term focus has shifted from the pace of U.S. economic activity to the health of the global financial system. Evidence of significant stress in the banking system would make easing more likely.
- Fed officials are not constrained by the FOMC meeting schedule. They would not hesitate to ease before the September 29 meeting if events got bad enough. If this happened, then the yield curve would steepen dramatically as investors recalled the 1987-1988 experience in which easing was followed by tightening six months later.
- On the domestic front, most of the news indicates that the economy retains considerable forward momentum, with existing home sales and durable goods orders up sharply. Although consumer confidence and spending have recently registered declines, the fundamental supports for spending growth still appear to be intact: Income rose sharply in July, and various labor-market indicators—initial jobless benefit claims, help-wanted advertising, and the Manpower, Inc. Survey—show no deterioration.
- The main risk to the U.S. growth outlook is in 1999, depending on whether growth in Latin America weakens substantially. About 20% of U.S. exports go to Latin America, and trade links with this region are tighter than with Asia.

Labor Demand Prospects Still Strong



Source: Manpower, Inc. Conference Board.

The Geographical Composition of U.S. Trade



Note: Based on merchandise trade data between 7/97 and 6/98.
Source: Department of Commerce.

Trade Recommendations

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

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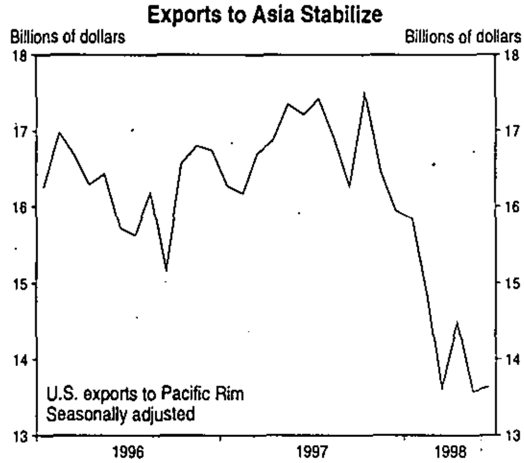
Goldman Sachs

U.S. Economics Analyst

Personal Saving: Sharp Drop Signals Increased Fragility

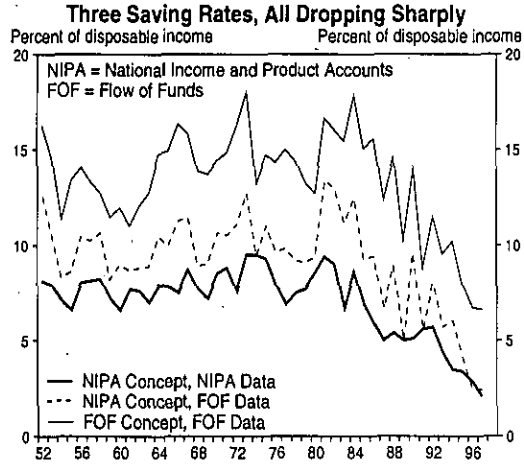
- Risks to the U.S. economic outlook have risen as a result of the threat of contagion into Latin America, troubles in Russia, coordination among Asian governments, the president's legal jam, and military strikes in Afghanistan and Sudan.
- Even so, Federal Reserve officials are unlikely to ease policy soon—barring a financial-market Armageddon—because of concerns that the trend in domestic activity remains strong.
- The latest U.S. economic indicators point to a rebound in growth during the second half. The trade balance narrowed in June, home building hit new highs in July, and surveys of factory conditions showed some improvement. Inflation remains quiescent, however.
- Sharp downward revisions to the U.S. personal saving rate have been greeted with skepticism by financial-market professionals, who see lots of funds flowing into financial assets. These flows implicitly incorporate net borrowing and other sources of funds, such as net sales of tangible assets, that are not included in the official gauge.
- The drop in the personal saving rate does foot with other measures of saving drawn from the Federal Reserve's flow of funds data. It is also corroborated by sharp swings in the federal budget balance and the current account deficit, which confirm the implied surge in the private-sector deficit to a record 4% of GDP. As noted last week, this development underscores the risk to the U.S. outlook from a steep further decline in the stock market and/or to a reduced appetite of foreign investors for dollar-based assets.

Exports to Asia Stabilize



Source: Department of Commerce. Our calculations.

Three Saving Rates, All Dropping Sharply



Source: Department of Commerce. Federal Reserve Board.

Trade Recommendations

- It appears that our short position in September T-bond futures will be stopped out today. We would stay close to shore for the time being.

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Issue No: 98/34
August 21, 1998

Important disclosures appear on the inside back cover.

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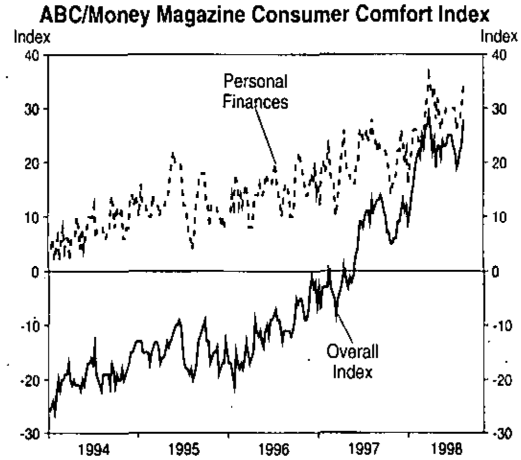
U.S. Economics Analyst

Domestic Imbalances Imply Greater Fragility, Uncertainty

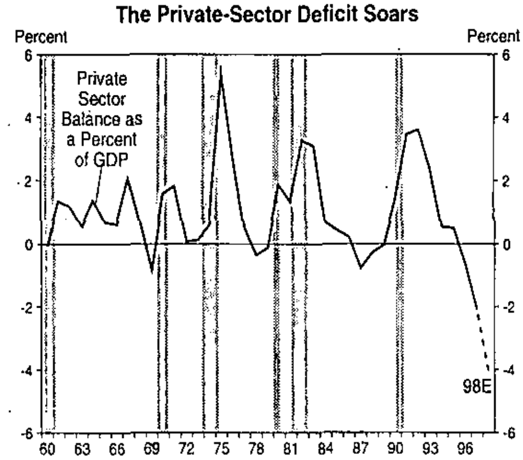
- U.S. consumer confidence remains high in the face of recent market setbacks, with spending outside the strike-plagued vehicle sector on a solid upward track in July. The strikes also caused industrial output to drop sharply in both June and July, distorting the underlying trends.
- Meanwhile, prices in the goods sector remain broadly unchanged. Benchmark revisions to productivity data show a modestly firmer trend in output per hour worked in the nonfarm business sector over the past five years, but not enough to undo a recent upturn in the rate at which unit labor costs are rising.
- Domestic economic imbalances are becoming more visible. Most notably, the personal saving rate has collapsed and the private-sector deficit, which is the gap between domestic saving and investment, has climbed sharply.
- The rapid rise in equity prices in recent years is mainly responsible for these imbalances. This suggests that a sharp and sustained decline in equity prices could cause domestic demand to falter. The wealth effect would run in reverse with more saving and less consumption.
- However, such a decline still appears unlikely. Good fundamentals underpin the U.S. equity market. The expansion is long-lived and without meaningful inflation pressures. Also, spontaneous bear markets in equities are very unusual. Typically, a hostile central bank plays a key role. Currently, Fed officials are not close to tightening monetary policy.

ABC/Money Magazine Consumer Comfort Index



Source: ABC/Money Magazine.

The Private-Sector Deficit Soars



Source: Department of Commerce. Our calculations.

Trade Recommendations

- Sell September Treasury bond futures (currently 124.06), with stops on a close above 125.16, for a target of 121.00.

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August 14, 1998

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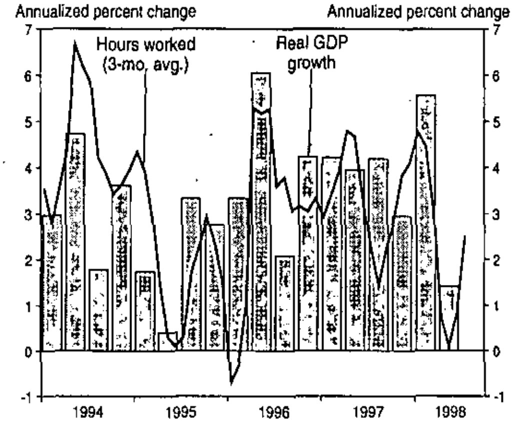
U.S. Economics Analyst

How the Data Move the Markets: An Update

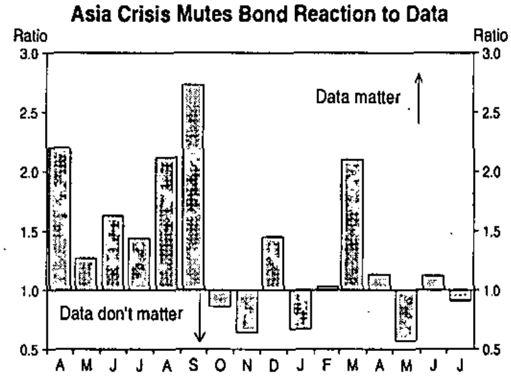
- The slump in Asia continues to hobble the U.S. manufacturing sector. Weakness in exports to the region, coupled with the GM strike, pushed the NAPM composite index down to 49.1% in July, implying a modest contraction in industrial activity. Factory payrolls also fell sharply.
- The rest of the U.S. economy is on a strong growth track, however. The latest indications of this are a 0.6% jump in real consumer spending in June and reports from major retailers that sales remained strong in July.
- This divergence owes much to the persistence of a strong labor market. In July, nonfarm payrolls rose 66,000 despite the GM strike, the jobless rate held steady at 4.5%, and gains in hours set the stage for a rebound in real GDP growth. However, wage inflation remained stable.
- In this week's center section we update our work on how economic data move the markets. With the Asian economic crisis having put the Fed on hold, we find that the reaction of the bond market to economic data has been muted. In fact, the employment report, once the "Mother of all Reports," no longer figures prominently on our list of top ten bond market movers. Until domestic demand weakens or inflation picks up, bonds remain largely a derived market, taking cues from developments in the dollar, equities, and commodities.
- In contrast, stocks have had an easier time reacting to economic data, since with the removal of the threat of an interest rate increase, strong economic data have been unambiguously bullish for stocks. In sharp contrast to bonds, the employment report has been a powerful equity market mover.

Hours Data Point to Growth Rebound



Source: Department of Labor. Department of Commerce.

Asia Crisis Mutes Bond Reaction to Data



Note: Graph plots the ratio of the average absolute move in 30-year Treasuries during days with major data releases over days without major data releases.
Source: Federal Reserve Board. Our calculations.

Trade Recommendations

- Stay neutral for now.

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Issue No: 98/32
August 7, 1998

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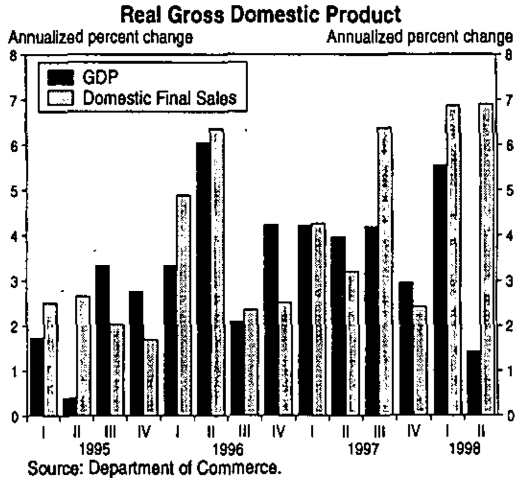
Goldman Sachs

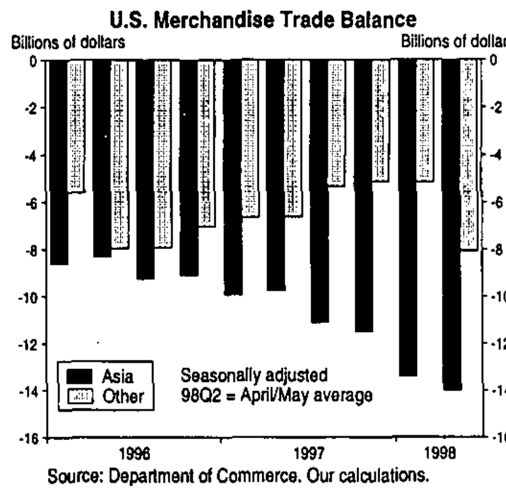
U.S. Economics Analyst

Trade Drag Nips at the Heels of U.S. Growth

- The U.S. economy managed to grow at a 1.4% annual rate in the second quarter of 1998 despite huge drags from inventory correction and trade deterioration. Real domestic final sales rose at nearly a 7% annual rate for the second quarter running.
- The latest reports on domestic activity remain firm. In June, bookings for durable goods were roughly flat despite the GM strike, and sales of new homes surged to a new all-time high. More recently, initial claims for jobless benefits have fallen back down near 300,000 per week, and consumer confidence has held up near recent highs.
- Our analysis of the latest trade data indicates that the crisis in Asia did not dominate the second-quarter trade setback to nearly the extent that it did in the first. A lull in European growth and persistent strength in U.S. domestic demand were the major factors.
- This foots well with updated estimates of U.S. trade relationships, which reinforce previous indications that the relative strength in domestic demand in the United States vis-à-vis demand abroad is by far the most important determinant of shifts in the U.S. trade balance. The analysis also shows that growth on both sides of the trade account has picked up significantly in the 1990s.
- On balance, the analysis suggests that this year's trade drag cut real GDP growth by about 1¼ percentage points, reflecting unrelenting strength at home as well as the Asian crisis. Next year, the drag should drop to ½ point as both factors wane.



Source: Department of Commerce.



Source: Department of Commerce. Our calculations.

Trade Recommendations

- Stay neutral for now.

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E-mail Address: william.dudley@gs.com

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U.S. Economics Analyst

Surging Surpluses May Burst Budget Dam

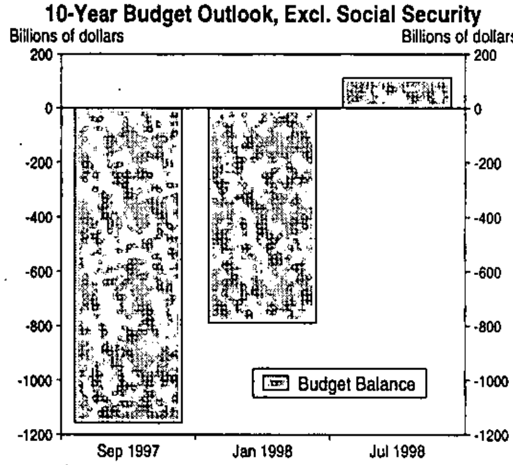
- Chairman Greenspan's Humphrey-Hawkins testimony indicates that monetary policy remains locked on hold for the time being. The Chairman hopes for a soft landing without any Fed action, but notes that the risks remain tilted in the direction that some tightening in monetary policy might be required eventually.
- Greenspan exhibited considerable skepticism about current stock market valuation. He believes that analysts' earnings projections are too optimistic and that this will inevitably lead to disappointment.
- The budget surplus continues to grow, motivating House Republicans to begin serious discussions about pushing ahead with a large tax cut package this fall. However, this effort is very unlikely to result in legislation this year, given opposition in the Clinton administration and the inability of Senate Republicans to obtain the 60-vote supermajority needed to bring such legislation to a vote.
- Although the midterm congressional elections this fall are not likely to change the composition of Congress very much—the historical record suggests that the Republicans are likely to bolster their majorities slightly—the pressures for tax cuts are likely to intensify further next year. The ability of the Clinton administration to keep Republican hands off the surplus by playing the fix-Social-Security-first card should fade as the surplus continues to grow and the passage of time forces the Clinton camp to provide concrete Social Security reform proposals.

FOMC Central Tendency Projections

	1998 February	1998 July	1999
Real GDP (Q4/Q4)	2%-2 3/4%	3%-3 1/4%	2%-2 1/2%
CPI (Q4/Q4)	1 3/4%-2 1/4%	1 3/4%-2%	2%-2 1/2%
Unemployment (average, Q4)	about 4 3/4%	4 1/4%-4 1/2%	4 1/2%-4 3/4%

Source: Federal Reserve Board.

10-Year Budget Outlook, Excl. Social Security



Source: Congressional Budget Office.

Trade Recommendations

- We would continue to stay flat.

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Issue No: 98/30
July 24, 1998

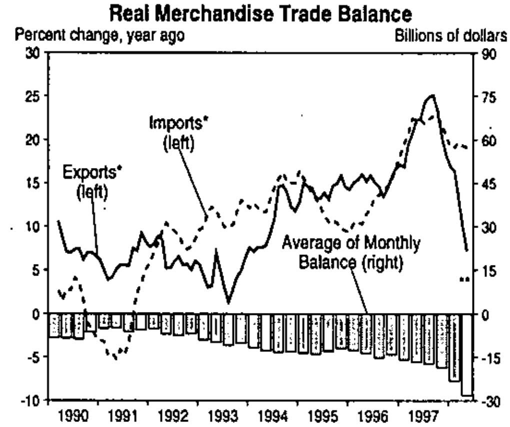
Goldman Sachs

U.S. Economics Analyst

Does an Aging Population Imply Lower Interest Rates?

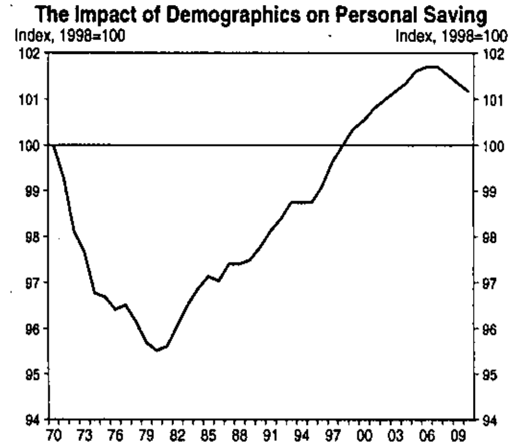
- We have cut our estimate of second-quarter real GDP growth to 1.0% at an annual rate, from 2.0% previously, for two reasons. First, the U.S. trade deficit widened sharply in May. Second, in spite of this, U.S. businesses made surprising progress in curbing inventory accumulation in April and May.
- These seemingly inconsistent developments are partly reconciled by the ongoing strength in domestic demand, illustrated most recently by a sharp upward revision to the increase in retail sales originally reported for May. This strength has allowed manufacturers outside the motor vehicle sector to keep raising output at a modest pace.
- The aging of the U.S. population will not have a significant positive impact on the personal saving rate. Thus, investors should not assume that demographic trends will exert meaningful downward pressure on interest rates.
- The magnitude of the impact is small because differences in the average saving rate across most adult age groups are modest and the shift in the composition of the population by age group is not very large and unfolds only slowly.
- The fact that the personal saving rate hit a 58-year low last year underscores the fact that other factors such as the strength of the equity market are much more important. The personal saving rate has been in a gradual downtrend for years even as the positive contribution from the aging population has been unfolding and now is about two-thirds complete.

Real Merchandise Trade Balance



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

The Impact of Demographics on Personal Saving



Source: Department of Commerce.

Trade Recommendations

- We would continue to stay neutral for now.

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July 17, 1998

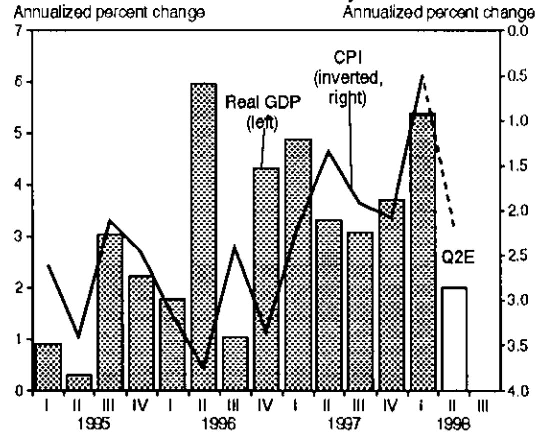
Goldman Sachs

U.S. Economics Analyst

Slower Growth ≠ Lower Inflation

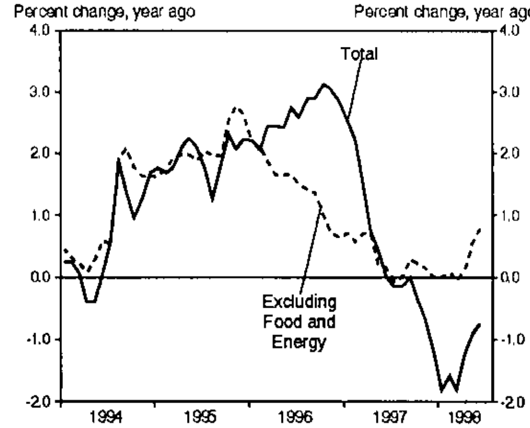
- A light week on the economic data front saw the third consecutive 0.2% increase in core producer prices, reinforcing the notion that inflation has now bottomed out. With the GM strike and price discounting inducing consumers to showrooms, vehicle sales posted a new ten-year record in June.
- However, same-store sales were up a more modest 4.4% from a year earlier, as reported by the GS retail index. Consumer credit is now growing at a 3.5% annual rate.
- The U.S. is currently enjoying a virtuous cycle. A robust economy is pushing up the stock market and the dollar; the dollar's strength is bringing down import prices and lowering inflation. Indeed the past couple of years have been characterized by stronger growth amidst milder inflation.
- The factors that are behind this negative correlation between growth and inflation imply that when the economy starts slowing down, inflation could actually pick up. Since it is inflation, not growth, that mainly drives bonds, this suggests that a growth slowdown might not turn out to be the Holy Grail that bond investors are looking for. Another implication of this analysis is that investors should diversify their holdings appropriately to protect themselves against the possibility that one day this virtuous cycle could turn vicious.

Growth and Inflation Inversely Correlated



Source: Department of Commerce. Department of Labor.

Producer Price Index



Source: Department of Labor.

Trade Recommendations

- We would continue to stay neutral for now.

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Issue No: 98/28
July 10, 1998

Important disclosures appear on the inside back cover.

I. Weekly Wrapup

Economic and Market Overview

This was a light week on the economic data front, with the bond market stabilizing ahead of the Japanese elections on Sunday and the stock market bracing for the second-quarter earnings season.

Monday saw the release of the recently introduced non-manufacturing NAPM index (which covers sectors such as services, construction, and agriculture). The index declined to 61.5% from 64% in May, with the prices paid component dropping to its lowest level since the survey started eleven months ago. The continuing split between the manufacturing and non-manufacturing sectors of the economy is well illustrated by the diverging fortunes of the two NAPM indexes.

Motor vehicle sales surprised on the upside, reaching a new ten-year high in June, as aggressive discounting and the GM strike fueled an early consumer buying spree. With employees at GM now on their regular two-week summer vacation, there is no end in sight to the strike. At this point it seems that the effects of the GM shutdown on the U.S. economy are going to be significant and will muddle economic statistics for quite a while. Auto sales should fall sharply next month, bringing total retail sales into negative territory. With GM production curtailed, the remaining auto companies are likely to discontinue their early discounting offers, putting pressure on consumer prices for July and August. It is estimated that the shutdown will cost GM $400 million per week starting July 13.
On the consumer front, same-store sales in June were up 4.4% from a year earlier according to the GS retail sales index. This was less than the torrid 7.5% increase posted in May, but still quite satisfactory. Consumer credit grew a modest 0.3% in May, bringing the annual growth rate down to 3.5%.

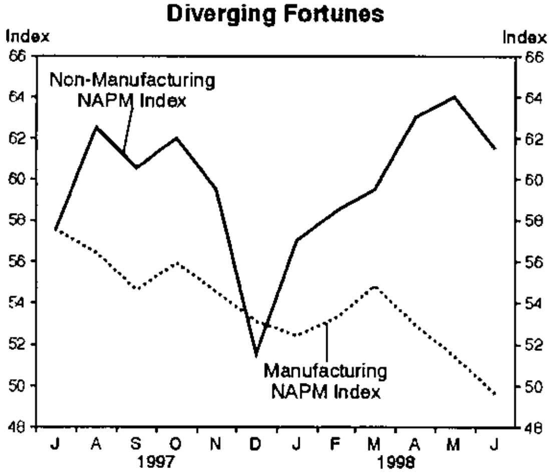
Wholesale inventories expanded at a surprising 0.6% rate in May, fully reversing their April decline, bringing the inventory-to-sales ratio up to 1.31. The headline figure concealed a sharp 2.2% drop in motor vehicle and automotive equipment inventories.

Last, but not least, producer prices declined 0.1% in June, reflecting a 1.7% drop in energy prices. Excluding food and energy, however, prices were up 0.2% for the third month in a row, on a 3.2% price jump in prescription drugs and a modest 0.3% increase in auto prices. Such data reinforce the notion that inflation has now bottomed out.

Federal Reserve Policy

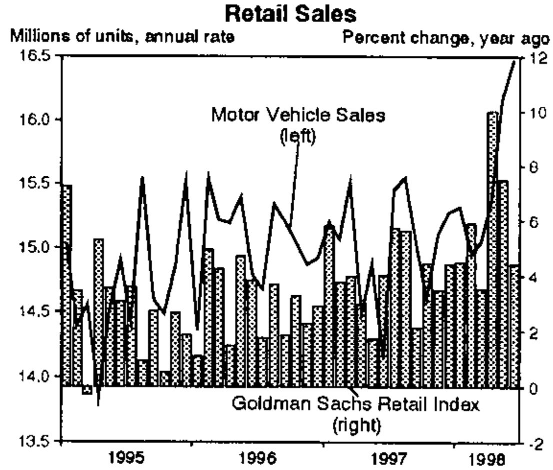
The minutes to the May 19 FOMC meeting were surprisingly hawkish. In addition to two explicit dissents by Bill Poole and Jerry Jordan in favor of an immediate tightening of monetary policy, a number of other members clearly favored tightening at that meeting, but were willing to wait, presumably at Chairman Greenspan's behest. We can infer this from the language of the policy directive that stated that some members "could" accept an unchanged policy. This stands in contrast with language like "favored" or "agreed" that would indicate that the unchanged policy was their first choice. Although the May 19 meeting was nearly two months ago, the

Diverging Fortunes



Source: National Association of Purchasing Management.

Retail Sales



Source: Department of Commerce. Goldman Sachs.

strong support for tightening underscores the high level of the threshold for monetary policy easing. Fed officials are unlikely to ease policy anytime soon for several reasons: 1) They want the economy to slow to generate some slack in the labor market; 2) the sources of the slowdown are likely to prove temporary (by its very nature, weakness due to an inventory correction is temporary); 3) there are few signs of weakness in terms of domestic demand; and 4) inflation has been sticky recently.

Fiscal and Political Developments

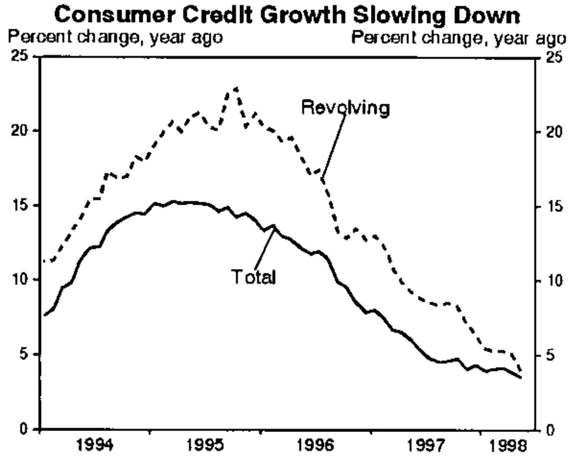
The focus will remain on Japan following the July 12 parliamentary elections. U.S. policymakers are hoping for concrete commitments toward increased fiscal stimulus, preferably in the form of permanent income tax cuts. The willingness of Prime Minister Hashimoto to move in that direction will have important consequences for dollar/yen, the willingness of the U.S. Treasury to intervene in the currency markets on behalf of the yen, and the success of Hashimoto's forthcoming trip to the United States. Because the stakes are so high, it will be surprising if some meaningful commitments are not extended in that direction. The Senate Finance Committee will have hearings on the issue of Japan next Tuesday, with Rubin and Summers among those who have been invited to testify. This may have been designed, in part, to keep the pressure on the Japanese policymakers.

Market Outlook and Comments on Value

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

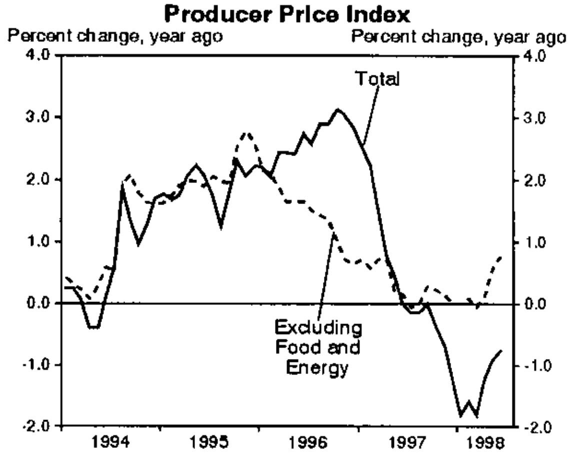
Although we are still not prepared to implement short positions because there remain significant uncertainties about Japan and the economic data over the next few weeks will be soft, we are beginning to question whether bond prices have much further upside: 1) The yield curve is unusually flat, suggesting that a further rally requires a growing expectation of Fed easing; 2) but the threshold to Fed easing is very high; 3) financial conditions have become more accommodative as the stock market has climbed and the dollar has stabilized; and 4) investors are already long their benchmarks.

Consumer Credit Growth Slowing Down



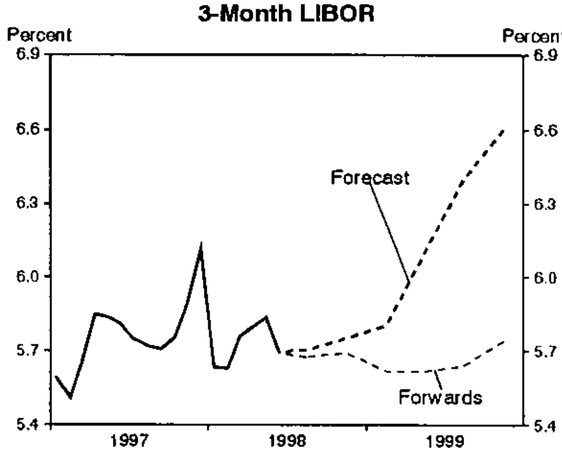
Source: Federal Reserve Board.

Producer Price Index



Source: Department of Labor.

3-Month LIBOR



Source: International Financial Statistics. Bloomberg.

II. Slower Growth ≠ Lower Inflation

The U.S. is currently enjoying a virtuous cycle. A robust economy is pushing up the stock market and the dollar; the dollar's strength is bringing down import prices and lowering inflation. Indeed the past couple of years have been characterized by stronger growth amidst milder inflation.

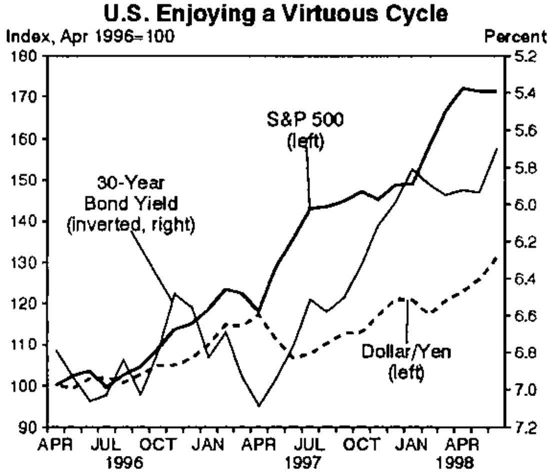
The factors that are behind this negative correlation between growth and inflation imply that when the economy starts slowing down, inflation could actually pick up. Since it is inflation, not growth, that mainly drives bonds, this suggests that a growth slowdown might not turn out to be the Holy Grail that bond investors are looking for. Another implication of this analysis is that investors should diversify their holdings appropriately to protect themselves against the possibility that one day this virtuous cycle could turn vicious.

A Virtuous Cycle

"Our economy is still enjoying a virtuous cycle, in which, in the context of subdued inflation and generally supportive credit conditions, rising equity values are providing impetus for spending, and in turn, the expansion of output, employment and . . . investment."

Chairman Greenspan's characterization of the U.S. economy during his recent testimony before the Joint Economic Committee is visually represented in the graph below. Robust economic growth has been accompanied by a rising stock market and dollar strength. The resulting decline in import prices has

U.S. Enjoying a Virtuous Cycle



Source: Federal Reserve Board. Standard and Poor's.

Correlation Between Growth and Inflation

Period	Correlation
58Q1 - 62Q3	-0.82
70Q4 - 78Q1	-0.54
82Q4 - 88Q2	+0.52
94Q3 - 98Q1	-0.29

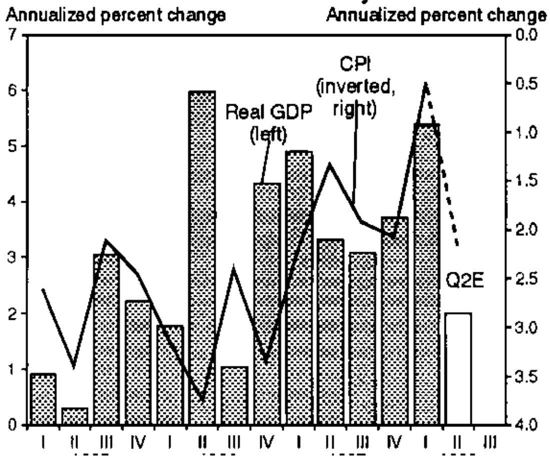
Note: Table shows quarterly correlation between GDP growth and CPI inflation.
Sources: Department of Commerce. Department of Labor. Our calculations.

pushed inflation down and provided support to the bond market. This, in turn, has justified progressively higher equity valuations, further strengthening the dollar, providing renewed impetus to the cycle.

The pillar of this remarkable strength in U.S. financial assets is the essence of the chart on page 5; every time growth has accelerated, contrary to conventional economic wisdom, inflation has actually declined rather than risen. Subdued, rather than accelerating, inflation amidst robust economic growth has allowed all three asset classes (equities, fixed income, dollar) to strengthen together. Indeed a consensus has emerged recently, adopted both by many Wall Street economists as well as by members of the Federal Reserve, that a couple of factors are behind this counter-intuitive negative correlation between inflation and growth. Analysts often mention the role of falling oil prices, the strong dollar, subdued benefit cost inflation and/or the emergence of a budget surplus as some of the reasons why the economy has managed to break through its usual cycle of accelerating inflation amidst a booming economy.

What is not often mentioned, though, is the obvious corollary to this result. If stronger growth coincides with falling inflation, then slower growth could actually be accompanied by rising, not falling, inflation, at least until slack developed in U.S. labor markets. (The chart on page 5 confirms that this has been the case in recent years; *e.g.* during the 1995 growth slowdown the disinflationary process came to a halt.) In fact, as the table above shows, the current period of negative correlation between growth and inflation has several historical precedents.

Growth and Inflation Inversely Correlated



3. Benefit Costs

Amidst soaring stock valuations, employers have had to make progressively smaller contributions to their employee pension funds, since the market value of those funds has been increasing faster than expected. (The Bureau of Labor Statistics reports that retirement and savings employer costs—which include items such as 401(k) contributions—have remained steady at 55 cents per hour worked over the past three years.) Similarly, a tightening labor market has produced shrinking severance costs as employers have had to lay off fewer workers (unemployment compensation costs have remained steady at 14 cents per hour worked for the past six years). A

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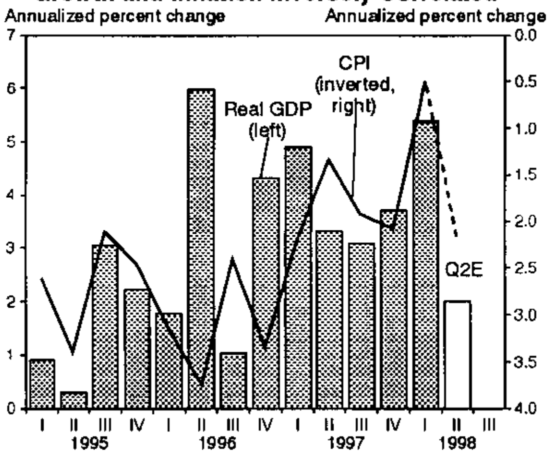
Growth and Inflation Inversely Correlated



Source: Department of Commerce. Department of L

The Inflationary Risks of a Growth Slowdown

Here are a couple of intuitive reasons why slow growth could coincide with higher inflation:

1. **Oil Prices**
   One of the side-effects of the Asian economic crisis has been a relentless decline in commodity prices, exemplified by the 40% collapse in the price of oil. Obviously this decline has fed directly into lower headline consumer and producer price inflation. However, another by-product of this decline, which went unnoticed for a long time by analysts, was that it provided solid support to U.S. economic growth both directly (through higher real wages and income) and indirectly (through lower production costs). When, and if, oil prices move significantly higher, this process will reverse itself, leading to a period of slower growth with higher inflation. (The stagflationary experience of the 1970s is an example of this.)

2. **The Dollar**
   As mentioned above, the dollar has derived its strength from a robust U.S. economy and a soaring stock market. Indeed the monthly correlation between the S&P 500 and the trade-weighted dollar has been a remarkable +0.97 during 1995-1998. A stronger dollar has helped contain inflationary pressures by pushing down import prices. Should a growth slowdown result in stock market weakness, a reversal in the fortunes of the dollar would feed into higher import prices, thus removing a source of downward pressure on domestic inflation. Once more, growth and inflation would be negatively correlated.

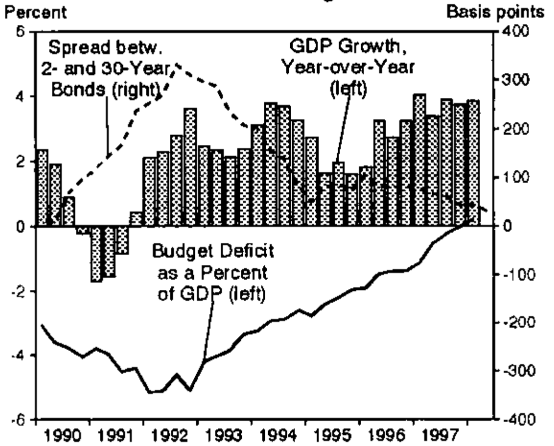
3. **Benefit Costs**
   Amidst soaring stock valuations, employers have had to make progressively smaller contributions to their employee pension funds, since the market value of those funds has been increasing faster than expected. (The Bureau of Labor Statistics reports that retirement and savings employer costs—which include items such as 401(k) contributions—have remained steady at 55 cents per hour worked over the past three years.) Similarly, a tightening labor market has produced shrinking severance costs as employers have had to lay off fewer workers (unemployment compensation costs have remained steady at 14 cents per hour worked for the past six years). A weakening stock market and/or a higher unemployment rate would reverse these favorable trends.

4. **Budget Surplus**
   That the government's budget balance is correlated with the business cycle is well-known. Unexpectedly sturdy economic growth is most certainly one of the main reasons behind the recent dramatic improvement in government finances. As the economy expands, tax receipts increase while government expenditures (on items such as unemployment insurance) decline. The emergence of a budget surplus, and the shrinking supply of Treasuries that such a surplus implies, is one of the main reasons behind the recent flattening in the yield curve.[1] Should growth slow, the government's budget surplus could shrink. Signs of deterioration could ultimately lead to a steeper yield curve, which would tend to undermine economic activity.

5. **Productivity**
   Quite an important link in the recent chain of events has been robust productivity growth amidst strong economic growth. A by-product of a growth slowdown would be slower productivity advances. This is because growth and productivity are positively correlated, as existing workers tend to work harder when demand is high, and vice versa. If productivity growth were to slow at a time of accelerating labor costs, pressure on profit margins and prices would inevitably increase.

[1] See *The Incredible Flattening Yield Curve: Risk Premia in the U.S. Treasury Market,* Alex Patelis, January 16, 1998.

The Incredible Flattening Yield Curve



Source: Department of Commerce, Federal Reserve Board.

6. **Lags**
Last, but not least, it is important to stress the economic lags that are present in the output/price relationship. Markets are often impatient and eager to detect new trends, but economic reality usually changes quite slowly. For example, wage growth and price inflation react with lags to changes in economic growth, and exhibit a lot of inertia. It is not clear yet whether the past two years of above-trend economic growth have worked their way through the system. It is quite possible that a growth slowdown over the next few quarters may coincide with the emergence of inflationary pressures that are already in the pipeline. (For example, we find that increases in house prices feed into CPI-Shelter more or less with a 2-year lag.[2]) The recent experience of the United Kingdom's economy is a stark reminder of the importance of lags. Wage and inflationary pressures have accelerated just as UK economic growth has shown signs of deceleration.

Bottom Line: There are quite a few reasons to expect the negative correlation between growth and inflation to persist in the quarters ahead.

Financial Market Implications

Although there are few signs that the virtuous U.S. economic cycle will be interrupted any time soon, a couple of financial market implications stem from our analysis above:

1. **Bonds: Slower Growth Is Not the Holy Grail**
The main lesson bond market participants have drawn from the experience of the past two years is that it is inflation, not growth, that ultimately matters for bonds. How else to explain the relentless decline in bond yields during a period of robust economic growth.

This lesson should not be ignored in the period ahead. Bond market participants have recently cheered as the economy has exhibited signs of a second-quarter slowdown. Our analysis above suggests that a period of slower economic growth could be accompanied by a pickup in inflation. Indeed this has turned out to be the case already this quarter. (For example, our current forecast calls for 2% growth in Q2, lower than Q1's 5.4%, together with quarter-over-quarter annualized CPI inflation at 2.2%, higher than Q1's 0.5%.) This suggests that investors should be cautious ahead of inflation releases in the coming months.

Inflation, Not Growth, Key Driver of Bonds

	Change since [illegible]
30-Year Treasury	-133 bp
CPI Inflation	-1.3 %
Real GDP Growth	+1.1 %

Sources: Department of Labor, Federal Reserve Board, Department of Commerce.

2. **Diversify, Diversify, Diversify**
The virtuous economic cycle has increased the correlation between U.S. financial asset classes. This increased correlation means that investors who have diversified across such assets may not be that protected. The rising tide on the way up has floated all boats—the ride on the way down could similarly affect assets across the board. One way for investors to protect themselves against a negative outcome would be to hedge a long stock/bond position via a short dollar one. Another useful strategy would be to incorporate commodities in a portfolio. The point here is to take advantage of the correlations between assets within the context of a virtuous cycle that could some day turn vicious.

Alex Patelis

[2] See "The Case of the Missing Inflation—Part II," *U.S. Economics Analyst*, May 1, 1998.

Key U.S. Economic Data

	Latest Monthly Data				6 Mo	12 Mo	Next
	'98 Jun	'98 May	'98 Apr	'98 Mar	Trend	Trend	Release
Nonfarm Payrolls (ch. thousands)	205	309	320	82	243	266	Aug 7
Unemployment Rate (%)	4.5	4.3	4.3	4.7	4.5	4.7	
Index of Hours Worked (% ch)	-0.1	0.6	0.1	-0.4	1.7	2.8	
Average Hourly Earnings (% ch)	0.1	0.2	0.6	0.3	3.9	4.1	
Producer price finished goods index (% ch)	-0.1	0.2	0.2	-0.4	-1.5	-0.8	Aug 14
Excluding food and energy	0.2	0.2	0.2	0.0	1.4	0.8	
Consumer price index (% ch)	--	0.3	0.2	0.0	1.4	1.7	Jul 14
Excluding food and energy (% ch)	--	0.2	0.3	0.1	2.7	2.3	
Retail sales (% ch)	--	0.9	0.7	0.1	8.2	6.6	Jul 14
Excluding motor vehicles (% ch)	--	0.4	0.5	0.1	6.3	5.2	
Industrial Production (% ch)	--	0.5	0.3	0.4	1.9	4.4	Jul 16
Manufacturing	--	0.2	0.5	0.0	1.8	4.7	
Capacity utilization (%)	--	82.2	82.1	82.2	82.5	82.6	Jul 16
Manufacturing	--	80.9	81.9	81.0	81.5	81.6	
Housing Starts (annual rate, thousands)	--	1530	1541	1585	1560	1521	Jul 21
Single-family	--	1228	1233	1239	1220	1178	
Trade balance (billions, monthly)	--	--	-14.5	-13.2	-11.5	-10.2	Jul 17
Merchandise	--	--	-21.5	-20.5	-18.5	-17.4	
Factory Orders (% ch)	--	-1.6	0.7	0.2	-6.7	2.8	Aug 6
Durable Goods	--	-2.4	1.5	0.3	-10.2	4.6	Jul 29
Personal Income (% ch)	--	0.5	0.4	0.4	5.9	5.9	Aug 3
Wages and Salaries	--	0.6	0.4	0.3	6.7	7.5	
Purchasing Managers' Index (%)	49.6	51.4	52.9	54.8	52.4	53.9	Aug 3
Consumer Sentiment U Mich (Feb 66=100)	105.6	106.5	108.7	106.5	107.4	106.4	Jul 31
Conference Board (1985=100)	137.6	136.3	137.2	133.8	135.1	131.9	Jul 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

- The consumer price index in June should reflect lower energy but higher food prices, with the core reading influenced by a further increase in tobacco quotes and a favorable reading on auto prices. As the premature vehicle discounting period ends, we expect core CPI to come under pressure next month (July 14).
- Retail sales should post modest increases in June, after two months of torrid consumer spending, on the back of a surprising further increase in vehicle sales and a softening in chain-store sales results. We are also looking for modest upward revisions to last month's tally (July 14).
- Industrial production should post a sharp decline as a result of the GM strike and the June drop in the NAPM index. Unfortunately, it will be practically impossible to disentangle the effects of the strike from the rest of the report, as the GM shutdown effects not only auto production, but also GM's suppliers as well as its competitors' operations (July 16).
- The trade deficit should narrow slightly with a rebound in exports (July 17).

Economic Releases and Other Events

Date		Time	Indicator	Estimate GS	Estimate Consensus	Last Report
Tue	Jul 14	8:30	Consumer Price Index (Jun)	+0.2%	+0.2%	+0.3%
			Excluding Food & Energy	+0.2%	+0.2%	+0.2%
		8:30	Retail Sales (Jun)	+0.3%	+0.1%	+0.9%
			Excluding Autos	+0.2%	+0.3%	+0.4%
Wed	Jul 15	8:30	Business Inventories (May)	+0.3%	+0.1%	+0.2%
Thu	Jul 16	9:15	Industrial Production (Jun)	-1.0%	-0.4%	+0.5%
		9:15	Capacity Utilization (Jun)	81.0%	81.6%	82.2%
		10:00	Philadelphia Fed Survey (Jul)	+15.0%	n.a.	+28.2%
Fri	Jul 17	8:30	Trade Balance (May)	-$14.0 Bil	-$14.5 Bil	-$14.5 Bil

- Atlanta Fed Survey (Tue, Jul 14 - 9:00)
- Richmond Fed Survey (Tue, Jul 14 - 10:00)
- Import & Export Prices (Wed, Jul 15 - 10:00)
- Treasury 1-Year Bill Auction (Thu, Jul 16)
- U. of Michigan Consumer Sentiment—Preliminary (Fri, Jul 17 - 10:00)
- Home Builders' Survey (Fri, Jul 17)

Interest Rates: Forecast vs. Forward Yields

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

Key Numbers in the Business Outlook

	1998 Q1	1998 Q2E	1998 Q3E	1997	1998E
Real GDP	5.4%	2.0%	2.5%	3.8%	3.5%
Ind. Prod., Mfg.	2.0	2.3	2.9	5.6	4.1
CPI	0.5	2.2	2.5	2.3	1.7
After-Tax Profits*	8.0	4.3	0.0	9.6	3.4
Unemployment	4.7	4.3	4.2	5.0	4.3

* Excluding inventory profits; adjusted for depreciation distortions.

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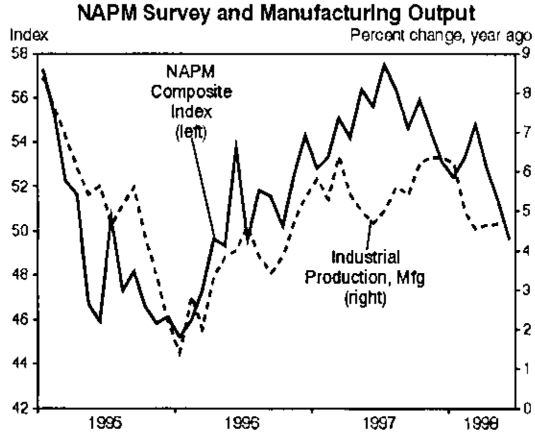
U.S. Economics Analyst

Asia vs. the Domestic Economy: The Tug-of-War Persists

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 July 10, 1998.

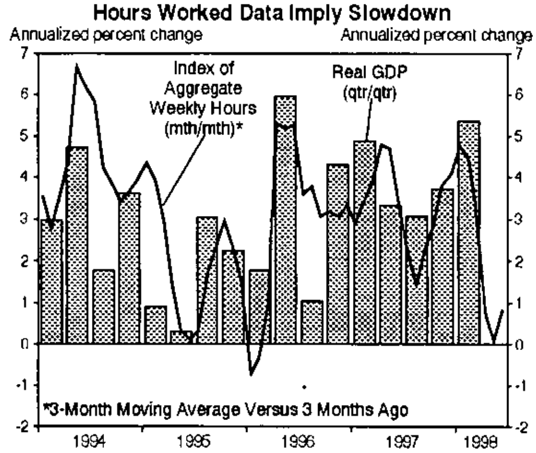
- The tug-of-war between Asia and a strong domestic economy persists. This was particularly visible in the contrast between the 29-year high reached in the Conference Board's measure of consumer confidence and the drop in the National Purchasing Managers' Index below 50% in June.
- In this struggle, Asia and an inventory adjustment cycle may have gained the upper hand, at least temporarily. The employment report confirms that the economy slowed sharply in the second quarter. Although payrolls increased by a respectable 205,000, the rest of the report was quite soft, with the unemployment rate rising to 4.5% and aggregate hours worked slipping slightly.
- The decision of Fed officials to keep monetary policy unchanged at this week's FOMC meeting was a surprise to virtually no one. That contrasted with the warning to banks that their lending procedures would be monitored carefully by Fed bank examiners.
- Treasury cash balance data suggest that the budget surplus will be considerably higher than the most recent projections by the CBO and OMB. As these projections are inevitably raised, this could embolden Republicans in Congress to push for a showdown with President Clinton on cutting taxes in the run-up to the midterm Congressional elections.

NAPM Survey and Manufacturing Output



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

Hours Worked Data Imply Slowdown



Source: Department of Labor. Department of Commerce.

Trade Recommendations

- We would continue to stay neutral for now.

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Issue No: 98/26
July 2, 1998

I. Weekly Wrapup

Economic and Market Overview

Over the past week, U.S. financial markets decoupled somewhat from fluctuations in dollar/yen. Stocks have rallied further as fears of a broader Asian trade shock have subsided somewhat, but the bond market has remained well-supported as investors have been reassured by evidence indicating that the U.S. economy is slowing.

The National Purchasing Managers' report confirms that the manufacturing sector has weakened further. The aggregate index fell below 50%—the dividing line between expansion and contraction in the manufacturing arena—to 49.6%, the lowest reading in more than two years. Most of the weakness was concentrated in the production and inventory components. This suggests that the adjustment process mainly reflects a response to too high inventory accumulation rates, not demand weakness. The fact that the orders component was essentially flat at 52.0% and the gap between the import and export orders components has narrowed a bit in recent months, after widening sharply due to the Asian crisis, is consistent with this conclusion.

The weakness on the production side of the ledger was also evident in the June payroll and household employment reports. Although payrolls rose by a healthy 205,000 in June, the rest of the report was soft. In particular, employment measured by the household survey fell sharply, pushing the unemployment rate up to 4.5% from 4.3%. Moreover, the index of aggregate hours worked fell by 0.1% in June. In the second quarter, aggregate hours worked climbed at a 0.8% annual rate. Finally, wage pressures were more subdued as average hourly earnings rose only 0.1% in June, pushing the year-over-year growth rate down to 4.1% from 4.3% in May.

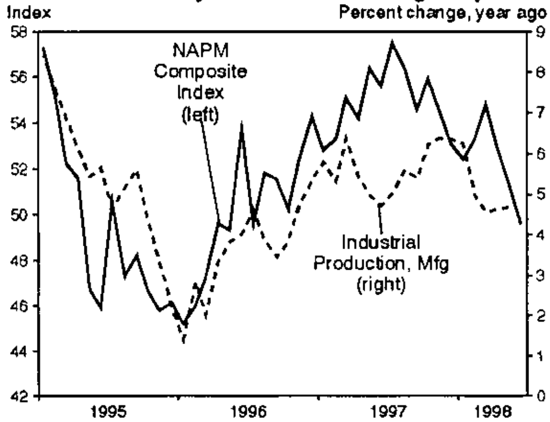
Although the economy is clearly slowing, this softening does not appear to have damaged the consumer sector. For example, the Conference Board's consumer confidence index climbed to a 29-year high in June. Similarly, partial reports indicate that motor vehicle sales in June were very strong.

Construction spending weakened sharply in May, falling by 1.5% overall, with declines in both private (-0.8%) and public (-3.5%) construction. However, this probably more reflects seasonal adjustment problems created by an unusually mild winter rather than true weakness. After all, the housing market is showing no signs of retrenchment. New home sales rose by 0.3% in May to an 890,000 annual rate, the highest of the economic expansion, keeping the ratio of the inventory of unsold new homes to sales at a depressed 3.9 months.

Federal Reserve Policy

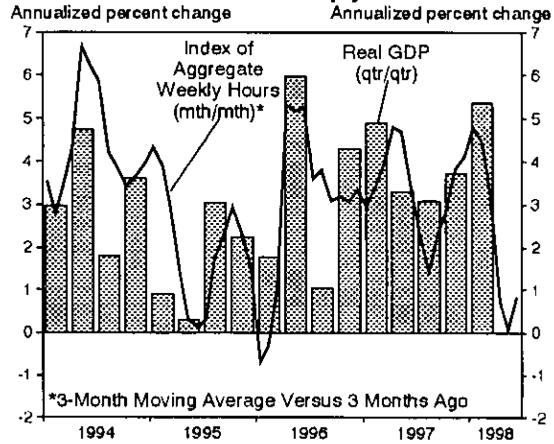
As expected, Fed officials kept monetary policy unchanged at this week's FOMC meeting. As Chairman Greenspan made clear in his testimony to the Joint Economic Committee of Congress a few weeks earlier, the monetary authorities will remain patient when uncertainty is high and inflation is low. The fact that the economy is finally showing signs of slowing undoubtedly reinforces this sentiment.

NAPM Survey and Manufacturing Output



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

Hours Worked Data Imply Slowdown



Source: Department of Labor. Department of Commerce.

At the same time, Fed officials worked to tighten monetary conditions in another way, by jawboning U.S. banks to tighten their lending standards. The Federal Reserve gave notice to all the banks it supervises that its bank examiners would more closely monitor bank lending practices. Apparently, Fed officials are concerned that lending standards have been eased as the long economic expansion has caused some lenders to become complacent. Most likely, this jawboning will have little effect because the relaxation of lending standards is being driven by fundamental developments including healthy bank profits, which is bolstering bank capital.

Fiscal and Political Developments

The Treasury's financial statements indicate that the federal budget surplus is coming in significantly higher than projected by both the Office of Management and Budget and the Congressional Budget Office. In fact, our forecast of an $80-billion surplus for fiscal 1998 may prove to be too low an estimate.

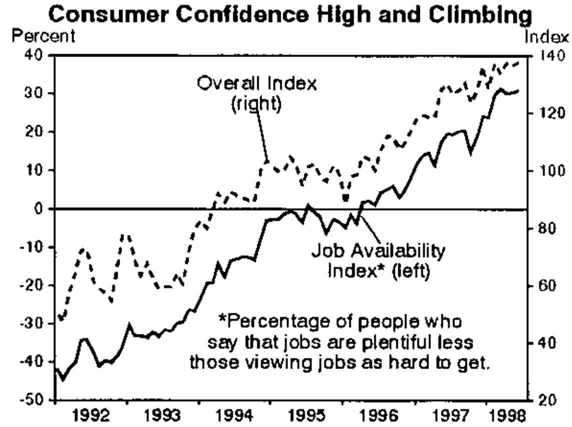
This suggests that the official projections (e.g., the CBO's current estimate is a range of $43-$63 billion) will undoubtedly be raised over the next month or two. If this happens, the pressures from Republicans for tax cuts will increase further, potentially setting the stage for a fall showdown with President Clinton on the issue in the run-up to the midterm Congressional elections. If the Republicans were successful in this endeavor, this would signal a significant shift in fiscal policy away from restraint. For this reason, developments in this arena bear careful watching.

Market Outlook and Comments on Value

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

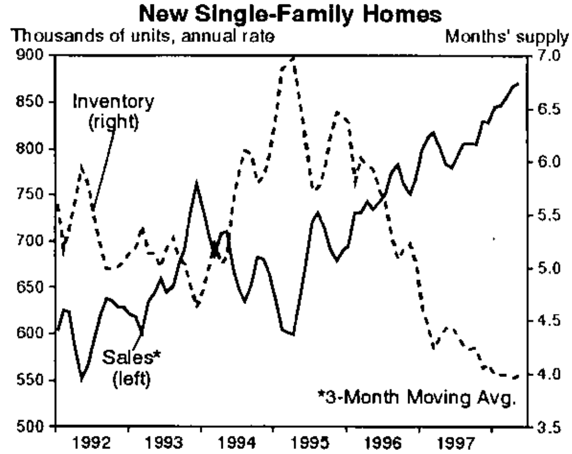
We would continue to stay flat for now. The fixed-income market is likely to remain trapped in a narrow range for a while, caught between evidence that the economy is slowing and the fact that a further decline in yields is difficult when the yield curve is already very flat and the threshold to Fed easing is high. A continuation of the GM strike may also serve to cloud the outlook. If, over the next few weeks, ease fever gets very pronounced, then we might consider implementing some trades from the short side.

Consumer Confidence High and Climbing



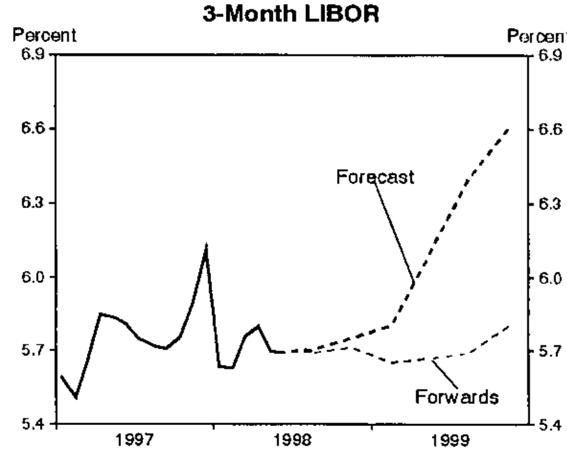
Source: The Conference Board.

New Single-Family Homes



Source: Department of Commerce.

3-Month LIBOR



Source: International Financial Statistics. Bloomberg.

U.S. Calendar

Focus for the Week Ahead

- Producer prices for finished goods are likely to rise modestly, boosted by higher food and tobacco prices. Outside of these two areas, goods prices should generally be well-behaved, with no price pressures further back in the pipeline (July 10).

Economic Releases and Other Events

Date		Time	Indicator	Estimate GS	Estimate Consensus	Last Report
Wed	Jul 8	3:00	Consumer Credit (May)	+$4.0 Bil	+$4.0 Bil	+$5.5 Bil
Fri	Jul 10	8:30	Producer Price Index (Jun)	+0.2%	0.0%	+0.2%
			Excluding Food & Energy	+0.1%	+0.1%	+0.2%

- **Wholesale Trade (Wed, Jul 8 - 10:00)**
- **Treasury Inflation-Indexed Bond Auction (Wed, Jul 8)**
- **Chain-Store Sales Results (Thurs, Jul 9)**
- **Treasury Announces 1-Year Bill Auction (Fri, Jul 10 - 2:30)**

FINANCIAL MARKET STRATEGIES

www.norwest.com

Sung Won Sohn
Corporate Economics
(612) 667-7498
July 6, 1998

Date	Indicator	For	Estimate	Consensus*	Previous Period
July 6	NAPM (Non-Mfg)	June	65.0%	N/A	64.0%
July 6	Home Completions	May	1.51M	N/A	1.53M
July 8	Consumer Credit	May	$4.3B	$4.08B	$5.5B
July 10	PPI	June	Unch	Unch	0.2%
July 10	PPI Excluding Food & Energy	June	Unch	0.1%	0.2%
July 21	Greenspan's Humphrey-Hawkins Testimony (Senate)				

*Consensus Provided by MMS International

Japan: Unintended Credit Tightening and Crunch

- Only 13 trillion yen ($94 billion) to clean up 77 trillion yen ($559 billion) of bad loans? This is clearly a disappointment in view of the fact that the official estimate of bad loans is grossly understated (Chart 1). In the meantime, Japanese banks laden with non-performing loans have stopped lending (Chart 2). Small-to-medium sized firms, which used to be propped up by heavily-regulated and relationship-driven banks, are starved of credit and the bankruptcy rate is jumping sky high.
- In an effort to counteract the banking crisis, Japan has created a "bridge bank" to seize the assets of failing banks and sell off the bad assets while maintaining lending to sound borrowers, using government funds if necessary. The goal of using bridge banks is to prevent bankruptcies among healthy borrowers that would further stifle economic growth. However, the $94 billion package is not enough money for the bridge bank to cover all the bad loans at commercial banks; business bankruptcies will continue to rise.
- As the yen depreciates further, the capital ratio of Japanese banks will worsen for a couple of reasons. Since part of a bank's stock portfolio is counted as capital, an equity slump will lower capital bases. In addition, the value of dollar-denominated loans translated into yen will balloon the leverage ratio. Japanese banks will become even more gun-shy about lending. Unless banking and bad loan problems are solved, the economy will continue to wallow in gloom.

Japan's Economy: Too Few Jobs and Too Much Inventory

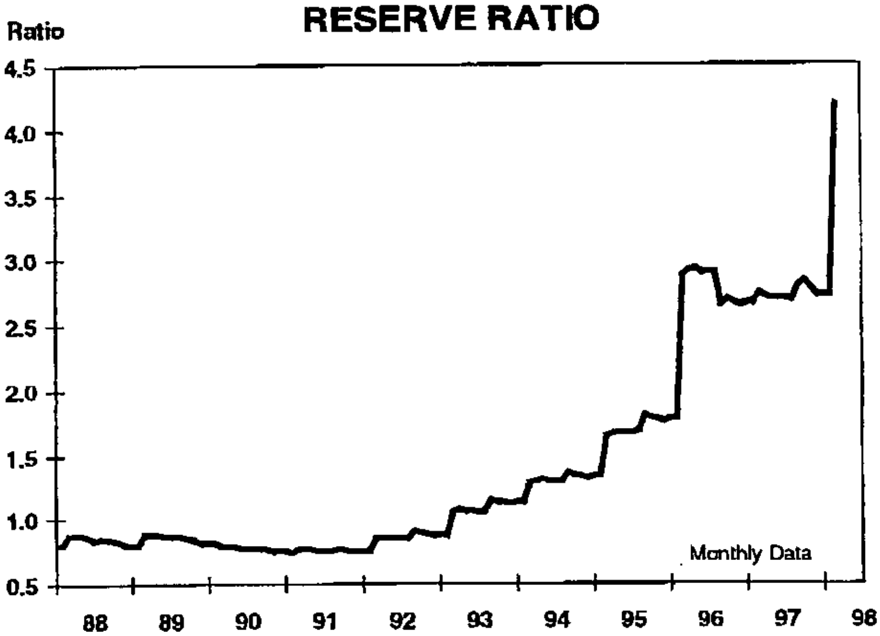
- While politicians hem and haw, the jobless rate in Japan has reached a post-war high. Since it is difficult and expensive to lay off existing workers, businesses have stopped hiring, relying on temporary help if necessary. Younger people are most effected by the recession. Labor immobility is stifling innovation and hurting efficiency. Job opportunities and productivity are moving in the same direction (Chart 3).
- Shell-shocked by rising unemployment as well as falling stock and real estate prices, Japanese consumers have pulled in their horns (Chart 4). Sales are plunging and unsold inventories, whose values are depreciating, are piling up, cutting production, employment and sales. Believing that prices will be lower later, consumers delay purchases. Inventory adjustments have taken about 14 months during the last three business cycles in Japan. At that rate the current inventory cycle may not be over until sometime next year (Chart 6).

Worldwide Impact: More of the Same

- Japan, accounting for 70 percent of East Asia's GDP, could drag down the rest of the world. The Japanese do not seem to appreciate the gravity of the economic dilemma. Korea and Thailand are being forced to make necessary structural changes because they need assistance from the IMF. This is not the case for Japan. We can't force Japan to do much, especially because there is little grass root support for structural changes.
- In the meantime, the weak economy in Japan has been a good safety valve for the red hot U.S. economy. If it were not for Japanese goods and money, U.S. inflation and interest rates would be much higher today. In Asia, however, exports to Japan have sagged. Japanese bankers, who made the Asian miracle possible, have disappeared, contributing to the credit crunch in Asia. Japan keeps letting the rest of the world down. It is difficult to believe that significant changes will happen anytime soon.

Chart 1

JAPANESE CITY BANKS: LOAN LOSS RESERVE RATIO

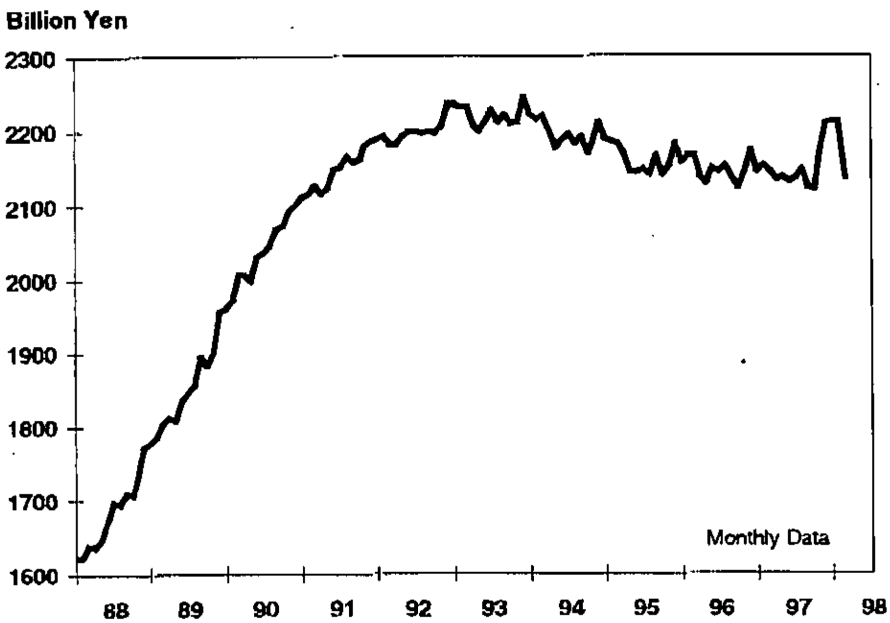


Source: Bank of Japan

Official statistics say that Japanese banks have $559 billion in bad loans. Most likely, the actual figure is much higher. To cover loan losses, banks are setting aside more reserves.

Chart 2

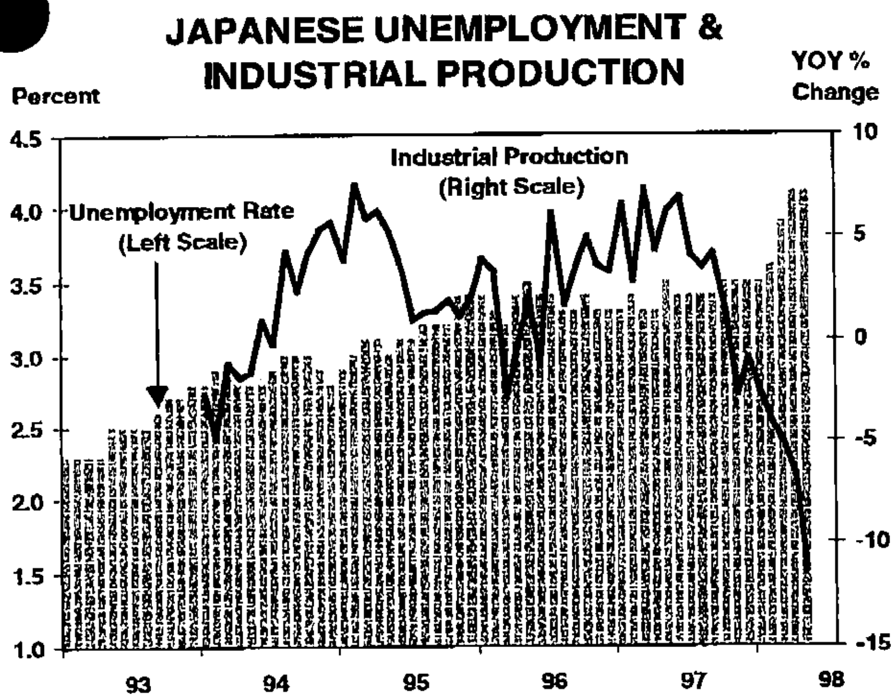
JAPANESE CITY BANKS: LOANS



Source: Bank of Japan

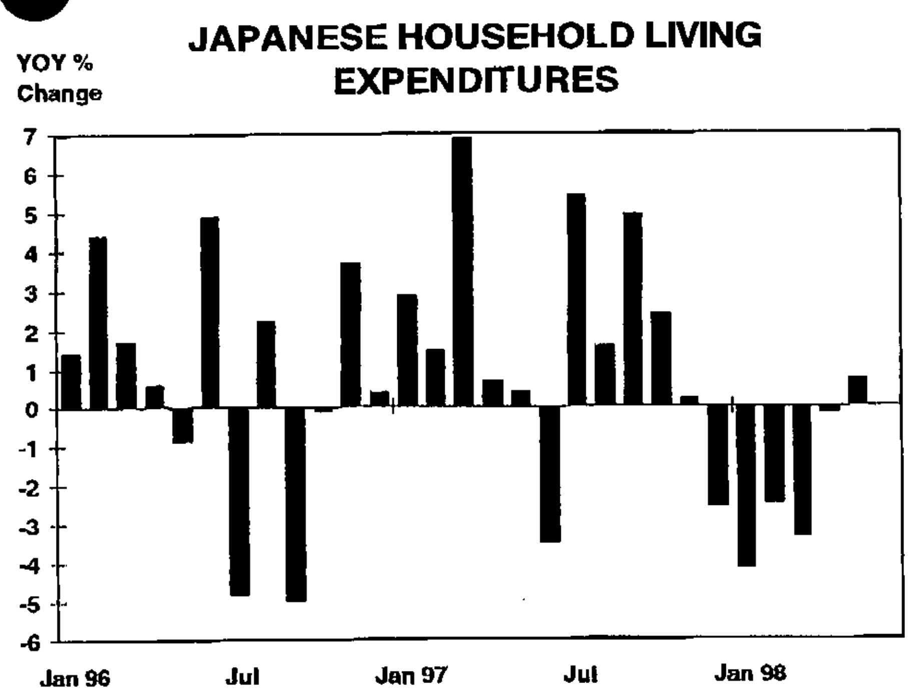
Banks laden with too many bad loans are too gun-shy about lending. Small- and medium-sized businesses are starved of credit, creating bankruptcies. Without bank lending, economic recovery is not possible.

Chart 3



Due in part to the credit crunch, production is plunging and the jobless rate has reached a post-war record. Because of restrictive labor laws, layoffs are expensive and difficult. Businesses have stopped hiring, hurting young people who are joining the labor force.

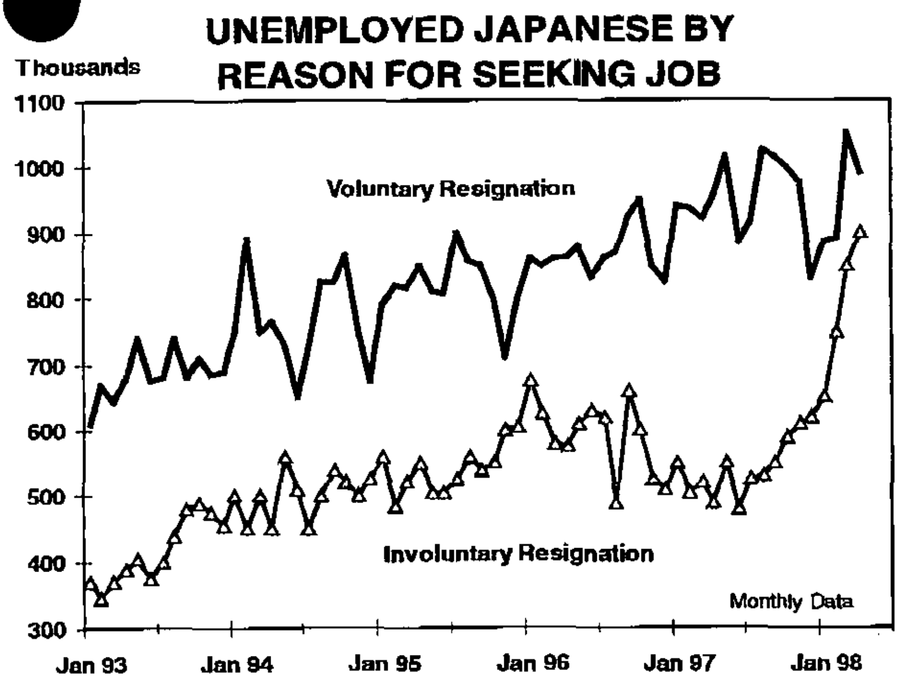
Chart 4



Source: Management & Coordination Agency

Japanese consumers have cut back spending on worries over their future. Home and auto sales are weak. The savings rate is rising, further exacerbating economic conditions.

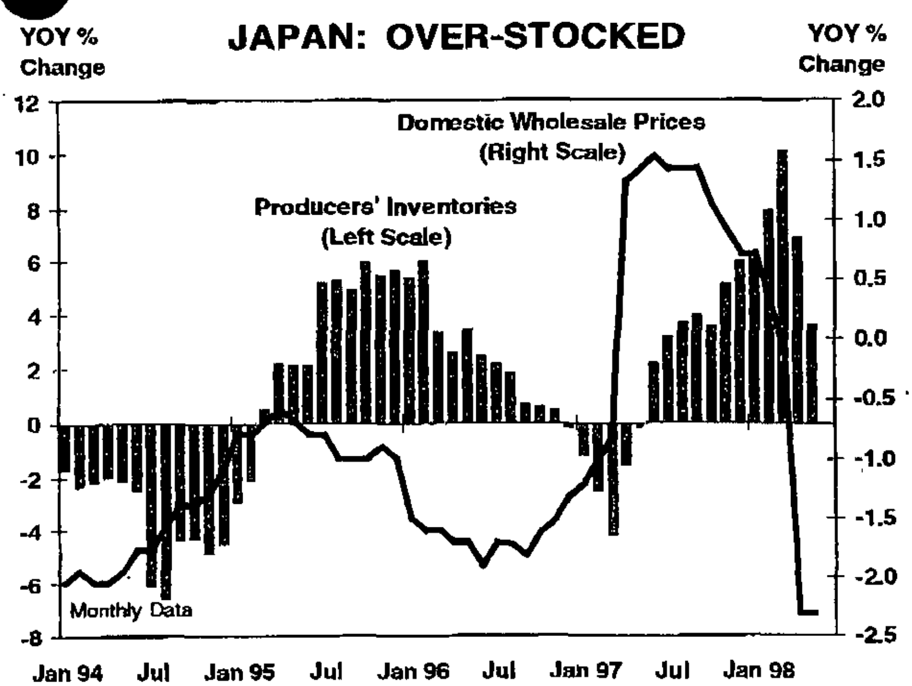
Chart 5



Source: Bank of Japan, Ministry of Int'l Trade & Industry

Using moral suasion within the workplace, Japanese firms are trying to entice workers to voluntarily resign as a way to reduce employment levels. Involuntary resignations have jumped due to increasing numbers of bankruptcies and down-sizing.

Chart 6



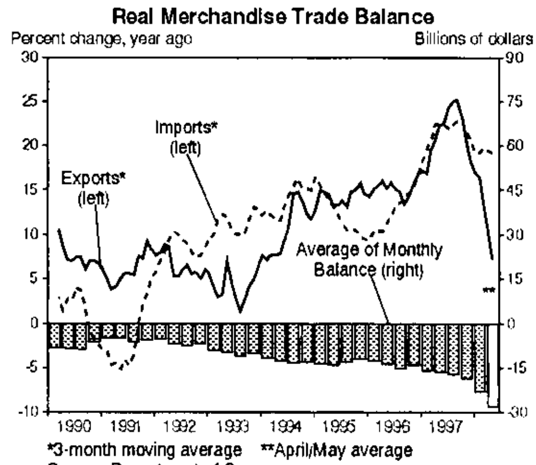
Source: Bank of Japan, Ministry of Int'l Trade & Industry

Unwanted inventories are piling up, the value of which depreciate as prices fall. Consumers delay purchases because prices are falling.

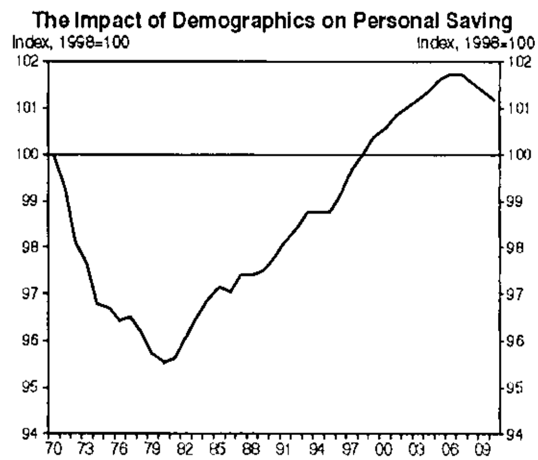
U.S. Economics Analyst

Does an Aging Population Imply Lower Interest Rates?

- We have cut our estimate of second-quarter real GDP growth to 1.0% at an annual rate, from 2.0% previously, for two reasons. First, the U.S. trade deficit widened sharply in May. Second, in spite of this, U.S. businesses made surprising progress in curbing inventory accumulation in April and May.
- These seemingly inconsistent developments are partly reconciled by the ongoing strength in domestic demand, illustrated most recently by a sharp upward revision to the increase in retail sales originally reported for May. This strength has allowed manufacturers outside the motor vehicle sector to keep raising output at a modest pace.
- The aging of the U.S. population will not have a significant positive impact on the personal saving rate. Thus, investors should not assume that demographic trends will exert meaningful downward pressure on interest rates.
- The magnitude of the impact is small because differences in the average saving rate across most adult age groups are modest and the shift in the composition of the population by age group is not very large and unfolds only slowly.
- The fact that the personal saving rate hit a 58-year low last year underscores the fact that other factors such as the strength of the equity market are much more important. The personal saving rate has been in a gradual downtrend for years even as the positive contribution from the aging population has been unfolding and now is about two-thirds complete.



Source: Department of Commerce.



Source: Department of Commerce.

Trade Recommendations

- We would continue to stay neutral for now.

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July 17, 1998

I. Weekly Wrapup

Economic and Market Overview

The main message from the latest U.S. economic data is that inventory correction progressed very quickly last quarter despite continuing weakness in exports, as strong consumer demand lent a hefty helping hand in clearing shelves of unsold goods. Thus, the book value of business inventories dipped 0.1% in May, reversing a similarly small increase in April. This virtually flat pattern contrasts sharply with an average monthly increase of 0.5% during the first quarter.

The progress in inventory correction occurred in the face of continuing weakness in U.S. business abroad. In May, the U.S. trade deficit surged to $15.7 billion, as shipments to other countries fell 1.3% despite a bounce in aircraft exports. Imports edged up 0.5%.

The contrasting role of domestic demand was evident in the latest report on retail sales. Although sales rose only 0.1% in June, both overall and excluding motor vehicles, the 0.4% gain initially estimated for nonauto sales in May was boosted to 0.9%. For the quarter as a whole, these figures imply that real consumer outlays rose at a 4.5% annual rate, and they set a high platform for spending in the third quarter.

On balance, the strength in domestic activity has enabled U.S. manufacturers in most industries to keep raising output, albeit modestly. In June, factory output outside the motor vehicle sector rose 0.1%, bringing the annualized gain for the second quarter to 2.3%. However, the strike at General Motors exacted a heavy toll on total output in June, dragging it down 0.6% as motor vehicle output plunged 11%.

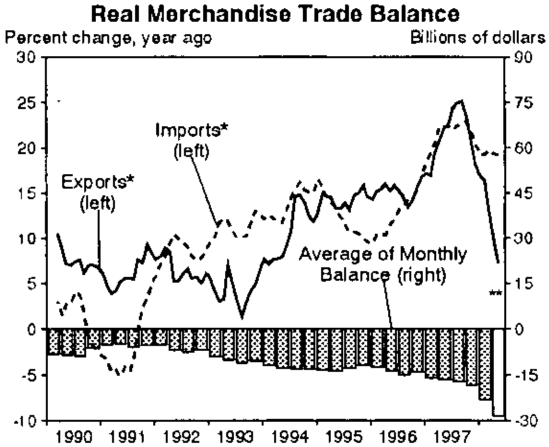
Given the unexpected speed of inventory correction and the worsening in U.S. trade, we have cut our estimate for second-quarter real GDP growth to 1.0%, at an annual rate, from 2.0% previously, and a lower figure cannot be ruled out. If the GM strike persists much longer, then our 2.5% for the third quarter may also turn out to be too high. Even so, the sturdiness of domestic demand in the face of these growth-slowing factors implies that the slowdown will not last much beyond the end of the third quarter.

Retail inflation was surprisingly tame in June, as the consumer price index rose only 0.1%—both overall and excluding food and energy. However, the surprise was not large enough to overturn the slight upward trend that has emerged this year in the year-to-year changes in the core index. Moreover, the June results contained a number of declines—2.0% in airline fares, 0.6% in tobacco quotes, and 0.3% in new vehicle prices—that are apt to be reversed in coming months.

Federal Reserve Policy

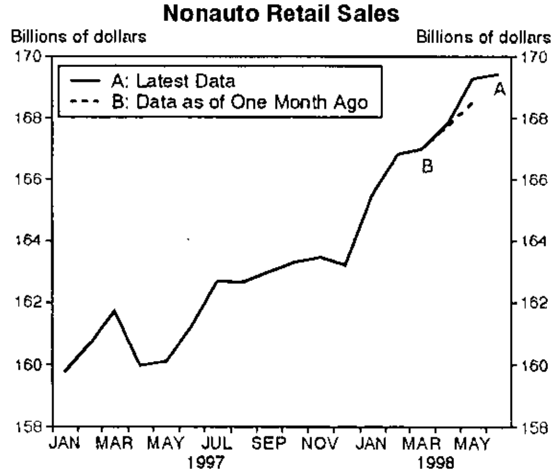
Federal Reserve Chairman Alan Greenspan is scheduled to deliver his semiannual Humphrey-Hawkins testimony on Tuesday, July 21, before the Senate Banking Committee. These remarks are likely to strike a balance similar to his earlier statement to the Joint Economic Committee in early June, as news in the interim has confirmed that industrial activity is slowing but domestic demand remains strong. In his forthcoming testimony, Mr. Greenspan will unveil the FOMC's preliminary "central tendency" forecasts for 1999. We expect ranges of 2%-2½% for changes

Real Merchandise Trade Balance



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

Nonauto Retail Sales



Source: Department of Commerce.

in both real GDP and the CPI (from fourth quarter to fourth quarter) and a fourth-quarter 1999 range of 4½%-4¾% in the jobless rate. Such an outcome should make it clear that Fed officials do not contemplate the need to ease anytime soon. In fact, the bias remains tilted toward tightening, if recent comments by William Poole, President of the St. Louis Federal Reserve Bank, are indicative. Mr. Poole, who dissented in favor of an immediate tightening at the May 19 FOMC meeting because of strong money growth, said nothing had changed in his view, despite some deceleration in the monetary aggregates.

Fiscal and Political Developments

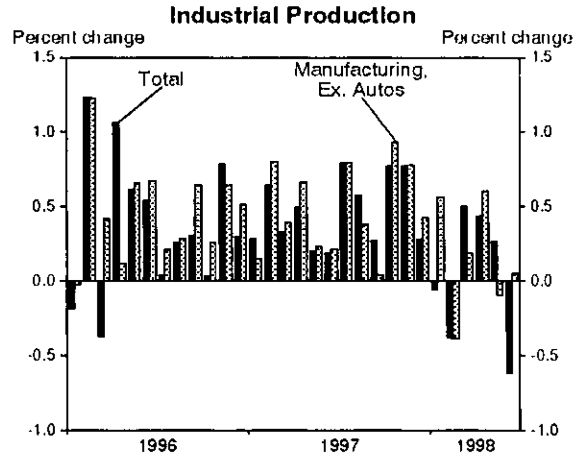
The Congressional Budget Office now estimates that the 1998 fiscal surplus will total $63 billion, at the upper end of its previous $43- to $63-billion range but still well below our estimate of $80 billion. Beyond the current fiscal year, the CBO foresees surpluses settling into the $80- to $85-billion range for FY 1999-2001 and then moving considerably higher. In contrast to fiscal 1998, this path is much higher than our own estimates, in part because it assumes no change in fiscal policy.

That assumption is already coming under increasing fire from conservative GOP lawmakers. On news of the revised budget estimates, several prominent senators and representatives revived calls for massive tax cuts, accumulating to as much as $300 billion over a five-year period.

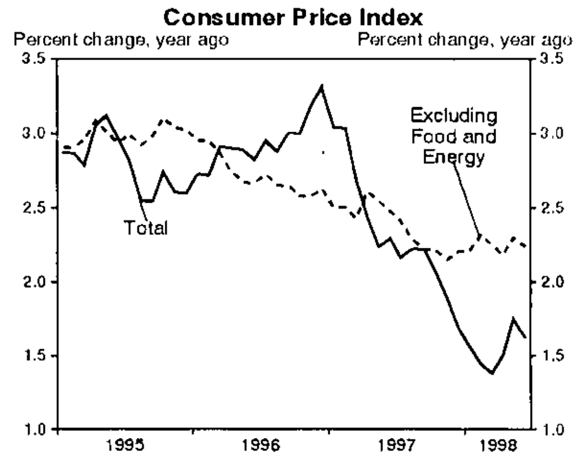
Market Outlook and Comments on Value

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

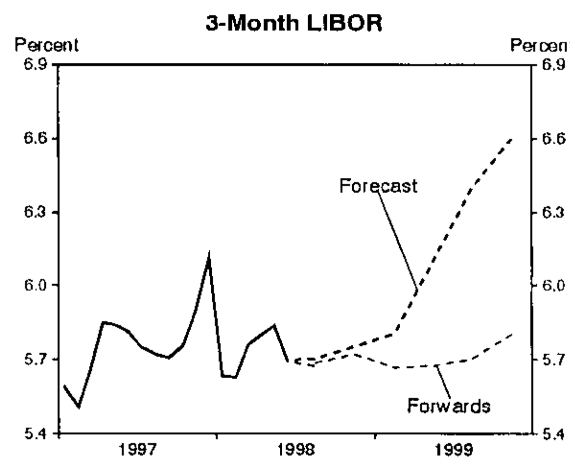
We are becoming more convinced that bond yields have troughed for the time being. This reflects four judgments: (1) Asia is settling down so that the safe haven demand for Treasuries should abate; (2) financial conditions in the United States have become easier as the stock market has vaulted upwards and the dollar has stabilized; (3) the slowdown in economic activity is not likely to be particularly deep or long-lasting; and (4) despite the good June CPI reading, inflation appears to be bottoming. Because the threshold to Fed easing is very high relative to what is priced into the Eurodollar futures market, we would look to express bearish views in the short end of the market but would wait a bit longer before taking action.



Source: Federal Reserve Board.



Source: Department of Labor.



Source: International Financial Statistics, Bloomberg.

II. Does an Aging Population Imply Lower Interest Rates?

One reason that the U.S. bond market has been well-behaved in recent years has been a strongly held view that secular factors—in particular, the aging of the population and the slowdown in labor force growth—will have favorable implications for the domestic saving/investment balance and, hence, interest rates. The argument has two facets. On one hand, as the baby boomers age, the saving rate will rise, increasing the pool of domestic saving. On the other hand, investment needs will drop as the growth rate of the labor force declines. The *ex ante* increase in saving and drop in investment imply lower interest rates. That is the mechanism that maintains the balance between saving and investment *ex post*.

In this weekly, we examine whether the aging of the U.S. population will result in greater saving and thereby help to hold down interest rates. Later this summer, we will consider the other half of the equation, whether slower labor force growth implies less investment demand and lower interest rates.

The aging of the U.S. population is likely to lift the personal saving rate only slightly. There are neither sufficiently large differences in the average saving rates across the working-age groups nor big enough changes in the proportion of the population in different age groups to generate a large impact. More baby boomers in their high-saving years lift the aggregate saving rate slightly, but this is largely offset by a rise in the proportion in the oldest age groups, which save very little.

The personal saving rate declined to a 58-year low last year, despite favorable demographic trends that are already well-advanced. This underscores the fact that other factors, such as the stock market, are much more important in influencing the personal saving rate.

The Link Between Demographics and Saving

Demographic trends should matter for two simple reasons: (1) The average saving rate differs by age group, and (2) the age distribution of the U.S. population is changing. The question is the magnitude of these effects, both absolutely and compared to other factors that affect saving.

The age distribution of the U.S. population is changing due to three factors. First, the bulge of baby boomers (and the offspring of the baby-boom generation) is gradually making its way through the age distribution. The baby-boom generation, born between 1946 and 1964, now ranges in age from 34 to 52 years old. Second, longer life expectancy is expanding the proportion of the population in the oldest age groups. The proportion of the population 75 years or older has risen to about 5.8% of the population currently from 3.7% in 1970. Third, the birth rate has declined. This will gradually cause the growth rate of the younger age groups to decline. As a result of these factors, the population is getting older. The median age of the population has climbed to about 34.9 years currently, up from 28.2 years in 1970. As this has occurred, the number of people in the highest-saving age brackets, the 35-44, 45-54, and 55-64 age groups, has increased.

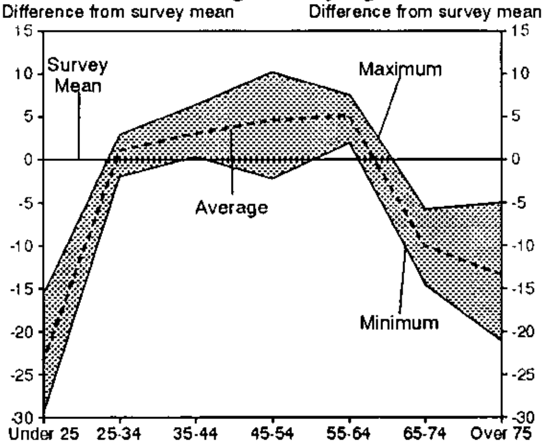
To calculate the impact of this demographic shift on the saving rate, we start with estimates of the

CES Saving Rate by Age Group (%)

Age Group	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Under 25	-10.2	-19.5	-15.4	-15.7	-11.4	-12.3	-17.4	-16.7	-12.8	-4.9	-12.4	-7.1
25 to 34	6.5	7.6	7.4	13.5	9.5	13.6	13.7	14.5	11.2	14.7	10.9	12.1
35 to 44	6.8	9.7	9.6	13.2	9.9	13.6	13.2	13.2	16.1	18.5	19.2	16.5
45 to 54	6.4	8.3	4.0	14.1	17.2	14.5	15.8	22.8	20.4	17.4	16.2	20.7
55 to 64	11.4	9.6	13.2	18.1	15.3	16.6	17.3	17.2	15.6	14.7	19.1	16.5
65 to 74	-2.5	0.3	0.2	-2.1	2.7	3.2	1.5	-0.9	-0.8	1.9	-1.6	0.2
Over 75	0.5	-10.4	-1.8	2.5	-0.6	-1.3	-4.0	-6.2	-2.2	-8.2	-0.4	-5.3
Mean	5.5	6.2	6.2	10.6	9.6	11.1	10.9	12.7	12.0	12.9	13.0	13.5
Memo: NIPA Personal Saving	8.7	7.2	6.5	5.3	5.5	5.1	5.3	6.0	6.2	5.1	4.2	4.8

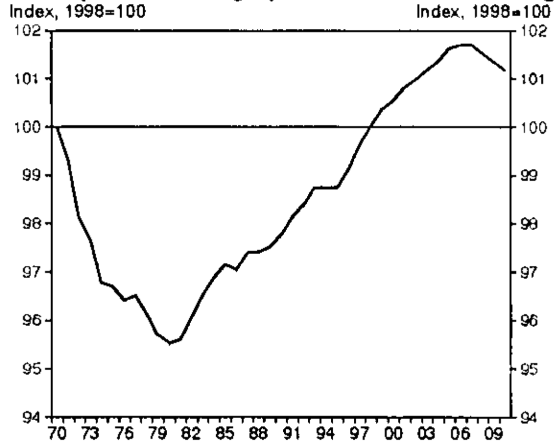
Source: Department of Commerce. Department of Labor.

Personal Saving Rate by Age Bracket



Source: Department of Labor.

The Impact of Demographics on Personal Saving



Source: Department of Commerce.

differences in saving behavior across age groups. We use the last 12 annual Consumer Expenditure Surveys (CES) for seven age groups, ranging from under 25 to 75 and over. Although the saving rate for each survey differs somewhat as might be expected with changes in economic conditions, the pattern of how the saving rate changes by age groups is remarkably similar across the surveys. As shown in the accompanying chart, which plots the average deviation of each age group from its own mean, the pattern is consistent. The saving rate generally rises to a peak in the 45-54 and 55-64 age groups, before declining. The young and the old typically have negative saving, i.e., their consumption outstrips their current income. Either debt is rising or they are living off accumulated savings.

The dispersion across the 12 CES surveys, illustrated by the shaded area in the chart, is quite narrow. The stability of this pattern suggests that saving behavior is much more determined by age group than by birth cohort. In other words, 60-year-olds in 1995 do not behave much differently than 60-year-olds in 1985. This means that an average of these 12 CES survey results should generate a pretty robust estimate of the differences in the saving rate by age group.[1]

Combining the CES data with projections of how the age distribution will change over time, we can use the CES data to calculate how important demographic shifts will be in affecting the aggregate saving rate. We make these calculations on the basis of the projected age group's share of total income, based on CES data on average income per household in each age group, and Bureau of the Census data on the age distribution of households.

Applying the Census projections of the age distribution by households to our CES estimates of the saving rate by age group and average income by age group results in the aggregate personal saving rate trajectory shown in the chart above. Because of the lack of direct comparability between CES- and NIPA-based saving rate concepts, we plot this trajectory in terms of index values, with the index equaling 100 in 1998.

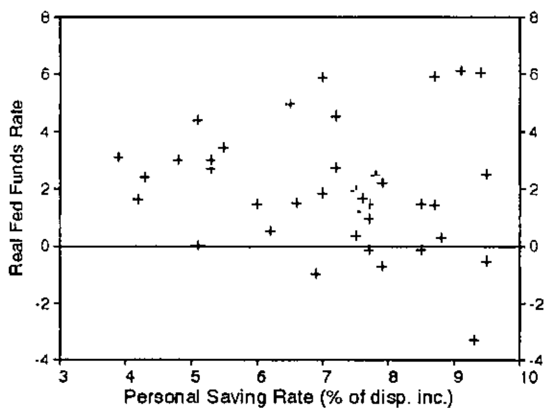
The chart indicates that demographic factors will have only a very modest impact on the saving rate over the next decade. As shown, the index climbs less than 2% by 2007. In terms of the CES saving rate data, this translates into an increase in the saving rate of roughly one-fifth of a percentage point. Using the NIPA personal saving rate concept as a benchmark, the magnitude of the increase would be even less because the NIPA saving rate is much lower than the saving rate calculated on a CES basis.

[1] The CES data show an aggregate saving rate far higher than the personal saving rate on a national income and product account (NIPA) basis. This is presumably due in large part to how the national income accounts make imputations to income (in-kind income) and consumption (housing) that differ from the concepts used in the consumer expenditure survey. However, we do not believe this difference is important in the results that we present. That is because we care about differences in the saving rate across age groups, rather than the absolute level of saving. We are trying to measure the net change in the saving rate generated by shifts in the age distribution of the population, not the level of the saving rate after adjusting for demographic trends.

This muted impact on the saving rate from the shift in the age distribution of the population reflects three factors. First, the differences between the saving rates by age groups are not that large. The 45- to 54-year-old age group does not have a much different saving rate than the adjacent 35-44 or 55-64 age groups. Second, the bulge in age groups caused by the aging of the population is actually relatively modest. For example, at its peak, the 45- to 54-year-old age group accounts for about 15% of the total population, up from a low point of 9% in 1986.

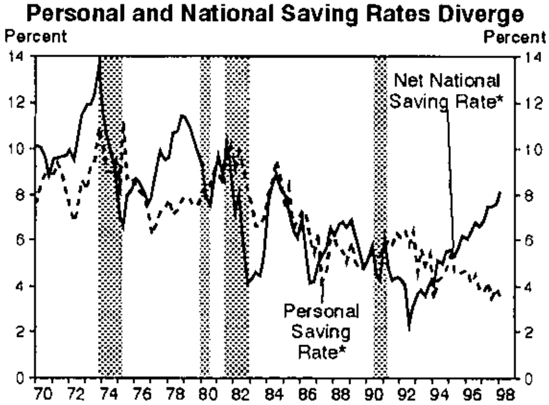
Third, as shown in the chart on page 5, much of the positive impact of demographics on the saving rate has already happened. Moving the saving rate backward in time adjusting just for changes based on demographic factors, one finds that more than two-thirds of the increase in the saving rate caused by demographic factors has occurred by 1998.

A Loose Link Between Saving and Interest Rates



Source: Department of Commerce. Department of Labor. Federal Reserve Board.

Personal and National Saving Rates Diverge



*Net national saving as a percent of net national income and personal saving as a percent of disposable personal income.
Source: Department of Commerce.

Other Factors More Powerful

The shifts in the personal saving rate caused by demographic factors are insignificant compared to the swings caused by other factors. For example, we estimate that the sharp stock market rise has reduced the personal saving rate by about 1½ percentage points since the beginning of 1995. Not only is this large relative to the total magnitude of the shift estimated from demographic factors, but also it has occurred in a much shorter period of time. In contrast, the trough-to-peak effect on the personal saving rate generated by shifts in the age distribution of the population shown earlier takes place over 26 years.

The effects are also insignificant relative to the volatility in the personal saving rate from year to year. To see this, consider that the annual personal saving rate on a NIPA basis has ranged between 3.9% and 9.5% since 1970. One standard deviation around the annual average is 1.8 percentage points. This is many times larger than the total trough-to-peak effect on the saving rate that would be generated by purely demographic factors.

Finally, it is important to emphasize that the linkage between the personal saving rate and interest rates is very loose. As shown in the accompanying chart, which plots the relationship between the real federal funds rate versus the personal saving rate over the 1960-1997 period, one has to strain to see even the slightest pattern (the correlation coefficient is -0.13 over this period).

The linkage is so loose because the aggregate supply of saving is influenced by other factors. For example, in the 1990s, the net national saving rate has risen sharply despite a decline in the personal saving rate (see accompanying chart). Net national saving has been boosted by an expanding corporate profit share of income and a federal budget balance that has swung sharply from deficit into surplus.

Bond investors should not hold their breaths waiting for aging baby boomers to save more and push down interest rates. Although this is a positive factor, it is very weak and mostly spent. Much more important will be developments on the fiscal policy front and the performance of the equity market. Continued fiscal restraint would be a positive; a robust stock market that pushed the personal saving rate lower would be negative for the interest rate outlook.

Bill Dudley

Key U.S. Economic Data

	Latest Monthly Data '98 Jun	'98 May	'98 Apr	'98 Mar	6 Mo Trend	12 Mo Trend	Next Release
Nonfarm Payrolls (ch. thousands)	205	309	320	82	243	266	Aug 7
Unemployment Rate (%)	4.5	4.3	4.3	4.7	4.5	4.7	
Index of Hours Worked (% ch)	-0.1	0.6	0.1	-0.4	1.7	2.8	
Average Hourly Earnings (% ch)	0.1	0.2	0.6	0.3	3.9	4.1	
Producer price finished goods index (% ch)	-0.1	0.2	0.2	-0.4	-1.5	-0.8	Aug 14
Excluding food and energy	0.2	0.2	0.2	0.0	1.4	0.8	
Consumer price index (% ch)	0.1	0.3	0.2	0.0	1.4	1.6	Aug 18
Excluding food and energy (% ch)	0.1	0.2	0.3	0.1	2.5	2.2	
Retail sales (% ch)	0.1	1.2	0.7	0.1	8.3	6.2	Aug 13
Excluding motor vehicles (% ch)	0.1	0.9	0.5	0.1	7.8	5.1	
Industrial Production (% ch)	-0.6	0.3	0.4	0.5	0.3	3.7	Aug 14
Manufacturing	-0.6	0.0	0.6	0.2	0.0	3.8	
Capacity utilization (%)	81.6	82.4	82.4	82.4	82.3	82.6	Aug 14
Manufacturing	80.3	81.1	81.4	81.2	81.3	81.6	
Housing Starts (annual rate, thousands)	--	1530	1541	1585	1560	1521	Jul 21
Single-family	--	1228	1233	1239	1220	1178	
Trade balance (billions, monthly)	--	-15.7	-14.3	-13.2	-12.5	-10.7	Aug 18
Merchandise	--	-22.8	-21.3	-20.5	-19.5	-17.9	
Factory Orders (% ch)	--	-1.6	0.7	0.2	-6.7	2.8	Aug 6
Durable Goods	--	-2.4	1.5	0.3	-10.2	4.6	Jul 29
Personal Income (% ch)	--	0.5	0.4	0.4	5.9	5.9	Aug 3
Wages and Salaries	--	0.6	0.4	0.3	6.7	7.5	
Purchasing Managers' Index (%)	49.6	51.4	52.9	54.8	52.4	53.9	Aug 3
Consumer Sentiment U Mich (Feb 66=100)	105.6	106.5	108.7	106.5	107.4	106.4	Jul 31
Conference Board (1985=100)	137.6	136.3	137.2	133.8	135.1	131.9	Jul 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.

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U.S. Calendar

Focus for the Week Ahead

- Chairman Greenspan's semiannual Humphrey-Hawkins testimony to the Senate and House Banking Committees should maintain the balanced tone evident in his appearance before the Joint Economic Committee last month. The U.S. economic growth pace is slowing, inflation is still well-contained, and uncertainties about Asia remain high. Under these circumstances, patience should continue to be the watchword (July 21 and 22).
- Housing starts in June should advance after falling modestly in May. Strong new home sales combined with low inventories suggest that the strength in this sector has not peaked yet (July 21).
- The Federal budget balance for June should show improvement from a year ago, reinforcing our view that the surplus in fiscal 1998 will be at least $80 billion (July 22).

Economic Releases and Other Events

Date	Time	Indicator	Estimate GS	Estimate Consensus	Last Report
Tue Jul 21	8:30	Housing Starts (Jun)	+2.0%	+1.3%	-0.7%
Wed Jul 22	2:00	Federal Budget Balance (Jun)	+$59.0 Bil	+$50.0 Bil	+$54.6 Bil

- **Greenspan Testifies Before Senate Banking Committee—Humphrey-Hawkins Report (Tue, Jul 21 - 10:00)**
- **Treasury Announces 2-Year Note (Wed, Jul 22 - 2:30)**
- **Greenspan Testifies Before House Banking Committee—Humphrey-Hawkins Report (Wed, Jul 22 - 10:00)**

Interest Rates: Forecast vs. Forward Yields

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

Key Numbers in the Business Outlook

	1998 Q1	1998 Q2E	1998 Q3E	1997	1998E
Real GDP	5.4%	1.0%	2.5%	3.8%	3.3%
Ind. Prod., Mfg.	2.3	1.7A	2.2	5.6	3.9
CPI	0.5	2.0A	2.5	2.3	1.7
After-Tax Profits*	8.0	4.6	0.1	9.6	3.6
Unemployment	4.7	4.4A	4.4	5.0	4.4

* Excluding inventory profits; adjusted for depreciation distortions.

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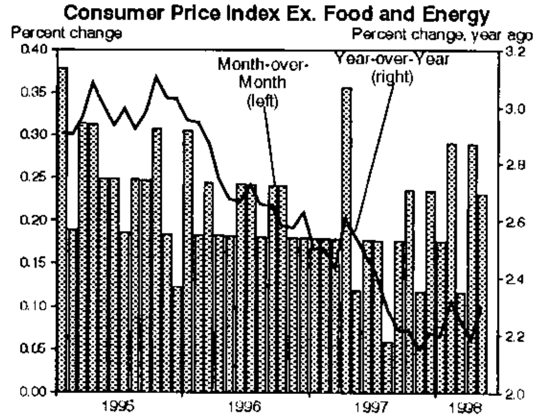
A More Benign Interest Rate Outlook

- As noted last week, we no longer expect monetary policy tightening in 1998. Slower growth, stable inflation, and a high level of uncertainty concerning developments abroad should keep Chairman Greenspan patient. As a result of this change, we also have lowered our range for the 30-year Treasury bond yield to 5½%-6% for the remainder of 1998.
- For 1999, we continue to expect Fed tightening and a gentle updrift in bond yields to above 6%. This reflects our view that financial conditions will need to be tightened to prevent the economy from overheating. The monetary authorities are likely to make financial conditions more stringent by pushing up interest rates.
- However, financial market conditions could become tighter in other ways—the dollar could strengthen or the equity market weaken. Because of this possibility, we have softened and pushed back the upward trajectory of interest rates that we expect next year.
- The Treasury's intervention in the foreign exchange market turned around the dollar, bond, and equity markets. For this to last, however, credible Japanese policy actions are required to shore up their economy and restructure their banking system.
- The core CPI inflation rate is no longer falling year-over-year and has, in fact, climbed a bit over the past six months. The trade data indicate that trade drag is continuing. Exports weakened in April, pushing up the U.S. trade deficit. This is only having a mild impact on production, however, which is on a firmer trend than reported earlier. Coupled with weakness in imports, this suggests that much of the first quarter inventory buildup represents imported goods.

U.S. Interest Rate Forecast
(quarter-end, in percent)

	1998 Q3	1998 Q4	1999 Q1	1999 Q2	1999 Q3	1999 Q4
Federal Funds	5.50	5.50	5.50	5.75	6.00	6.25
3-Month LIBOR	5.70	5.75	5.80	6.10	6.40	6.60
2-Year Treasury	5.40	5.50	5.55	5.80	6.00	6.10
10-Year Treasury	5.50	5.60	5.65	5.90	6.00	6.10
30-Year Treasury	5.70	5.80	5.90	6.10	6.20	6.30

Consumer Price Index Ex. Food and Energy



Source: Department of Labor.

Trade Recommendations

- We would stay neutral for now.

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Issue No: 98/24
June 19, 1998

Goldman Sachs

U.S. Economics Analyst

Riding the Asian Roller Coaster: Japan Holds the Key

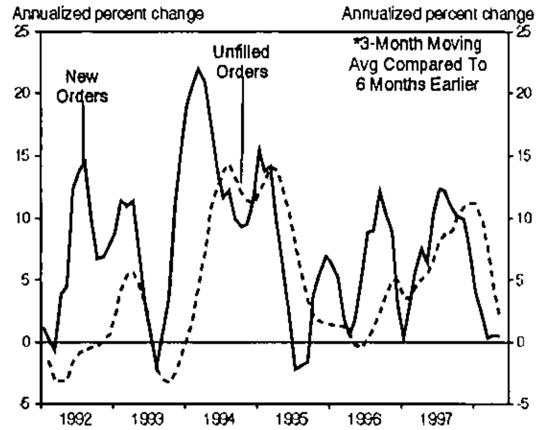
- International developments continue to be the focus of attention in U.S. financial markets, as the latest news on domestic activity has not been very surprising. Although the link has loosened a bit in recent days, changes in the dollar/yen exchange rate have driven trading in U.S. bonds and stocks to a remarkable degree lately.
- The direct effect on U.S. growth of shifts in the dollar/yen rate are small, even for the huge 10% range that has prevailed in the past two weeks. Instead, the U.S. markets' sensitivity to dollar/yen reflects a realization that the effects of the Asian crisis will multiply if policy makers in Japan fail to revive its economy.
- Japan's economy suffers from two problems: a financial sector laden with bad loans and a shortage of aggregate demand. Although the markets' focus is on bank reform, efforts in this area could actually suppress economic activity. Thus, fiscal stimulus that is more permanent than the temporary set of measures now in the pipeline is urgently needed.
- Data for May featured divergent trends in orders for durable goods, which fell 2.6%, and personal income and spending, which each advanced about ½%. Although domestic demand remains sturdy, we have cut our second- and third-quarter growth estimates slightly to reflect upward revisions to first-quarter inventory accumulation and the UAW strike at GM.
- The Federal Open Market Committee meets on June 30 and July 1, but is quite unlikely to change its federal funds rate target.

U.S. Bonds and Stocks Follow Dollar/Yen

	Daily Correlation Coefficient with Dollar/Yen Rate	
Period	30-Year Bond Rate	S&P 500 Index
1982-1996	0.06	-0.02
1997:H1	-0.10	0.00
1997:H2	-0.18	-0.03
1998 Year-to-Date	-0.26	-0.07
Jan	-0.44	0.07
Feb	-0.23	-0.02
Mar	-0.31	-0.09
Apr	0.08	-0.19
May	-0.46	0.21
Jun	-0.43	-0.22

Source: Federal Reserve Board.

Nondefense Durable Goods Orders excl. Aircraft



Source: Department of Commerce.

Trade Recommendations

- Stay neutral for now.

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Issue No: 98/25
June 26, 1998

silent, in accordance with the informal "blackout" period, although Boston Bank President Cathy Minehan did note that the business cycle is not dead and Vice Chair Alice Rivlin asserted that the economy is not slowing as fast as some might have thought. Looking ahead, we still see the Fed on hold for the rest of the year, reflecting the heightened degree of uncertainty for the U.S. economic outlook posed by Asia and rapid inventory accumulation.

Fiscal and Political Developments

By a 6-3 vote, the Supreme Court struck down the 1996 line item veto law that had given the president long-sought authority to strike certain items from budget legislation without vetoing it in its entirety. This decision was not surprising and is unlikely to have a substantial impact on the budgetary process, as the line-item veto was not exercised regularly by the president in the first place.

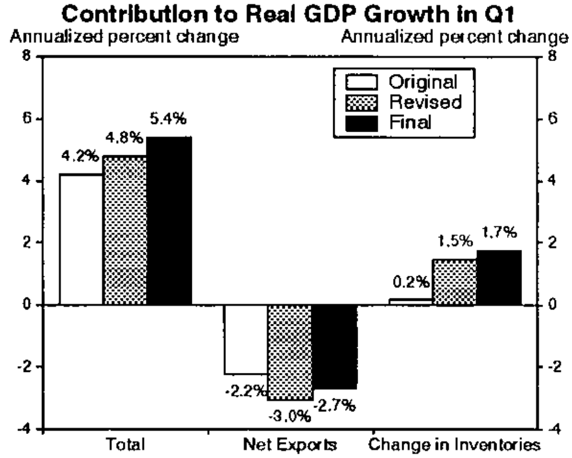
President Clinton arrived in China on Thursday to begin a nine-day visit. Meanwhile, at a Senate subcommittee hearing on the Asian financial crisis, Deputy U.S. Treasury Secretary Lawrence Summers reiterated his view that coordinated Fed intervention has now opened ". . .a window of opportunity, but it won't always be there and that's why actions are significant." The overall tone of U.S. government officials of late indicates that they are now working with, rather than against, their Japanese counterparts. It is unlikely, however, that a long-term solution to the Japanese banking crisis is going to emerge soon, as detailed plans are unlikely to be announced before the upcoming July 12 elections.

Market Outlook and Comments on Value

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

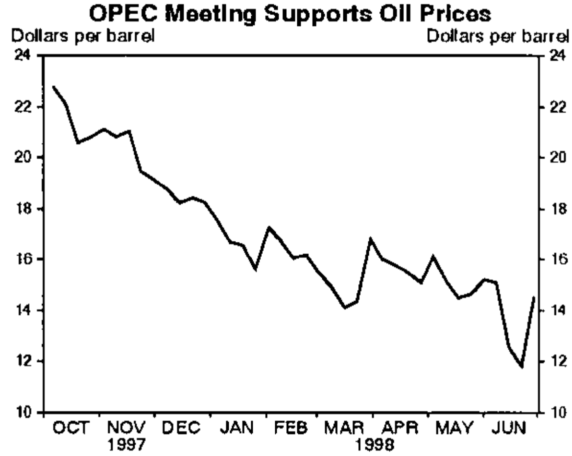
We would stay close to shore given the significant cross-currents affecting the fixed-income market. On one hand, the economy is slowing and the Asian outlook remains unsettled, providing support for fixed-income assets. On the other hand, the core CPI has already shown signs of bottoming and the labor market remains very tight. Because the yield curve is unusually flat, investors must anticipate an easier monetary policy for bond yields to fall materially further. Barring a meltdown in Asia, this seems very unlikely because the threshold to an easing is very high given the pressure on labor markets. Instead, bonds are likely to be range-bound for now.

Contribution to Real GDP Growth in Q1



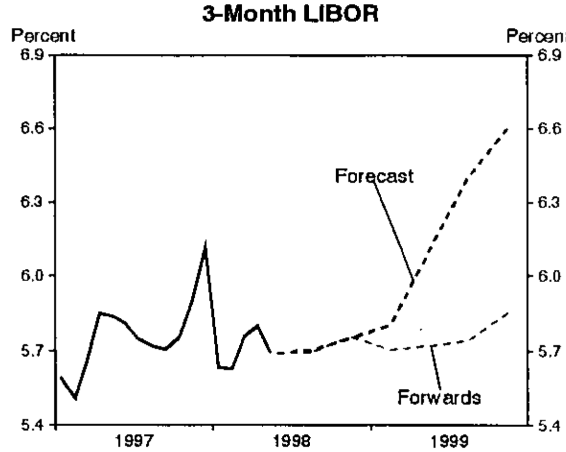
Source: Department of Commerce.

OPEC Meeting Supports Oil Prices



Source: Wall Street Journal.

3-Month LIBOR



Source: International Financial Statistics. Bloomberg.

II. Riding the Asian Roller Coaster: Japan Holds the Key

Over the last month or so, turmoil in Asia has moved back to center stage in U.S. financial markets. Quite often during this period, trading in the U.S. equity and bond markets has been dominated by movements in the dollar/yen exchange rate, which has become the gauge of how serious the Asian crisis is. In essence, market participants have come to the conclusion that policy decisions in Japan will determine whether the Asian crisis remains a minor event for the U.S. economy or turns into something worse. We agree. Thus, even though much of the economic weakness now surfacing in Asia represents the fallout from last fall's crisis, and should therefore not change the U.S. outlook to a significant degree, the risks of a much larger impact now appear higher.

The Significance of the Dollar/Yen Rate

Over the past two weeks, the dollar/yen exchange rate has traded as high as 147¥/$ and as low as 132¥/$, and prices of U.S. stocks and bonds have swung sharply in tandem. This continues a pattern of strong sensitivity to trading in dollar/yen, as shown by the rising correlation coefficients in the table at the top of the next column. What is behind this sensitivity?

U.S. Bonds and Stocks Follow Dollar/Yen

Period	Daily Correlation Coefficient with Dollar/Yen Rate	
	30-Year Bond Rate	S&P 500 Index
1982-1996	0.06	-0.02
1997:H1	-0.10	0.00
1997:H2	-0.18	-0.03
1998 Year-to-Date	-0.26	-0.07
Jan	-0.44	0.07
Feb	-0.23	-0.02
Mar	-0.31	-0.09
Apr	0.08	-0.19
May	-0.46	0.21
Jun	-0.43	-0.22

Source: Federal Reserve Board.

The answer does not lie in the direct implications of the changes in the dollar/yen rate for U.S. economic activity. At 147¥/$, imports from Japan would be about 10% cheaper to U.S. buyers than if they were priced at 132¥/$. Likewise, U.S. exports would be 10% more expensive for Japanese buyers. Although the trade deficit with Japan would surely widen to some extent in response to such a shift, it would not make a big difference to the U.S. growth outlook. After all, the United States exports only 1¼% of its output to Japan and satisfies only about 2¼% of its domestic demand with imports from Japan. A 10% move in both sides of the bilateral balance, which probably overstates the effect given the insensitivity of U.S. imports to changes in price, would cut U.S. GDP growth by only about 0.3 percentage points.

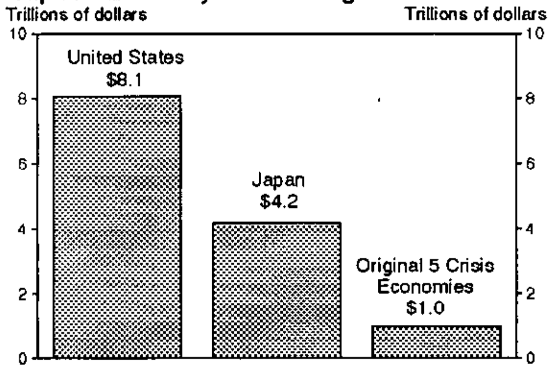
Instead, market participants see the dollar/yen rate as the barometer of the gravity of the Asian situation, recognizing that the outcome depends critically on the prospects for a turnaround in Japan's economy and on the policies undertaken to achieve that objective. Unlike the nations in which the crisis began, whose economies are quite small, Japan boasts the second largest economy in the world—one half as big as the U.S. economy and four times the size of the original crisis economies combined, as shown in the chart on the top of page 5. Thus, even if additional weakness in Japan has only a modest direct effect on U.S. activity, it would increase the pressure on Chinese authorities to devalue their currency—the yuan—which in turn would likely set off another round of competitive depreciation in the region and threaten to spread the crisis to Latin America as well. For these reasons, the dollar/yen rate is likely to keep driving the trading in U.S. markets until the outlook for the Japanese economy comes into clearer focus.

Intervention: Whys and Wherefores

On Wednesday, June 17, the Federal Reserve and the Bank of Japan bought an estimated $4 billion in yen to stem the slide in the yen's value that had occurred over the preceding week or two. Although implemented by the Fed, the U.S. side of this intervention was done at the behest of the Treasury Department, which has the authority to decide when, by how much, and in what currencies to intervene. Thus, the decision to intervene was made in the Clinton administration—either by Treasury Secretary Rubin or by the president himself.

We will probably not know, at least for a long time, what prompted the move, which came less than a week after Secretary Rubin had pointed out in congressional testimony, that intervention does not have a lasting effect on currency rates in the absence of changes in the underlying fundamentals. Several possible explanations come to mind: (1) With President Clinton headed to China for a state visit, U.S. officials may have wanted to appease Chinese authorities, who have talked lately of possibly

Japan's Economy Looms Large in Asian Crisis



Note: Original 5 crisis economies include Korea ($450 bn), Indonesia ($210 bn), Thailand ($155 bn), Malaysia ($99 bn), and the Philippines ($77 bn).
Source: Department of Commerce. Goldman Sachs.

Adjustments to Our Outlook for Japan

	FY 1998		FY 1999	
(Year-over-Year % Change)	New	Old	New	Old
Real GDP	0.3	0.9	-0.3	1.1
Private Consumption	0.1	-0.3	0.3	1.4
Private Capex	-4.1	-0.9	-1.1	1.4
Private Housing Investment	-5.6	-6.0	0.4	0.7
Government Consumption	0.9	0.2	0.4	0.0
Public Fixed Investment	8.3	9.3	0.2	0.1
Exports	-2.1	5.3	-0.2	2.4
Imports	-7.7	-0.7	2.0	2.8
Industrial Production	-8.0	-0.9	-2.2	2.3
Corporate Profits*	-10.0	0.0	-3.0	2.5
GDP Deflator	-0.4	-0.5	-0.5	-0.2
Consumer Price Index	-0.3	0.2	-0.9	0.2
Trade Balance	15.8	15.6	-3.8	2.2
Current Account Balance	23.4	16.7	-13.2	-11.7
(Ratio to Nominal GDP %)	3.2	3.1	2.8	2.7

* Excluding financial sector, national income basis.
Source: Goldman Sachs.

devaluing the yuan if the yen weakens further. (2) U.S. officials may have gotten assurances from the Japanese government that it will take more decisive steps to stimulate its economy after elections for the upper house of the Diet on July 12. (3) These officials may have calculated that intervention would push Japan in this direction.

In terms of U.S. fundamentals, the move does not signal a shift in policy thrust, even though the sale of dollars for yen did, in the first instance, increase the outstanding volume of bank reserves. This is because the Fed always sterilizes intervention in the foreign exchange markets by conducting offsetting open market operations—in this case by selling Treasury securities to mop up the additional dollars. Thus, the federal funds rate was unaffected in the final analysis.

The key question is whether the intervention either signals or motivates a shift in Japan's economic policies. So far, the comments by U.S. and Japanese officials, made in the wake of a visit to Japan by Deputy Treasury Secretary Lawrence Summers, have merely reiterated the good intentions of the Japanese government and have fallen short of revealing a definitive policy shift. Until that occurs, the June 17 intervention and any follow-up measures that might be on the way will do little more than buy time.

All Eyes on Japan . . .

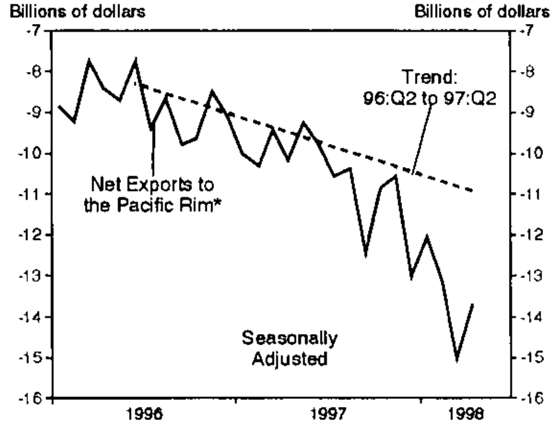
The Japanese economy suffers from two problems—a financial sector laden with bad loans and weakness in domestic demand. To succeed, government policies must address both. Currently, the markets' focus is on financial sector reform. However, measures that deal solely with this issue could actually weaken the Japanese economy in the short run, by disrupting the internal flow of credit and strengthening the yen as international confidence improves. In fact, this is a principal reason why our colleagues in Tokyo have just cut their estimates for growth in Japan, by 0.6 percentage points in the current fiscal year (1998) and 1.4 points in fiscal 1999, as shown in the table above. They now foresee no net growth over this period.

Under these circumstances, it is especially important that the government tackle the problem of stimulating economic growth, preferably via fiscal policy so as to prevent further yen depreciation. Recently, the Diet passed a supplemental budget that shifts the thrust of policy in fiscal 1998 from restraint equal to 0.6% of GDP to stimulus worth about 0.8% via temporary tax cuts and public works projects. This move had been widely expected and was already incorporated in our growth outlook. However, its effectiveness is open to question for several reasons: (1) The shift in fiscal thrust is temporary; unless current laws are changed, it will be replaced by a huge drag, worth 1.7% of GDP in fiscal 1999. (2) Confidence is extremely low in Japan. (3) Despite years of stagnation, Japan still enjoys a high standard of living, so consumers may not feel the need to acquire more goods. (4) The Japanese population is comparatively old, with many workers due to retire within the next decade. For all of these reasons, Japanese consumers may choose to save the tax cut, and financial markets are therefore looking for the Japanese authorities to make the stimulus more long-lasting. Our forecast for Japan assumes that changes will be made to keep fiscal policy on an essentially neutral track in fiscal 1999.

. . . And China, Too

As the yen has fallen and the Japanese economy has looked even more precarious than before, the question of whether the Chinese government might devalue the yuan has also been weighing on the collective mind of the U.S. financial markets. The combination of an ample supply of reserves, the absence of free convertibility for the currency, and relatively firm growth makes devaluation a matter of choice rather than necessity for the Chinese authorities. So far, we are assuming that they will hold the line, recognizing that little would ultimately be gained if the move set off another round of depreciation throughout Asia. However, their ominous expressions of concern about the effect of recent weakness in the Japanese yen makes this less than a confident forecast.

U.S. Trade with the Pacific Rim



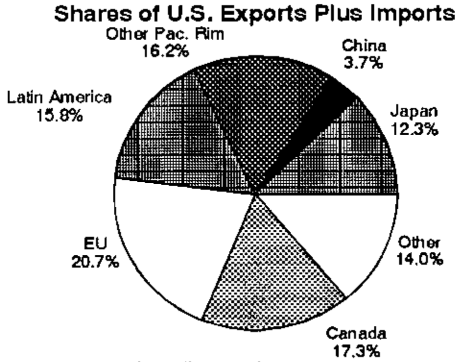
*Including Thailand.
Source: Department of Commerce. Our calculations.

Although China's economy looms large in the region, it is actually quite small in terms of its share of U.S. trade. In 1996, the last year for which data are fully available, China accounted for less than 4% of U.S. trade in goods and services (exports plus imports)—less than one-third the importance of Japan, as shown in the chart below. Thus, the direct effect on U.S. activity of devaluation of the yuan or slower-than-expected growth in China is also not very large. It is the potential for such developments to intensify the turmoil elsewhere in Asia, as well as to precipitate a problem in Latin America and other emerging-market economies, that makes a devaluation of the yuan a significant element of risk to the U.S. economic and financial outlook.

Implications for the U.S. Outlook

So far, the effect of the Asian crisis on U.S. growth has been quite small. On a seasonally adjusted basis, we estimate that the U.S. deficit with the Pacific Rim (plus Thailand) averaged $14.0 billion per month in the three months ending in April, as shown in the chart above. This is $3.1 billion ($37 billion at an annual rate) larger than the deficit would have been if the export and import trends in the year prior to last July's devaluation of the Thai baht had persisted, implying a hit of slightly less than ½% to U.S. GDP (currently about $8.3 trillion). Furthermore, this loss has been partially offset by the benefits to growth that Asia has conferred via its contributions to reductions in U.S. inflation and interest rates. In fact, the net impact has not been enough to prevent our estimates for growth in 1998 from crawling gradually higher, to 3½% currently from 2¾% last fall, when we first made detailed estimates of the U.S. fallout from Asia.

Shares of U.S. Exports Plus Imports



Note: 1996 data, including services.
Source: Department of Commerce.

Although the latest developments in Asia are largely the result of last fall's currency crisis, and therefore do not necessitate a change in our view that the effect will remain small, the potential for a much bigger effect has risen because of the risk that a downward spiral in Japan could precipitate more weakness in other parts of the world via the mechanisms already discussed. In addition, Japan's difficulties could be the catalyst for investors to downgrade the optimism about growth and profits that currently underpins the valuation of U.S. equities, even if the mechanics of the U.S. trade drag do not point to a major hit. In this case, a setback in the equity market could undercut the strength in domestic spending that has powered the U.S. economy forward in recent years.

Ed McKelvey

U.S. Calendar

Focus for the Week Ahead

- Although growth in payrolls appears to have slowed a bit, the June employment report should continue to indicate extremely tight labor-market conditions, via a low jobless rate and another up-tick in year-to-year wage inflation, to about 4½%. The GM strike shaved only about 3,400 from the job count in June (July 2).
- Surveys of purchasing managers are apt to show further slowing in growth during June, with the national survey on or close to the dividing line between growth and contraction (June 30/July 1).
- The FOMC meets for a two-day Humphrey-Hawkins session but is unlikely to announce any changes in monetary policy at the conclusion of this get-together (June 30/July 1).

Economic Releases and Other Events

Date	Time	Indicator	Estimate GS	Estimate Consensus	Last Report
Tue Jun 30	10:00	Conf. Board Consumer Confidence (Jun)	138.0	135.5	135.2
	10:00	Chicago Purchasing Managers Index (Jun)	54.0%	n.a.	56.3%
	10:00	New Home Sales (May)	+2.5%	-2.6%	+5.2%
Wed Jul 1	10:00	National Purchasing Managers Index (Jun)	50.0%	51.0%	51.4%
	10:00	Construction Spending (May)	+0.5%	+0.5%	+0.8%
	10:00	Leading Indicators (May)	-0.1%	0.0%	+0.1%
		Domestic Motor Vehicle Sales (Jun)	13.3M	13.5M	14.3M
Thu Jul 2	8:30	Civilian Unemployment Rate (Jun)	4.3%	4.4%	4.3%
	8:30	Nonfarm Payroll Employment (Jun)	+175,000	+207,000	+296,000
	8:30	Average Hourly Earnings (Jun)	+0.4%	+0.3%	+0.3%
	10:00	Factory Orders (May)	-1.1%	-0.5%	+1.2%

- **FOMC Meeting (Tue/Wed, Jun 30/Jul 1 - Press Release at 2:15 Jul 1)**
- **Treasury Announces Inflation-Indexed Securities (Wed, Jul 1 - 2:30)**
- **May FOMC Minutes (Thu, Jul 2 - 2:00)**

Interest Rates: Forecast vs. Forward Yields

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

Key Numbers in the Business Outlook

	1998 Q1	1998 Q2E	1998 Q3E	1997	1998E
Real GDP	5.4%	2.0%	2.5%	3.8%	3.5%
Ind. Prod., Mfg.	2.0	2.3	2.9	5.6	4.1
CPI	0.5	1.7	2.5	2.3	1.6
After-Tax Profits*	8.0	4.3	0.0	9.6	3.4
Unemployment	4.7	4.3	4.2	5.0	4.3

* Excluding inventory profits; adjusted for depreciation distortions.

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I. Weekly Wrapup

Economic and Market Overview

In a week devoid of significant news on the domestic front, developments abroad continued to dominate the U.S. financial markets. With Fed intervention having opened a "window of opportunity" for changes in Japanese economic policy, market participants are on standby, awaiting action on banking reform and fiscal stimulus.

On the domestic front, durable goods orders fell 2.6% in May, and figures for April were also revised down. Outside the volatile defense and civilian aircraft categories, the weakest part of the report was in consumer goods and materials (-2.0%). Although bookings for nondefense capital equipment other than aircraft rose 0.9% in May, this was largely canceled by a 0.7% downward revision in the April level. Thus, the report can only be characterized as a weak reading on the demand for U.S.-made hard goods.

On the other hand, personal income and spending posted sturdy gains in May, rising 0.5% and 0.6%, respectively. Due to a slight downward revision to data for April, real consumer spending is on a slightly lower growth path than we previously thought. Still, at an annual rate of 4.1%, the implied growth in real consumption for the second quarter is quite robust.

The United Auto Workers' strike against General Motors, now about three weeks old, shows few signs of quick resolution and has brought the firm's North American operations to a halt, idling 148,000 workers. Although this showdown should be regarded as a company-specific dispute rather than evidence that low unemployment is generating a major rise in militancy among the unionized work force, the strike is sure to muddle economic statistics for a while and subtract a small amount from growth in both the second and third quarters.

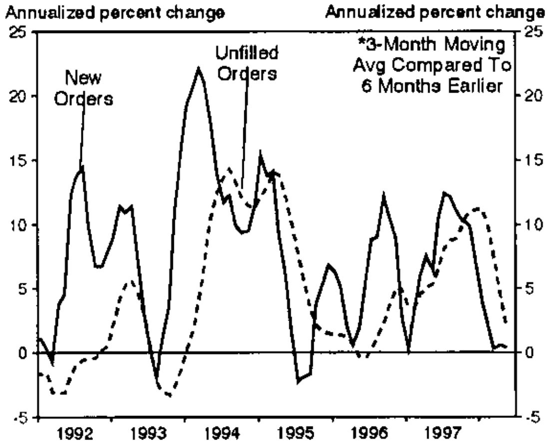
First-quarter GDP growth was revised up sharply, to an annual rate of 5.4%. The primary sources of this change were exports, where the previously estimated drop was cut from 3.0% (annualized) to 1.2%, and nonfarm inventory accumulation, which was lifted to an 8.5% annual rate. Given the tenuous outlook in both areas, as well as the GM strike, we have lowered our second- and third-quarter growth estimates to 2.0% and 2.5%, respectively, from 2.5% and 2.8%.

In other developments, OPEC members agreed on June 24 to cut daily production by 1.4 million barrels. On top of the March Riyadh pact as well as other non-OPEC planned cuts, this brought announced cuts to a total of 3.1 million barrels a day, or about 4% of global oil supply. Although the oil market rallied on this agreement, it remains well below the highs of last year. Our commodities group expects prices to move up during the remainder of 1998. Movements in oil prices are important for market psychology, because they feed into the monthly inflation indexes, and they also have a direct impact on the purchasing power of U.S. consumers.

Federal Reserve Policy

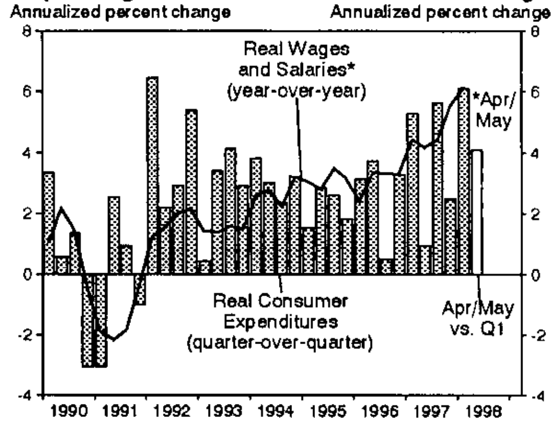
Like other analysts, we do not expect the FOMC to change monetary policy at its June 30-July 1 meeting. Ahead of the meeting, FOMC members were largely

Nondefense Durable Goods Orders excl. Aircraft



Source: Department of Commerce.

Spending and Income Trends Remain Strong



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

Goldman Sachs

Key U.S. Economic Data

	Latest Monthly Data				6 Mo	12 Mo	Next
	'98 Jun	'98 May	'98 Apr	'98 Mar	Trend	Trend	Release
Nonfarm Payrolls (ch. thousands)	--	296	302	82	261	266	Jul 2
Unemployment Rate (%)	--	4.3	4.3	4.7	4.6	4.7	
Index of Hours Worked (% ch)	--	0.7	0.1	-0.4	2.4	2.6	
Average Hourly Earnings (% ch)	--	0.3	0.5	0.3	4.2	4.3	
Producer price finished goods index (% ch)	--	0.2	0.2	-0.3	-1.7	-0.9	Jul 10
Excluding food and energy	--	0.2	0.2	0.0	0.8	0.6	
Consumer price index (% ch)	--	0.3	0.2	0.0	1.4	1.7	Jul 14
Excluding food and energy (% ch)	--	0.2	0.3	0.1	2.7	2.3	
Retail sales (% ch)	--	0.9	0.7	0.1	8.2	6.6	Jul 14
Excluding motor vehicles (% ch)	--	0.4	0.5	0.1	6.3	5.2	
Industrial Production (% ch)	--	0.5	0.3	0.4	1.9	4.4	Jul 16
Manufacturing	--	0.2	0.5	0.0	1.8	4.7	
Capacity utilization (%)	--	82.2	82.1	82.2	82.5	82.6	Jul 16
Manufacturing	--	80.9	81.9	81.0	81.5	81.6	
Housing Starts (annual rate, thousands)	--	1530	1541	1585	1560	1521	Jul 21
Single-family	--	1228	1233	1239	1220	1178	
Trade balance (billions, monthly)	--	--	-14.5	-13.2	-11.5	-10.2	Jul 17
Merchandise	--	--	-21.5	-20.5	-18.5	-17.4	
Factory Orders (% ch)	--	--	1.2	0.2	2.1	4.5	Jul 2
Durable Goods	--	-2.6	1.6	0.3	-10.4	4.5	Jul 29
Personal Income (% ch)	--	0.5	0.4	0.4	5.9	5.9	Aug 3
Wages and Salaries	--	0.6	0.4	0.3	6.7	7.5	
Purchasing Managers' Index (%)	--	51.4	52.9	54.8	53.0	54.4	Jul 1
Consumer Sentiment U Mich (Feb 66=100)	105.6	106.5	108.7	106.5	107.4	106.4	Jul 31
Conference Board (1985=100)	--	135.2	137.2	133.8	134.7	131.1	Jun 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.

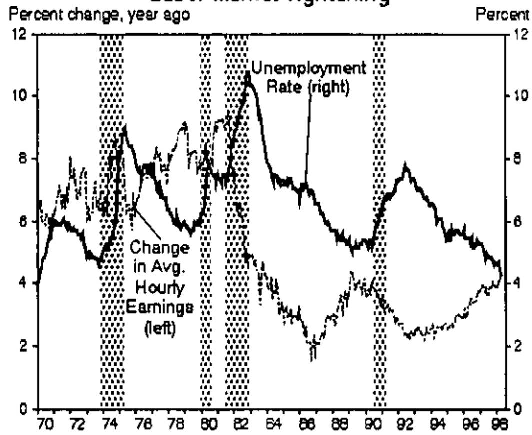
Goldman Sachs

U.S. Economics Analyst

Y2K: A Tremor, Not a Quake

- Growth in domestic demand remains red hot. New home sales hit a new record in April, and major retailers reported very strong sales results for May. Car sales also surged in May, although this was influenced by purchase incentives.
- The latest labor market data reinforce the notion that the economy is marching to a different drummer than the manufacturing sector, as total nonfarm payrolls rose nearly 300,000 in May despite a setback in factory jobs. The jobless rate remained at 4.3%, proving that last month's decline was no fluke, while year-to-year wage inflation remained at a cycle high of 4.3%.
- Even so, fresh worries about Asia appear to have dulled Fed officials' appetite for a near-term rate hike, judging from recent public comments. Thus, Chairman Greenspan's June 10 testimony before the Joint Economic Committee is apt to be more carefully balanced than we previously thought.
- Fears of a millennium recession, due to the Y2K bug, are overblown. Using the prior experience with natural disasters as a model, we anticipate a dent in productivity, a modest boost to economic activity, upward pressure on wages and inflation, and a cut into corporate profits. Estimates of the direct costs of the Y2K fix-up range from \$50-\$200 billion over three years, equivalent to about 0.15%-0.6% of GDP annually.
- However, because the possibility of system failures cannot be firmly ruled out, financial markets will price in risk premia going into the new millennium. There could also be a flight to quality into U.S. assets. On balance, Y2K is apt to exert upward pressure on interest rates.

Labor Market Tightening



Source: Department of Labor.

Think of Y2K as a "Natural Disaster"

	$ billion
Y2K Cost Estimate	
Fed Governor Kelley -- Private sector only	50
Software Productivity Research, Inc.	77
Goldman Sachs	95
International Data Corporation	115
Gartner Group	150-200
Estimated Total U.S. IT spending 1997-2000	1,583
Estimated Total U.S. pretax profits 1997-2000	3,200
Estimated U.S. GDP 1997-2000	34,000
Natural Disasters	
Kobe Earthquake	100
Los Angeles Earthquake	60
Drought/Heatwave '88	40
Hurricane Andrew	27

Source: IDC, SPR, Gartner Group, Goldman Sachs, National Climatic Data Center, Federal Reserve Board.

Trade Recommendations

- Stay short the June '99 Eurodollar futures contract, with a target of 93.50, and a stop on a close above 94.30.

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Important disclosures appear on the inside back cover.

I. Weekly Wrapup

Economic and Market Overview

U.S. financial markets have traded without a clear sense of direction in recent days, as investors have digested a mixed set of data on economic activity and awaited testimony by Chairman Greenspan.

On the soft side of the data ledger, indicators of U.S. industrial activity continue to paint a sluggish picture of growth in goods output, presumably reflecting the weakness in Asia and other emerging markets. For example, purchasing managers reported another drop in their composite index of conditions in this sector—to 51.2% in May, the lowest in 1½ years. About one-third of this decline reflected slower accumulation of inventories; however, the remaining two-thirds was in the new orders index, which also hit a 1½-year low. This extended the pattern of weak bookings in April; although total orders rose 1.2% that month, the gain was entirely due to sharp increases in the volatile defense equipment and civilian aircraft categories.

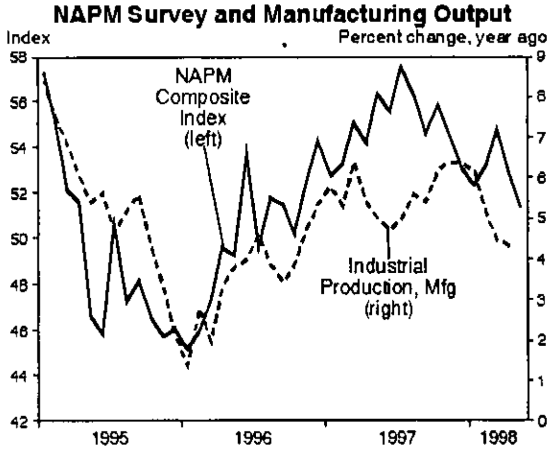
Notwithstanding this sluggish pattern, growth in U.S. domestic demand remains red hot. Sales of new, single-family homes hit an all-time high in April. Meanwhile, major retail chains turned in another set of strong sales results for May, as the Goldman Sachs Retail Index posted a 7.1% year-to-year gain in same-store sales and the three-month average of this index hit a 3-year high. Sales of light-weight motor vehicles soared to a 16.4-million-unit annual rate in May, although this was mainly a response to purchase incentives.

This pattern of strong overall growth despite softness in manufacturing is apt to continue, judging from the latest labor market data. While U.S. factories shed 26,000 jobs in May, nonfarm payrolls rose nearly 300,000, and data for prior months were also revised up sharply. The unemployment rate stayed down at 4.3%, confirming that the decline reported for April was no fluke, and year-to-year gains in average hourly earnings were at a cycle high of 4.3%.

Federal Reserve Policy

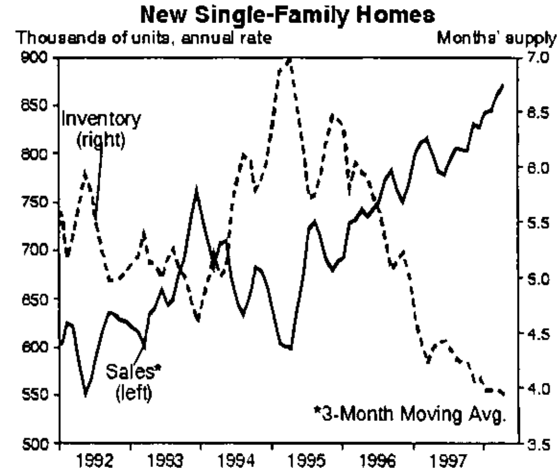
In the past two days, three governors of the Federal Reserve have made comments on the U.S. economic outlook that were strikingly balanced in the context of widespread anticipation that Chairman Greenspan is on the verge of preparing markets for the possibility of a near-term tightening in monetary policy. Vice Chair Alice Rivlin, who is generally seen as a dove and has never broken ranks with Greenspan in an FOMC vote, began this latest round of public commentary by expressing doubts about asset price inflation and commenting that the Asian crisis will continue to slow growth. Then Governor Laurence Meyer, one of the more hawkish FOMC members, opined that the risks to U.S. growth associated with emerging markets and Japan had increased over the past month and that inventory correction would retard growth for awhile. Finally, Governor Edward Kelley, who also leans slightly to the hawkish side, expressed the view that the growth impact from Asia would stretch out over two to three quarters and that he was not more concerned about inflation than two months

NAPM Survey and Manufacturing Output



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

New Single-Family Homes



Source: Department of Commerce.

ago, when the FOMC reinstated an asymmetric directive tilted toward monetary tightening.

Although all three statements included the obligatory caveats, their tone stands in contrast with the more hawkish slant of comments before the last FOMC meeting. Coming just days ahead of Chairman Greenspan's testimony before the Joint Economic Committee, these comments suggest that concerns about Asia have caused sentiment within the FOMC to converge somewhat toward the view that there are still reasons to remain patient. If so, then Mr. Greenspan's testimony may not be the definitive warning shot that we and others had been assuming.

Fiscal and Political Developments

Congress has proven that surpluses are no panacea for budget gridlock as it has returned from a short recess in memory of the late Senator Barry Goldwater to face an enormous backlog of unfinished work. Seven weeks past the April 15 due date, a budget resolution is still lacking, hampering further progress on the fiscal 1999 budget. Moreover, the bill seeking to codify the liability agreement between state attorneys general and the tobacco companies has bogged down.

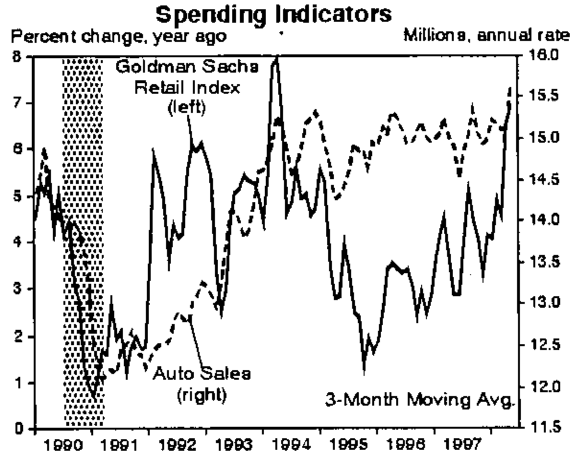
Under these circumstances, and with looming mid-term elections sure to prompt an early adjournment this fall, the likelihood of major legislation in either area has diminished considerably. One possibility: that elimination of the marriage tax penalty is tacked onto a scaled-back version of the tobacco bill, enacting the "look back" provisions regarding teenage smoking, but deferring plans for larger tax cuts and legislation incorporating liability payments by the tobacco companies until the 106th Congress.

Market Outlook and Comments on Value

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

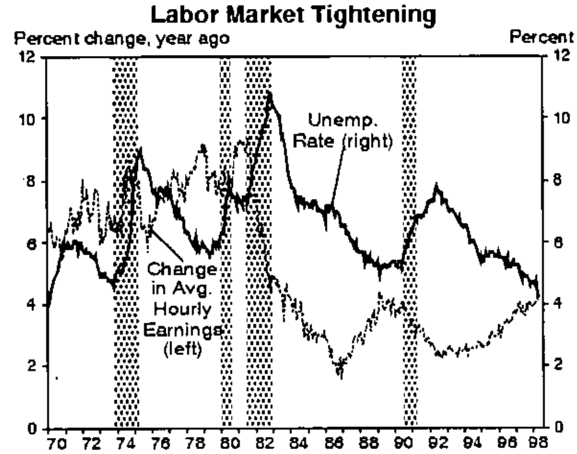
With Chairman Greenspan's testimony looming and the domestic economy still showing few signs of slowing, we would stick with our short June '99 Eurodollar futures trade, with a target of 93.50 and a stop on a close above 94.30. While it appears that no tightening is imminent, the risks are still strongly skewed in that direction once the uncertainties surrounding the impact of trade drag from Asia and rapid inventory building lessen. In contrast, Eurodollar futures contracts are generally priced at levels consistent with no change in monetary policy indefinitely. On the long end, we remain neutral.

Spending Indicators



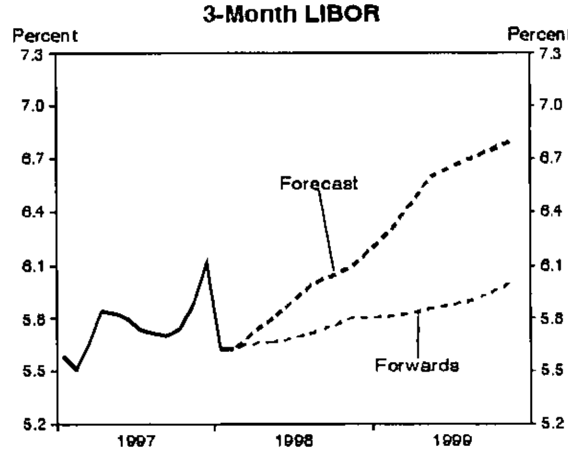
Source: Goldman Sachs, Department of Commerce.

Labor Market Tightening



Source: Department of Labor.

3-Month LIBOR



Source: Federal Reserve Board, Wall Street Journal.

II. Y2K: A Tremor, Not a Quake

A Case of the Millennium Blues

With the year 2000 fast approaching, a computer bug is adding to pre-millennium *angst*. The so-called Year 2000 (Y2K) problem has gripped public imagination as an example of how technological progress can turn against us in an economy that is increasingly dependent on complex, interlinked computer systems. The Y2K problem refers to the fact that much of software code only uses two (rather than four) digits in referring to a calendar year. This makes the computer unable to distinguish between the years 1900 and 2000. This seemingly trivial problem is being credited with predictions as dire as a millennium recession. We do not attach much probability to that outcome, as we view Y2K as a tremor, not a quake. At the margin, the Y2K bug is likely to hurt productivity, boost economic activity, exert upward pressure on wages, cut into corporate profits, and increase inflation.

Cost Estimates: $50-$200 Billion

First of all the obvious: How much will the Y2K conversion cost? A lot of research effort has been poured into this topic, both by market researchers[1] and by information technology (IT) services firms that stand to gain from IT spending on this area. The table below summarizes the various cost estimates

Think of Y2K as a "Natural Disaster"

	$ Billion
Y2K Cost Estimate	
Fed Governor Kelley -- Private sector only	50
Software Productivity Research, Inc.	77
Goldman Sachs	95
International Data Corporation	115
Gartner Group	150-200
Estimated Total U.S. IT spending 1997-2000	1,583
Estimated Total U.S. pretax profits 1997-2000	3,200
Estimated U.S. GDP 1997-2000	34,000
Natural Disasters	
Kobe Earthquake	100
Los Angeles Earthquake	60
Drought/Heatwave '88	40
Hurricane Andrew	27

Source: IDC. SPR. Gartner Group. Goldman Sachs. National Climatic Data Center. Federal Reserve Board.

that we have come across. They range anywhere from $50 billion (an estimate of the costs to the private sector presented by Federal Reserve Governor Kelley to the U.S. Senate in April 1998) to $150-$200 billion (the headline-grabbing estimate by the Gartner Group). Let's put this into perspective. Such spending comprises about 3%-13% of total IT spending during the 1997-2000 period (estimated at around $1.6 trillion). As a percent of GDP, direct spending on the Y2K problem would fall between 0.6% and 2.4% of one year's output. (Nominal U.S. GDP is around $8 trillion per year.) Since these costs would be spread out over a few years, we estimate that **Y2K spending is equivalent to about 0.15%-0.6% of GDP annually.**

Economic Effects of the Y2K Bug

In our opinion, the best way to think about the economic effects of the Y2K problem is to compare it to a natural disaster. Though there was nothing "natural" about it, the Y2K bug disrupts the economy in a way similar to, say, the earthquake that hit Los Angeles in 1994—which cost a total of $60 billion—in the sense that it represents an unexpected reduction in the capital stock, which first hurts and then supports economic activity. Here are some likely economic repercussions of the Y2K problem:

1. **Y2K hurts productivity...**

   You bought a computer network that addressed your company's needs. Suddenly, you discover it will no longer work past the year 2000 unless you spend extra money to "repair" it. Your computer is therefore less productive than you previously thought. Just like an earthquake destroys bridges, so does the Y2K bug "destroy" computer code. The $50-$200 billion spent to fix the Y2K problem will merely maintain the economy's current productive capacity rather than augment it. With final output unchanged, but extra programmers working on computer code, output per hour worked declines.

Putting Y2K Spending into Perspective

Y2K Spending	Low Estimate	High Estimate
Total in $ billion	$50 billion	$200 billion
Total as a % of GDP	0.6%	2.4%
Annual Y2K spending as a % of GDP	0.15%	0.6%
Annual Y2K spending as a % of corporate profits	1.6%	6.3%

Calculations assume Y2K spending is spread over four years.
Source: Federal Reserve Board. Gartner Group. Goldman Sachs.

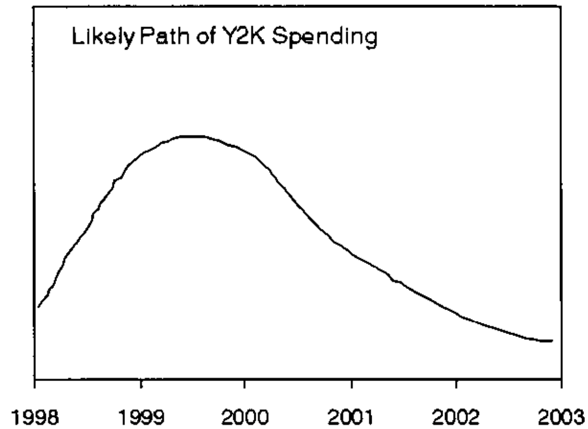
[1] Related Goldman Sachs reports: R. Kramer/G. Gould, "Europe's Year 2000 Problem," October 16, 1997; G. Gould/S.Y. Chiang, "Year 2000 Update from a Computer Services Perspective," June 23, 1997; and G. Napolitano, "The Year 2000: A Computer "Bug" Odyssey," March 18, 1997.

2. . . .**boosts economic activity. . .**

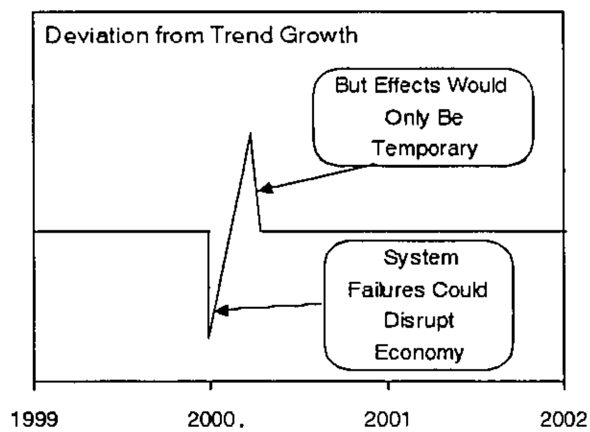
How can a "disaster" boost economic activity? First, government measurements of GDP failed to take into account the reduction in the value of existing IT infrastructure when the Y2K problem was first uncovered. This means that government statistics will count at least part of the Y2K spending as "extra output," even though it is not. (More precisely, the Department of Commerce counts spending on hardware as capital spending, which is a component of GDP, but treats spending on software as spending on "intermediate" goods, and excludes it. Therefore, any Y2K hardware-related spending will feed through into GDP.) Second, Y2K spending has a "multiplier effect," since some of the spending is plowed back into the rest of the economy, which gets a resulting boost.

Although Y2K spending will probably peak ahead of the year 2000, it will still linger on past the new millennium for two reasons: First, many firms have delayed repair of non-critical systems beyond January 1, 2000. Second, much of Y2K spending comes at the expense of other non-critical IT spending. (The Gartner Group estimates that 30% of central IT budgets have been redirected towards Y2K spending.) This will have to be brought back to the front burner come January 1, 2000. Overall, we anticipate spending to resemble a hump-shaped pattern.

Y2K Hump Boosts Economy



A Tremor, Not a Quake



3. . . .**exerts upward wage pressures. . .**

The Y2K problem adds pressure to an already very tight IT labor market. With overall IT wages rising faster than other sectors, we expect even larger wage increases for technology specialists (*e.g.*, wages for COBOL programmers are rising 10%-20% annually versus around 4% for the economy as a whole). Although there was initially some hope that overseas labor, *e.g.* from India, could be used to absorb part of the programming needs related to Y2K, it does not seem that this is such a panacea after all, since most parts of a Y2K fix still have to be completed on site.

4. . . .**reduces profits and/or increases inflation. . .**

At the end of the day, somebody has to foot the bill for fixing the Y2K problem. This can happen in one of two ways. Companies that lack pricing power will have to absorb Y2K costs through a reduction in profitability. Such would be the case, for example, for manufacturing firms that currently operate in a very competitive environment with excess capacity. Note that **total Y2K costs are equivalent to about 1.6%-6.3% of pretax corporate profits** (although part of the bill will be footed by the government in the form of federal spending on Y2K and lower corporate taxes).

On the other hand, companies that are in sectors facing excess demand may be able to pass Y2K costs along to consumers in the form of higher prices. This would cause an uptick in inflation. Therefore it seems likely that the Y2K bug will result in lower profits and/or higher inflation than would otherwise have been the case.

5. . . .**and could look like a "tremor" hit the economy in the year 2000.**

Most Y2K cost estimates tend to include only the direct costs of fixing the Y2K bug. There are also costs related to any disruptions come January 1, 2000, as well as the costs of litigation related to system failures. After all, no one can know with certainty if a system has been adequately fixed, until the fateful date actually arrives. Furthermore, there are still firms that have not even started to deal with the Y2K problem and might not be prepared on time. In an April 1998 report, International Data Corp. (IDC) estimates that 10% of large U.S. firms, and 20% of small, will fail to complete their Y2K conversion projects by January 2000. Though IDC argues that this does not pose a great risk to the economy as a whole, because most problems lie with small companies (which do not tend to play pivotal roles) or with companies whose systems are not critical, there is still a lot of uncertainty related to the inter-dependence of current IT infrastructure. We just do not know what ripple effects might be caused by a small percentage of system failures spreading throughout the economy. (Even IT specialists express incognizance when asked about this.)

The example of a natural disaster is once again useful. Should some critical systems fail on January 1, 2000, the initial effect on the economy would be negative, just as when, for example, an earthquake hits a city. Output would be disrupted, and economic activity would initially slow. However, this effect would only be temporary. The next leg of such a scenario would involve *higher* economic activity, as corporations and government would strive to rebuild the networks that are necessary for the smooth functioning of the economy. All in all, it would look as if a "tremor" hit the economy at the beginning of the year 2000.

We are, however, more optimistic than some about the whole magnitude of the disruption. For example, we do not expect the Y2K problem to cause a recession. Economies are resilient and can adjust quickly to temporary shocks, especially when such shocks are anticipated, as is the case with Y2K. (Let us not forget that the Y2K problem is a temporary one, in the sense that it occurs once, and is ultimately fixable.) For example, the U.S. economy has gone without a government for 22 days (December 1995), the Northeast has been pounded by a winter storm erasing 200,000 jobs (January 1996), and Los Angeles was hit by an earthquake which ultimately cost $60 billion (January 1994), all of which occurred without denting an extraordinarily long-lived economic expansion.

However, over a short period of time, the effects that we mentioned above (on output, productivity, profits and inflation) would tend to be magnified, and exacerbated by any computer-related mishaps. For example, if you are facing a disruption in your supplies because of a Y2K glitch, you will have reduced bargaining power when trying to secure supplies from an alternative vendor.

Financial Market Implications

Though we do not expect a recession to be caused by the Y2K problem, there are still some important financial market implications.

1. There should be a **risk premium** going into January 1, 2000, related to the fact that one cannot know with absolute certainty whether a company has adequately dealt with its Y2K bug or not (or whether it is dependent on another company which is not, itself, Y2K compliant). Investors willing to take that risk on December 31, 1999 should be able to buy stocks or corporate debt at a lower price at that date, to compensate for the probability of earnings disappointments or default caused by such computer complications.

2. This risk premium could differ across different asset classes. For example, to the extent that large **firms are more adequately prepared for the Y2K problem than medium-sized firms**, the risk premium should be higher for the latter. (Most surveys indicate that large firms are well ahead of the game in terms of being Y2K compliant. Very small firms face less of a risk as they tend to either outsource their IT needs, or are less IT-intensive. It is the medium-sized firms that we are most worried about.)

3. From a worldwide perspective, the United States is probably better prepared than other countries (though this is at least partially offset by the fact that the U.S. economy is more IT-interdependent). To this extent there could also be some **flight-to-quality into U.S. assets**.

4. The effect on interest rates is less clear. As we argued above, the Y2K problem will tend to be inflationary, which would put **upward pressure on interest rates**. Some have argued that monetary authorities might adopt an accommodative monetary stance should a major economic disruption occur on January 1, 2000. We do not view this as likely since natural disasters have not in the past provoked an easing of monetary policy.

Alex Patelis

Key U.S. Economic Data

	Latest Monthly Data '98 May	'98 Apr	'98 Mar	'98 Feb	6 Mo Trend	12 Mo Trend	Next Release
Nonfarm Payrolls (ch. thousands)	296	302	82	192	261	266	Jul 2
Unemployment Rate (%)	4.3	4.3	4.7	4.6	4.5	4.7	
Index of Hours Worked (% ch)	0.7	0.1	-0.4	-0.1	2.4	2.6	
Average Hourly Earnings (% ch)	0.3	0.5	0.3	0.4	4.2	4.3	
Producer price finished goods index (% ch)	--	0.2	-0.3	-0.1	-2.3	-1.2	Jun 12
Excluding food and energy	--	0.2	0.0	0.1	0.3	0.1	
Consumer price index (% ch)	--	0.2	0.0	0.1	1.0	1.5	Jun 16
Excluding food and energy (% ch)	--	0.3	0.1	0.3	2.5	2.2	
Retail sales (% ch)	--	0.5	0.0	0.9	6.5	5.2	Jun 11
Excluding motor vehicles (% ch)	--	0.5	0.0	0.8	5.4	4.8	
Industrial Production (% ch)	--	0.1	0.3	-0.3	2.0	3.8	Jun 16
Manufacturing	--	0.3	-0.2	-0.3	2.8	4.3	
Capacity utilization (%)	--	81.9	82.2	82.3	82.6	82.6	Jun 16
Manufacturing	--	80.8	81.0	81.5	81.7	81.6	
Housing Starts (annual rate, thousands)	--	1538	1575	1616	1556	1510	Jun 16
Single-family	--	1241	1232	1263	1210	1167	
Trade balance (billions, monthly)	--	--	-13.0	-12.2	-10.9	-10.1	Jun 18
Merchandise	--	--	-20.2	-18.5	-17.8	-17.2	
Factory Orders (% ch)	--	1.2	0.2	-0.7	2.1	4.5	Jul 2
Durable Goods	--	2.2	0.3	-0.9	4.7	7.5	Jun 24
Personal Income (% ch)	--	0.4	0.3	0.6	6.2	5.6	Jun 26
Wages and Salaries	--	0.4	0.2	0.9	8.2	7.3	
Purchasing Managers' Index (%)	51.4	52.9	54.8	53.3	53.0	54.4	Jul 1
Consumer Sentiment U Mich (Feb 66=100)	106.5	108.7	106.5	110.4	106.8	106.3	Jun 26
Conference Board (1985=100)	135.2	137.2	133.8	137.4	134.7	131.1	Jun 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.

Goldman Sachs

U.S. Calendar

Focus for the Week Ahead

- Chairman Greenspan testifies before the Joint Economic Committee on June 10. Although the forum is ideal for issuing a warning about future rate hikes, recent comments by his colleagues suggest that the statement will probably be carefully balanced.
- Another batch of strong retail chain reports imply that the government's retail sales figures posted a sturdy gain in May. Although motor vehicle sales were strong in unit terms, the fact that this was driven by purchase incentives should dilute the effect on retail sales, which are reported in nominal terms (June 11).
- The vehicle incentives will suppress the core index of producer prices, overwhelming an increase in tobacco prices. Modest rebounds in food and energy prices should pull the overall index up a bit (June 12).

Economic Releases and Other Events

Date	Time	Indicator	Estimate GS	Estimate Consensus	Last Report
Thu Jun 11	8:30	Retail Sales (May)	+0.8%	+0.6%	+0.5%
		Excluding Autos	+0.4%	+0.4%	+0.5%
Fri Jun 12	8:30	Producer Price Index (May)	+0.1%	+0.1%	+0.2%
		Excluding Food & Energy	-0.1%	+0.1%	+0.2%
	8:30	Business Inventories (Apr)	+0.3%	+0.2%	+0.5%

- Wholesale Trade (Tue, Jun 9 - 10:00)
- Richmond Fed Survey (Tue, Jun 9 - 10:00)
- Greenspan Testimony to the Joint Economic Committee (Wed, Jun 10 - 10:00)
- Atlanta Fed Survey (Fri, Jun 12 - 9:00)
- U. of Michigan Consumer Sentiment—Preliminary (Fri, Jun 12 - 10:00)
- Treasury Announces 1-Year Bill (Fri, Jun 12 - 2:30)

Interest Rates: Forecast vs. Forward Yields

	3 mo	6 mo	12 mo
LIBOR 3 mo	5.8%	5.9%	6.2%
Forward	5.7	5.8	5.8
2 Yr T-Note	5.6	5.8	6.2
Forward	5.6	5.6	5.7
10 Yr T-Note	5.7	5.9	6.2
Forward	5.6	5.6	5.7

Key Numbers in the Business Outlook

	1998 Q1	1998 Q2E	1998 Q3E	1997	1998E
Real GDP	4.8%	3.0%	3.3%	3.8%	3.5%
Ind. Prod., Mfg.	1.8	1.0	4.6	5.6	4.1
CPI	0.5	1.3	2.3	2.3	1.5
After-Tax Profits*	7.2	6.6	3.2	9.6	5.4
Unemployment	4.7	4.3	4.2	5.0	4.3

* Excluding inventory profits; adjusted for depreciation distortions.

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EPI JOBS FAX
JUNE 5, 1998

Jobless rate holds at 4.3%; wage growth moderate

Unemployment held steady at its historically low rate of 4.3%, according to the Bureau of Labor Statistics May employment report released today. The establishment survey reported a gain of 296,000 jobs. Most of the key indicators in today's report support the view of a sustainable expansion characterized by moderate job growth and real, but noninflationary, wage gains.

The household survey showed growth in both the population and the labor force, leaving the labor force participation rate unchanged at 67%. The share of the population that is employed — 64.2% — remains at the historically high level it has sustained for most of 1998.

While there was little change in unemployment for most groups, there is some evidence that the sustained recovery is providing a much-needed economic lift to lower-wage workers. The unemployment rate for workers with less than a high school degree fell slightly from 7% to 6.7%; the teenage unemployment rate, though edging up from 13.1% to 14.2%, remains 1.5 percentage points below its year-ago level. The Hispanic employment rate of 64.3% is at an historic high point. Much of this job growth, however, was in the lower-paid service industries.

> The key indicators in today's report support the view of a sustainable expansion.

Other positive indicators from the household survey include the continued decline in the number of workers who have given up looking for work due to discouragement over their job prospects. Also, contrary to trends in recent reports, the share of unemployed who are "job leavers" increased last month. In a tight labor market, economists typically expect increasing "quit rates" as workers leave unsatisfactory jobs to look for better ones. After falling for three months in a row, the May quit rate rose from 10.7% to 12.4%.

The establishment report showed continued moderate growth. The report included revised employment counts reflecting more complete information about the number of jobs created over the past few years. These revisions always show an increase in the *number* of jobs, but, in this case, they show no increase in the *rate* of job growth, which over the past three months has proceeded at an annual rate of 2%. In the prior three months, jobs grew at an annual rate of 3.2%, so, the current rate of job growth would most accurately be characterized as moderate.

Another indicator of the sustainability of current labor market conditions comes from the industrial composition of May's job growth. Providing clear evidence of the effect of Asia's economic crisis, employment in manufacturing fell by 26,000 jobs, with the largest decrease (9,000 jobs) in the apparel industry. Almost all of the employment growth in May took place in service industries. Retail trade, the service sector with the largest increase, added 89,000 jobs. Since low-wage workers are concentrated in this sector, economists have been closely watching growth here for signs of job impact resulting from the 1996-97 minimum wage increases. Continued strong job growth in retail trade has shown that the wage increase did not have a negative impact on job creation. This is further underscored by last month's job growth of 33,000 in restaurants, a major employer of minimum wage workers.

Hourly wages growth for production, nonsupervisory workers—the 80% of the workforce with production jobs in manufacturing and nonsupervisory service jobs—grew a moderate $0.04. The tight labor market, low levels of inflation, and the minimum wage increase noted above have all helped to generate real wage gains for these workers over the past few quarters. Nevertheless, given the decline in their average wages over the past few decades, these workers are only now back to their 1989 level. Since the economy has grown considerably since then, wage growth will need to continue proceeding at its current rate if the economic fortunes of lower wage workers are to be reconnected to the growing economy.

—Jared Bernstein
—research assistance by Yonatan Alemu

The **Economic Policy Institute JOBS FAX** is published each month upon release of the Bureau of Labor Statistics' employment report. For more information, contact EPI at 202-775-8810.

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I. Weekly Wrapup

Economic and Market Overview

The dynamic of yen weakness, bond strength, and equity market weakness was reversed in midweek by the Treasury's decision to intervene and sell dollars. Because the success of this intervention is still unclear—as it rests on the ability of Japanese officials to generate a sustainable economic recovery in Japan—U.S. financial markets will likely continue to take their cues from the foreign exchange market.

The widening of the trade deficit in April to $14.5 billion from $13.2 billion in March (originally $13.0 billion) underscores the fact that the trade drag on the U.S. economy generated by strong domestic demand, Asian turmoil, and dollar strength is not over yet. The only bright spot in the report was the 0.9% drop in imports, which suggests that a good portion of the inventory buildup in the first quarter was probably due to increased imports.

This judgment is reinforced by the recent trend in industrial production, which rose by 0.5% last month with significant upward revisions to manufacturing output for March and April. The trend rate of underlying factory production growth in the second quarter is now about 2% annualized, versus flat previously. For the first time in four months, the capacity utilization rate edged up (to 82.2%).

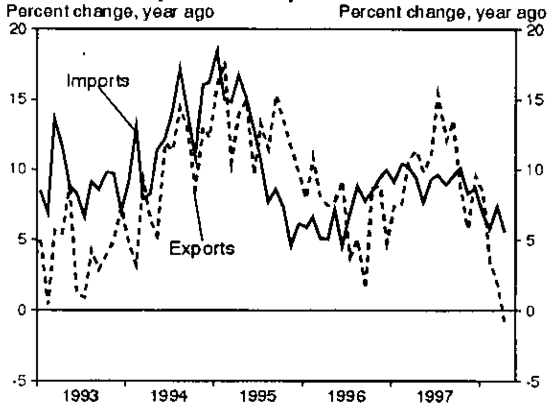
Although housing starts fell by 0.7% in May, it is hard to take this decline seriously given that permits advanced, climbing above the starts rate, and the underlying fundamentals such as the rate of new home sales remain very positive.

The most important news on the domestic front was further signs that consumer price inflation has bottomed, at least temporarily. Consumer prices rose by 0.3% in May, the highest monthly reading in 17 months, bringing the year-over-year gain up to 1.7%. Excluding food and energy, prices rose by 0.2%. The core CPI has risen at a 2.7% annual rate over the past six months, compared to 1.9% over the prior six months. The fact that the median CPI (which strips out extreme observations from headline inflation) has been rising at a 2.9% annual rate for a couple of months now also suggests that rising compensation costs and firm demand are offsetting the inflation-depressing effects of a stronger dollar and lower commodity prices.

Federal Reserve Policy

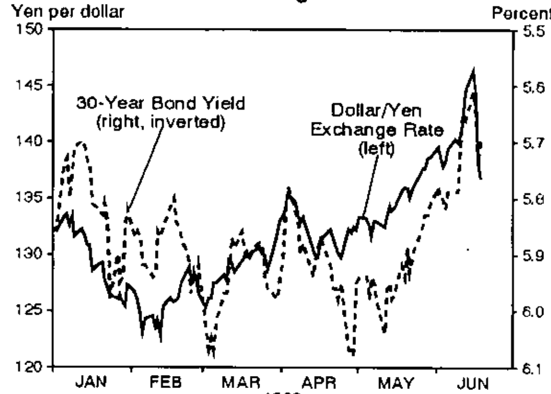
The Fed's beige book report painted a pretty picture: "Output and employment are high while inflation is low." Although there were signs of an impact from Asia, the effects appeared to be scattered. Interestingly, the report found few signs of an inventory overhang, noting that they were "generally describe(d) . . . as at normal levels relative to sales." Labor markets remain tight. But the resulting wage pressures were not reported to be widespread. On balance, the report is consistent with Chairman Greenspan's latest testimony indicating that the economy is about as good as it gets. Despite a bit of anxiety among some Fed officials about the recent CPI price data, monetary policy should remain on hold until 1999 before the monetary authorities respond to tight labor markets and incipient price pressures (see center section article for more details).

Import and Export Growth



Source: Department of Commerce.

Bonds Trading Off Dollar



Source: Federal Reserve Board, WEFA.

Fiscal and Political Developments

The Treasury took center stage with the decision to sell dollars against the yen in an attempt to dampen the flight out of yen assets. The motivation for the move was undoubtedly a growing concern that yen weakness could trigger a Chinese devaluation that would destabilize Asia and increase the pressures on Latin American economies. At this point, it is too soon to say whether the intervention will be effective. That is because its success depends upon whether it is accompanied by structural changes in Japan that meaningfully increase the prospects for a sustainable Japanese economic recovery. Although the Japanese have made promises of further action, particularly in restructuring their ailing banking system, concrete steps probably will not commence until after the July 12 parliamentary elections.

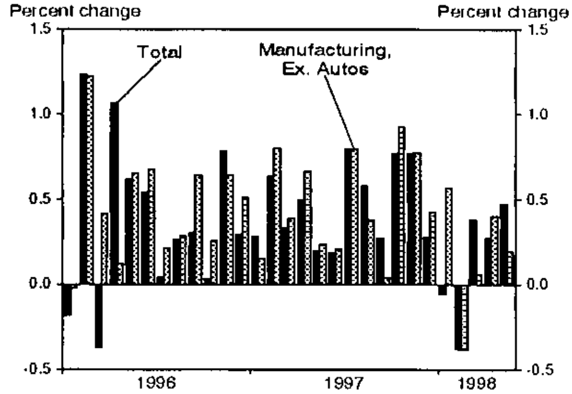
In other news, the Senate killed the tobacco bill. The issue will now be fought out in the voting booth as Republicans try to paint the Democrats as tax and spenders (the tobacco bill would have raised taxes) and the Democrats strive to paint the Republicans as beholden to the tobacco companies, which would have been hurt by the legislation. It increasingly appears that no major legislation initiatives that affect the fiscal outlook will emerge from this Congress.

Market Outlook and Comments on Value

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

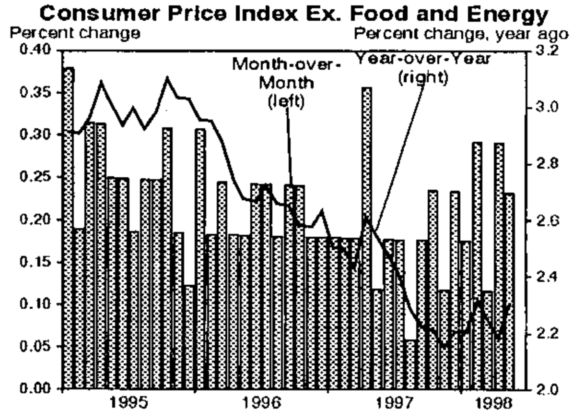
Despite the early success of dollar intervention, we think it is risky to rush to judgment. The key at this point will be the forex market's reaction to Deputy Treasury Secretary Summers' trip to Japan. The focus will be on credibility of the promises that he elicits from the Japanese officials and politicians that he talks to on this trip. If investors become more worried again about the risks of a Japanese depression, then the dollar will strengthen, U.S. bonds will rally, and U.S. equities will come under renewed pressure. In contrast, if Japan's response is credible to investors, then the rebound in the yen and the recent weakness in the U.S. bond market could intensify. Given our expectations that the Fed will ultimately tighten, we retain a bearish bias at the short end, but are not prepared to initiate trades right now given uncertainties surrounding $/yen and the fact that the domestic economic news should be substantially weaker over the next month or two, assisted by the impact of the General Motors strike.

Industrial Production



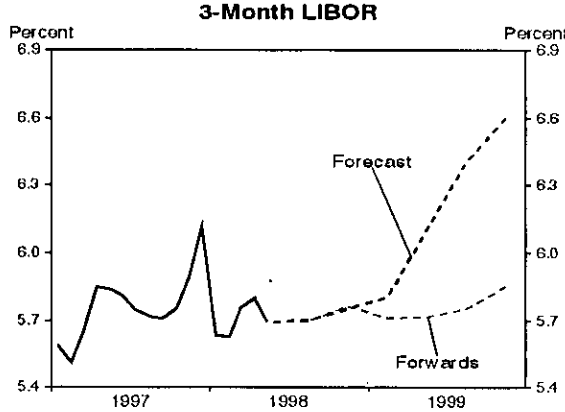
Source: Federal Reserve Board.

Consumer Price Index Ex. Food and Energy



Source: Department of Labor.

3-Month LIBOR



Source: International Financial Statistics, Bloomberg.

II. A More Benign Interest Rate Outlook

Over the past few weeks, we have become more optimistic about the interest rate outlook. We no longer anticipate monetary policy tightening this year. And, while tightening still appears likely next year, the process will probably be delayed and more gradual than we earlier had anticipated.

Because the path of short-term rates is a major determinant of the trajectory of bond yields, we have also modified our bond market views accordingly. We now anticipate that 30-year Treasury bond yields will generally trade in a 5½%-6% range this year, before climbing modestly into a 6%-6½% range next year once Fed tightening comes into clearer focus. Earlier, we had anticipated that the move into a 6%-6½% range would occur later this year.

We have become more optimistic for four reasons: 1) Inflation should stay subdued for a while longer as dollar strength and commodity price weakness offset rising compensation costs; 2) the economic growth pace will almost certainly slow as inventory accumulation rates are cut sharply following the surge in the first quarter; 3) uncertainty about the outlook remains high given worries about Japan and Asia; and 4) Chairman Greenspan indicated in his recent testimony a desire to be patient when inflation is low, growth is slowing, and uncertainty is high.

Despite this shift, we continue to believe that U.S. financial market conditions remain too accommodative to bring the economy down to a sustainable growth pace. This means that eventually such conditions will need to become restrictive. Otherwise, U.S. labor markets will tighten further; compensation costs will rise; and a portion of these costs will be passed on in the form of higher prices.

We continue to assume in our forecast that the required tightening of financial market conditions will occur mainly via a tightening of U.S. monetary policy and a rise in short- and long-term interest rates. However, we have tempered the rise in interest rates that we anticipate next year because the tightening of financial market conditions could be accomplished in other ways such as dollar strength or stock market weakness. Such shifts—while not anticipated by our currency and equity strategists—could conceivably enable Fed officials to avoid tightening altogether. Thus, we have incorporated the possibility of such an outcome explicitly into our forecast.

U.S. Interest Rate Forecast
(quarter-end, in percent)

	1998 Q3	1998 Q4	1999 Q1	1999 Q2	1999 Q3	1999 Q4
Federal Funds	5.50	5.50	5.50	5.75	6.00	6.25
3-Month LIBOR	5.70	5.75	5.80	6.10	6.40	6.60
2-Year Treasury	5.40	5.50	5.55	5.80	6.00	6.10
10-Year Treasury	5.50	5.60	5.65	5.90	6.00	6.10
30-Year Treasury	5.70	5.80	5.90	6.10	6.20	6.30

Why We Are More Constructive Now

The new round of Asian turmoil is quite significant in three respects. First, it involves much bigger economies than the first round which was concentrated in the ASEAN-4 countries and Korea. Japan's economy by itself is about 4 times the size of the 5 countries that earlier occupied center stage. This is important because it increases the risk of contagion and, thus, threatens a bigger potential trade shock back to the United States. One can imagine a linkage from yen weakness to Chinese devaluation and pressures on Latin America. Second, resolution is unlikely to be rapid. For example, Japan's policy apparatus will find it difficult to enact any new initiatives before the July 12 parliamentary elections. Third, the Asian turmoil increases uncertainty, which damages equity values. This could potentially exert another avenue of restraint on the U.S. economy.

While the recent currency intervention undertaken by the Federal Reserve on behalf of the Treasury may have turned the tide for now, it is unclear how lasting this impact will be. As Treasury Secretary Rubin has pointed out, currency intervention typically does not work unless accompanied by fundamental shifts in policy. Unless the Japanese make the intervention credible by announcing further structural reforms that market participants believe will be implemented and are substantive, then the recent retracement of the dollar's earlier rise could prove to be temporary.

The surge in inventory accumulation in the first quarter is also important because it virtually guarantees a slowdown in the U.S. economic growth rate. Nonfarm inventories rose at an 8.1% annual rate last quarter, the highest since mid-1984. As inventory growth subsides, this should dampen production, employment, and income growth and eventually exert restraint on consumer spending.

Furthermore, Chairman Greenspan's testimony is also significant. Despite 4.8% real GDP growth in the first quarter and an unemployment rate that had fallen to 4.3%, the chairman was remarkably even-handed, emphasizing all the ways that the economy could slow on its own as well as explaining why monetary policy might need to be tightened eventually. Greenspan's remarks suggest that he is unwilling to tighten when inflation is low and the outlook is uncertain. Although this does not rule out tightening in 1998, it makes it much less likely because the Asian woes are likely to keep uncertainty high for a while longer and dollar strength and commodity price weakness will help keep a lid on inflation.

Finally, tightening in 1998 becomes less likely after the August 18 meeting because Fed officials prefer not to adjust monetary policy during the election season or near Christmas. Instead, as shown in the table below, tightening moves are concentrated in the first half of the year. Prior to Christmas, the Fed's inclination is to act like Santa Claus rather than Scrooge.

The Timing of Fed Policy Actions (1983-1997)

	Tighten	Ease	Total
Q1	10	6	16
Q2	11	5	16
Q3	6	14	20
Q4	3	20	23
Total	30	45	75

If economic growth slows and the Fed does not tighten, it is hard to see how bond yields can climb much. To see this, it helps to decompose the bond yield into two components—expected future short-term rates plus a bond risk premium. An examination of the fundamentals driving each component suggests that both should be broadly stable.

The first component should be stable because there is unlikely to be any new information that results in a sharp change in short-term rate expectations. If growth slows, inflation is benign, but the labor market remains tight, market participants will expect the Fed to keep monetary policy stuck in neutral.

The main determinants of the bond risk premium are Treasury supply and inflation. Treasury supply should continue to decline as the budget surplus reaches about $80 billion this year. Inflation is likely to move sideways as dollar strength and lower commodity prices offset the pressures generated by a tight labor market and the strong demand for housing.

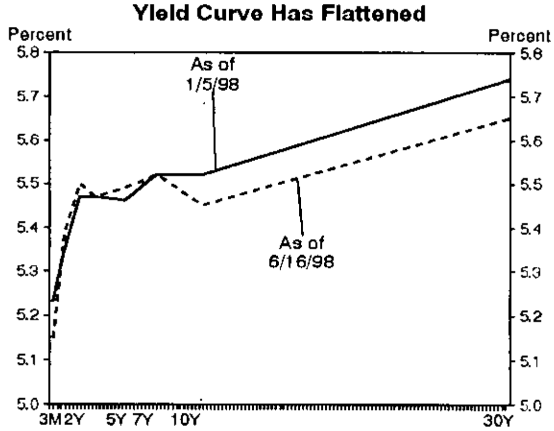
At the same time, a sharp further rally in bond yields appears unlikely. Expectations about the path of short-term rates already are quite favorable judging from the Eurodollar futures market. In fact, the threshold to Fed easing is probably considerably higher than generally realized. Short of a financial market meltdown or confidence that the Asian crisis will steadily worsen, it would probably take several quarters of 1% real GDP growth to get Fed officials to reduce the federal funds rate target. That is because the monetary authorities would probably be more comfortable with the unemployment rate above 5% than at its current 4.3% reading. Moreover, the bond risk premium is already quite narrow—note that before the recent $/yen reversal, the curve had flattened since the beginning of the year. Finally, the favorable factors, such as reduced Treasury supply and low inflation, that have helped shrink the bond risk premium are unlikely to improve much further.

For these reasons, we expect Treasury bond yields to remain trapped in a trading range during the second half of 1998. We have adjusted our bond rate forecast down slightly to a 5½%-6% range because monetary policy tightening has become less likely this year.

Tempering Our Bearishness About 1999

We have also adjusted our interest rate forecast for 1999 downward slightly. We still expect monetary policy tightening, but we have pushed it out a bit in terms of timing and have reduced the total magnitude to a 50-100 basis points range from the cumulative 100 basis points of tightening that we had anticipated

Yield Curve Has Flattened



Source: Federal Reserve Board.

by the end of 1999. We have also cut about 25 basis points from our trajectory of bond rates in 1999.

These changes in our 1999 outlook reflect greater uncertainty concerning how U.S. financial market conditions will tighten. Earlier, we had assumed that all of the tightening would be accomplished via higher interest rates. Given the uncertainties engendered by the Asian crisis, we now think that there is an increased risk that some of the tightening occurs via dollar strength or equity market weakness. If that were to happen, there would be less pressure on Fed officials to tighten monetary policy.

As we have noted earlier, the Goldman Sachs financial market conditions index (GS FCI)—which incorporates short-term rates, long-term rates, the trade-weighted dollar, and the S&P 500 price/earnings ratio—has become more accommodative over the past few years. It needs (and this is borne out by the persistent strength of the economy) to be tighter. But whether this requires a tighter monetary policy depends upon the trajectory of the other variables that make up the index—especially the trade-weighted dollar and the level of stock prices, which is an important determinant of the price/earnings ratio.

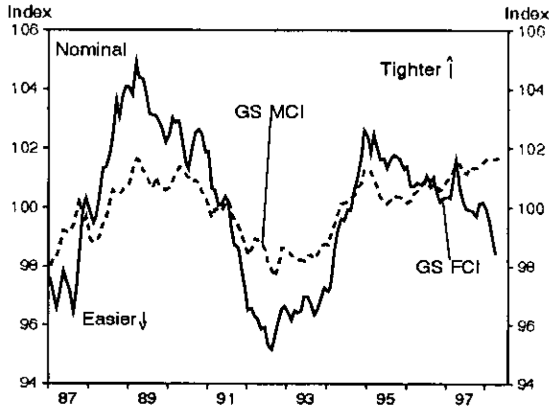
As we see it, the financial conditions index needs to increase by at least 1 point to slow the economy to a growth pace that stabilizes the unemployment rate. This could be accomplished by either dollar strength (about a 13% increase in the trade-weighted dollar), stock market weakness (about a 11% decline in the price/earnings ratio), or by a rise in interest rates (a 120-basis-point rise in both short and long-term interest rates).

If the dollar falls in 1999 and the stock market continues to advance as our currency and U.S. equity market strategists expect, then the onus will be on the Fed and on interest rates. But there are alternative outcomes too. If Asia is significantly unsettled, one could envision sufficient dollar strength and stock market weakness to obviate the need for monetary policy tightening. Or if wage gains come out of profit margins and result in disappointing earnings, perhaps stock prices will weaken as a result. To reflect the increased risks of such alternative outcomes we have tempered our interest rate forecast.

A Bimodal Outcome

As we see it, the distribution of outcomes beyond 1998 is increasingly becoming bimodal. Either the

Financial Conditions Continue to Ease



Source: Goldman Sachs.

economy will slow sufficiently, loosening the labor market and allowing Fed officials to keep monetary policy steady, or the economy will remain stronger than desired, tightening labor markets further, increasing the need for monetary policy tightening.

With Fed officials increasingly willing to wait for inflation pressures to manifest themselves before tightening, the least likely outcome is a very modest tightening of monetary policy (say 25-50 basis points). Such a small adjustment would not change financial market conditions much and, thus, would not cut growth sufficiently to push inflation lower. If the Fed waits until inflation arrives, a flu shot will not be enough; stronger medicine will be required.

Trading Implications

Two important trading implications stem from our views. First, bearish trades should be concentrated in the short end. Apart from a potentially unfavorable path for short-term rates, the fundamentals for the long end are likely to remain favorable. However, it is probably still too soon to implement such trades given the fact that the economic growth pace is likely to slow and inflation should benefit from the recent drop in commodity prices. Second, investors should be short volatility this year, long volatility in 1999. Barring a financial market meltdown, interest rate volatility is likely to remain low until the Fed acts. But when the Fed finally swings into action, the shift in interest rates is likely to be greater than generally anticipated. The pressure is building even as the Fed does not act.

Bill Dudley

Key U.S. Economic Data

	Latest Monthly Data '98 May	'98 Apr	'98 Mar	'98 Feb	6 Mo Trend	12 Mo Trend	Next Release
Nonfarm Payrolls (ch, thousands)	296	302	82	192	261	266	Jul 2
Unemployment Rate (%)	4.3	4.3	4.7	4.6	4.6	4.7	
Index of Hours Worked (% ch)	0.7	0.1	-0.4	-0.1	2.4	2	. 6
A v e r a	g e	0 3 . H	05 o .	0 3 r.	H y. ·	42	.E 3a r r
Producer price finished goods index (% ch)	0.2	0.2	-0.3	-0.2	-1.7	-0.9	Jul 10
Excluding food and energy	0.2	0.2	0.0	0.1	0.8	0.6	
Consumer price index (% ch)	0.3	0.2	0.0	0.1	1.4	1.7	Jul 14
Excluding food and energy (% ch)	0.2	0.3	0.1	0.3	2.7	2.3	
Retail sales (% ch)	0.9	0.7	0.1	0.9	8.2	6.6	Jul 14
Excluding motor vehicles (% ch)	0.4	0.5	0.1	0.8	6.3	5.2	
Industrial Production (% ch)	0.5	0.3	0.4	-0.4	1.9	4.4	Jul 16
Manufacturing	0.2	0.5	0.0	-0.4	1.8	4.7	
Capacity utilization (%)	82.2	82.1	82.2	82.2	82.5	82.6	Jul 16
Manufacturing	80.9	81.9	81.0	81.4	81.5	81.6	
Housing Starts (annual rate, thousands)	1530	1541	1585	1616	1560	1521	Jul 21
Single-family	1228	1233	1239	1263	1220	1178	
Trade balance (billions, monthly)	--	-14.5	-13.2	-11.7	-11.5	-10.2	Jul 17
Merchandise	--	-21.5	-20.5	-18.1	-18.5	-17.4	
Factory Orders (% ch)	--	1.2	0.2	-0.7	2.1	4.5	Jul 2
Durable Goods	--	2.2	0.3	-0.9	4.7	7.5	Jun 24
Personal Income (% ch)	--	0.4	0.3	0.6	6.2	5.6	Jun 26
Wages and Salaries	--	0.4	0.2	0.9	8.2	7.3	
Purchasing Managers' Index (%)	51.4	52.9	54.8	53.3	53.0	54.4	Jul 1
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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

- Deputy Secretary Summers wraps up his trip to Japan. The focus should be placed on the credibility of Japanese commitments to stimulate their domestic economy and restructure their banking system.
- Durable goods orders should soften as aircraft and defense orders weaken after surging in April (June 24).
- Personal income and consumption trends in May should remain robust. Income is well-supported by solid employment growth and rising wages (June 26).

Economic Releases and Other Events

Date	Time	Indicator	Estimate: GS	Estimate: Consensus	Last Report
Wed Jun 24	8:30	Durable Goods Orders (May)	-0.6%	-0.5%	+2.2%
Thu Jun 25	8:30	Real GDP (Q1 '98—Rev.)	+4.8%	+4.8%	+4.8%
	8:30	Chain-Weight Price Index (Q1 '98—Rev.)	+1.0%	+1.0%	+1.0%
	8:30	After-Tax Corporate Profits (Q1 '98—Rev.)	+0.6%	n.a.	-2.2%
	10:00	Existing Home Sales (May)	+1.5%	+0.6%	-2.5%
Fri Jun 26	8:30	Personal Income (May)	+0.5%	+0.6%	+0.4%
	8:30	Personal Consumption (May)	+0.6%	+0.6%	+0.5%

- **Treasury 2-Year Note Auction (Tue, Jun 23)**
- **Treasury 5-Year Note Auction (Wed, Jun 24)**
- **OPEC Meeting (Wed, Jun 24)**
- **APICS Survey (Thu, Jun 25 - 8:30)**
- **Help-Wanted Index (Thu, Jun 25 - 10:00)**
- **University of Michigan Consumer Sentiment—Final (Fri, Jun 26 - 10:00)**

Interest Rates: Forecast vs. Forward Yields

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

Key Numbers in the Business Outlook

	1998 Q1	1998 Q2E	1998 Q3E	1997	1998E
Real GDP	4.8%	2.5%	2.8%	3.8%	3.5%
Ind. Prod., Mfg.	2.0	2.5	4.0	5.2	4.2
CPI	0.5	1.7	2.5	2.3	1.6
After-Tax Profits*	7.2	4.4	0.0	9.6	3.2
Unemployment	4.7	4.3	4.2	5.0	4.3

* Excluding inventory profits; adjusted for depreciation distortions.

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Goldman Sachs

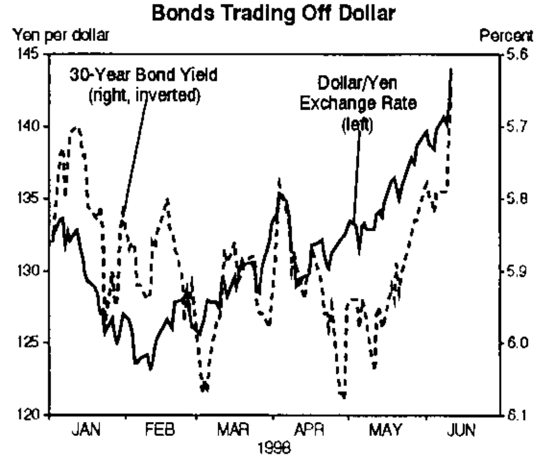
U.S. Economics Analyst

Our Views Have Changed (Slightly)

Inventory Surge More Opportunism Than Accident

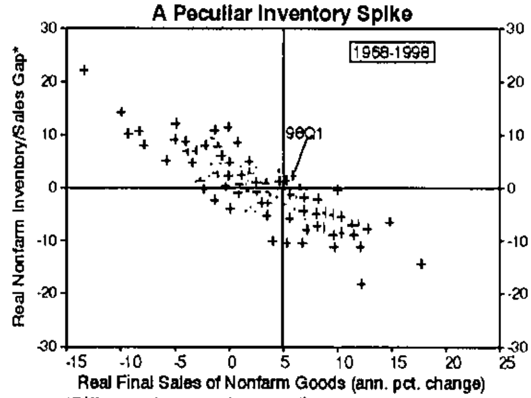
- We have altered our interest rate forecast modestly—pushing any Fed tightening into 1999 and lowering slightly the range for 30-year T-bond yields to 5½%-6%, from 5¾%-6¼% previously.
- These changes reflect three developments: Chairman Greenspan's testimony to the Joint Economic Committee, which indicates that he will be patient until clear evidence of inflation appears; further turmoil in Asia, which should exert more drag on growth and help to restrain inflation; and the rapid buildup of inventories during the first quarter, which makes some slowing in the U.S. growth pace virtually inevitable.
- The turmoil abroad took center-stage this week, with U.S. markets shadowing moves in dollar/yen. On the domestic front, the economic news remained quite firm as May retail sales rose sharply and the pace of inventory building moderated in April. Although the producer price index climbed more sharply than expected, this was due mainly to a huge surge in prescription drug prices.
- Although the first quarter inventory surge will lead to slower growth, the buildup does not appear to be particularly worrisome. Our analysis suggests that much of the buildup was intended—either a response to healthy demand growth or to the recent sharp drops in commodity and import prices.
- As a consequence, we do not expect the inventory retrenchment to be severe in either magnitude or duration. We are skeptical that inventory adjustment will derail the domestic economy from its above-trend growth trajectory for more than a quarter or two.

Bonds Trading Off Dollar



Source: Federal Reserve Board, WEFA.

A Peculiar Inventory Spike



*Difference between the annualized quarterly percent changes in real nonfarm inventories and real final sales of nonfarm goods.
Source: Department of Commerce.

Trade Recommendations

- Our short June '99 Eurodollar trade was stopped out this past week. We would be flat for now.

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Issue No: 98/23
June 12, 1998

I. Weekly Wrapup

Economic and Market Overview

"The current economic performance...is as impressive as any I have witnessed in my near half-century of daily observation of the American economy." These were the words used by Alan Greenspan in describing the U.S. economy to the Joint Economic Committee on Wednesday. The data released this week confirmed the chairman's observation.

On Thursday, the retail sales report underscored the vigor of the U.S. consumer. Spurred by aggressive auto discounting, total retail sales were up 0.9% on the month, following an upwardly revised 0.7% April gain. Excluding autos and building materials, the so-called "control" group of retail sales—which feeds directly into GDP accounts—is up 4.7% thus far in the second quarter, following an explosive 9.1% increase in the January/March period. These numbers are even more striking given the near absence of goods price inflation.

A sharp rise in prescription drug prices overwhelmed a large drop in motor vehicle quotes, causing a mild 0.2% rise in headline and core producer price indexes. Unfinished goods prices remain exceptionally stable, suggesting no inflationary pressures in the pipeline.

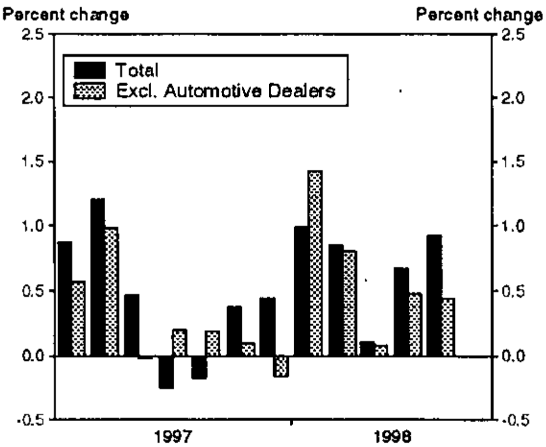
Inventories in April rose only 0.2%, as wholesale inventories dropped 0.6% and retail stocks rose 0.4%. These figures suggest that the buildup of the first quarter is already in the process of being corrected.

The juxtaposition of a robust U.S. economy against troubled foreign markets, together with comments by Treasury Secretary Robert Rubin on Thursday that suggested that Treasury intervention was unlikely for the time being, led to an aggressive bid for the dollar, which rose to a 7-year high against the Japanese yen. With the Fed now perceived to be on hold following Chairman Greenspan's speech on Wednesday, and the stock market more jittery, flight-to-quality considerations drove the yield on the 30-year Treasury to a new low of 5.65%. In fact, as the accompanying chart shows, U.S. bonds have been largely trading in sync with the foreign exchange market this year, as dollar strength has reassured bond investors that inflation would stay low and has provided a safe haven bid to bonds. (Note that, taken literally, the graph implies an inverted yield curve—fed funds to bonds—at 150 yen to the dollar.) The high correlation between markets is likely to continue in the weeks ahead.

Federal Reserve Policy

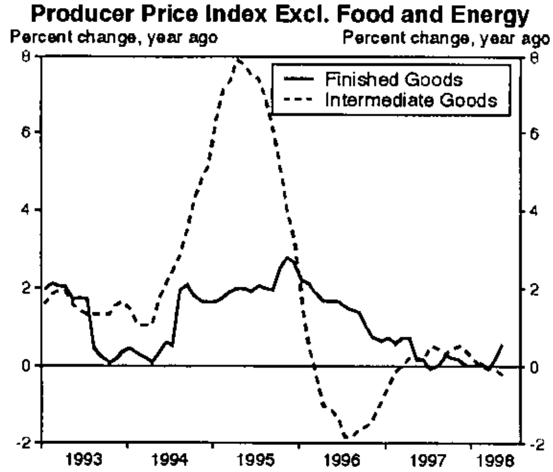
Chairman Greenspan's testimony before the Joint Economic Committee was well-balanced, strongly suggesting no monetary policy tightening is imminent. The Fed chairman spent as much time detailing the reasons why the economy could slow on its own (e.g., Asia and inventories) as on why the tightness of the U.S. labor markets could, by generating inflationary pressure, force the FOMC to tighten. His remarks strongly suggest that the FOMC will not tighten until inflationary pressures are clearly visible. With inflation well-behaved and the economic outlook uncertain, Chairman Greenspan has no appetite to be preemptive.

Retail Sales



Source: Department of Commerce.

Producer Price Index Excl. Food and Energy



Source: Department of Labor.

As a result of Chairman Greenspan's testimony and the increased turmoil from Asia, we are making some modest changes to our interest rate forecast. We no longer anticipate any monetary policy tightening this year. Instead, we expect that it will commence in 1999. Similarly, we have lowered the range for 30-year Treasury bond yields to 5½%-6% from 5¾%-6% earlier. In next week's center section, we will discuss these changes in greater detail and explain why the outlook is becoming increasingly bimodal: Either there will be no tightening or Fed officials will have to tighten monetary policy significantly.

Fiscal and Political Developments

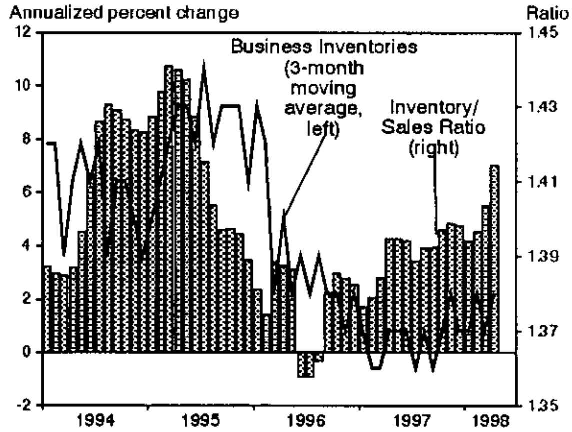
Senate Republicans have succeeded in tying a phaseout of the so-called marriage tax penalty (i.e., the fact that the taxes of a married couple that both work can sometimes exceed the taxes that would have to be paid if both were able to file as single taxpayers) to tobacco legislation. Under the proposal, income taxes would be cut for low and moderate income families. In essence, a portion of the revenues from the increase in cigarette taxes would be siphoned off for this purpose. The passage of the amendment makes passage of tobacco legislation by the Senate more likely. However, because the House leadership apparently does not favor this approach, the outcome remains uncertain. Even if the Senate proposal were enacted by Congress, the fiscal consequences would be small because the marriage tax penalty relief would be phased in gradually and would be fully funded by higher tobacco taxes.

Market Outlook and Comments on Value

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

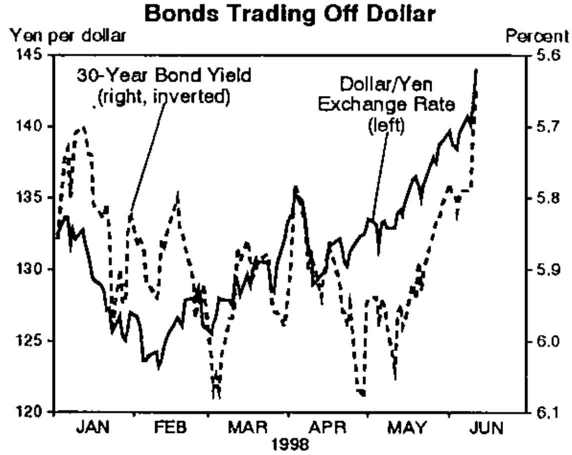
Our short position in the June '99 Eurodollar contract was stopped out on Thursday. Although the prospects for easing look bleak, we would be cautious about reentering the market from the short side right now. The economy is likely to slow and inflation should be well-behaved for a while longer. And, with Asia unsettled, ease fever could increase further. On the long end of the market, the sharp rally has breached the bottom end of our trading range. But rather than get short quite yet, we have readjusted our trading range downward. Trading in the bond market is now much more dependent on events in Asia and changes in dollar/yen than on domestic economic developments.

Business Inventories



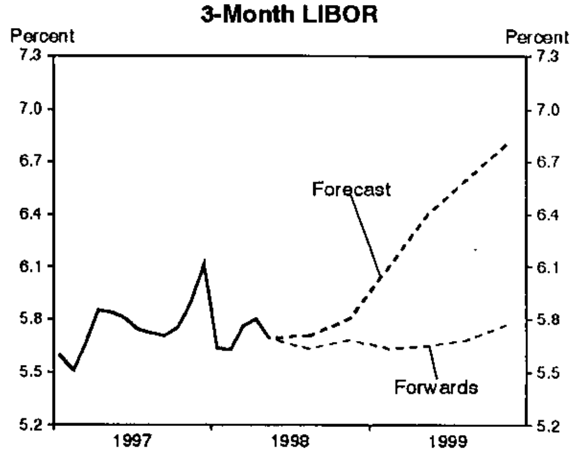
Source: Department of Commerce.

Bonds Trading Off Dollar



Source: Federal Reserve Board. WEFA.

3-Month LIBOR



Source: International Financial Statistics. Bloomberg.

II. Inventory Surge More Opportunism Than Accident

Revisions to first-quarter U.S. GDP statistics on May 28 revealed a stunningly rapid rate of real nonfarm business inventory accumulation over the first few months of 1998. At an 8.1% annual rate, growth in the stock of goods on hand last period was in the 95th percentile of all quarterly observations over the past 30 years, and the fastest since mid-1984. This information reinforced expectations for a sharp slowdown in economic activity over the balance of the year, and has led some analysts to project a sustained sub-par growth pattern that will ultimately provoke monetary easing by the Federal Reserve.

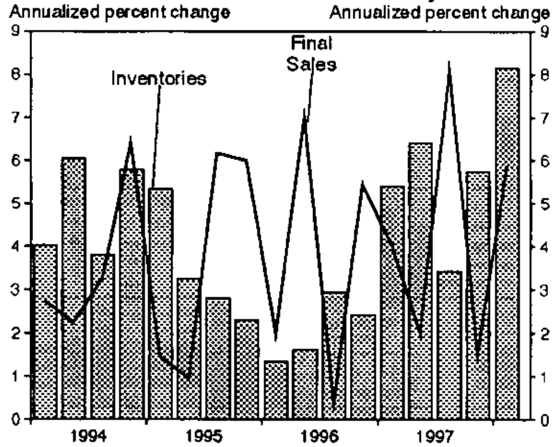
Inventory restraint is already exerting a notable drag on domestic goods output, which is causing U.S. economic activity to finally soften. We are very skeptical, however, that these effects will last very long or prove strong enough to block further absorption of labor resources in the period ahead. Occurring as it did against a background of explosive goods sales gains, the recent inventory surge does not conform with the typical pattern of an unwanted buildup that foreshadows an aggressive retrenchment. Consistent with that observation, the stocking swell was highly concentrated among petroleum products, factory durable materials, and wholesale hardgoods, which may principally reflect actions by firms to take advantage of exceptional price discounts deriving from weakness in Asian demand and currencies. With domestic final purchases still on a robust upward course, and no policy restraint in the pipeline, firms should not need to undertake steep cuts in domestic orders and production to gradually bring inventory gains back into line with sales.

Goods Supply Bulge Braking U.S. Output

According to the latest figures from the Department of Commerce, the pace of stocking by nonfarm businesses soared in the first three months of this year to $91.8 billion in annual real terms, contributing 1½ percentage points to the 4.8% quarterly real GDP rise. As a result, the ratio of nonfarm inventory on hand to total goods sales climbed for the second straight quarter to the highest level in almost three years.

The exceptionally rapid pace of goods accumulation and related rise in the inventory/sales ratio make it highly likely that stocking behavior will act as an appreciable retarding influence on U.S. economic growth for awhile. To reflect this, we have lowered our projections for second- and third-quarter annualized real GDP gains by 0.5% each, to 2.5% and 2.8%, respectively. Clues abound that stock adjustments were already underway before the end of winter. Industrial production in manufacturing outside the automotive sector fell in both February and March, a notable change from average increases around 0.5% during the prior six months. Purchasing managers, likewise, report a recent pullback in both new orders and inventories at factories, although as of May their composite activity index remained marginally in expansionary territory, at 51.4%.

Nonfarm Goods Sales and Inventory Growth



Source: Department of Commerce.

The key question for the business and financial outlook, however, is whether this influence will be sufficient to depress overall GDP gains below the long-term trend, so that pressure on resource margins—specifically labor supplies—and related inflationary risks will ease. Our view is that this should not occur, for two main reasons: (1) It appears that much of the first-quarter buildup was a deliberate effort to take advantage of bargain prices in commodities and imported products, and (2) a robust domestic demand climate should enable firms to accomplish necessary adjustments in an orderly, relatively patient fashion.

Classic Signs of a Major Stocking Surprise Absent

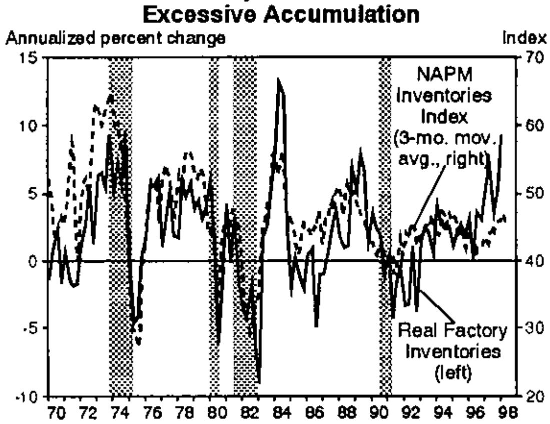
A striking aspect of the first-quarter inventory jump is that it took place in a context of rapid and strengthening final sales gains. The annualized real growth rate for nonfarm goods demand last period was 5.9%, up from a 3.9% rise over the preceding four quarters. That certainly does not fit the normal pattern of an unanticipated stock buildup, whereby a sudden deterioration in spending catches producers and distributors off guard, forcing a downshift in orders and production. As the scatter diagram at right shows, this was the first time in 30 years that nonfarm inventories rose faster than nonfarm goods sales during a quarter in which the latter grew more than 5% annualized. Such unusual circumstances make it appropriate to question how much of the inventory pileup was truly a surprise for firms.

Moreover, there has been relatively little anecdotal or statistical evidence of a significant involuntary goods buildup. In the Federal Reserve "Beige Book" dated May 6, for example, six of the seven regions offering commentary on retail inventories said they were in line with sales; only in the relatively small Richmond district were some concerns about excess retail supplies noted. Similarly, in the factory realm, the NAPM inventory index hovered in a tight range between 46.6% and 46.9% over the first four months of the year, only a shade above the averages posted in the second half of 1997 (45.5%) and throughout the 1993-1997 period (44.4%). All of these NAPM inventory readings are far below the 50% or higher levels that have usually been associated with major factory stocking excesses (see chart below).

Stocking Distribution Atypical of Undesired Pattern

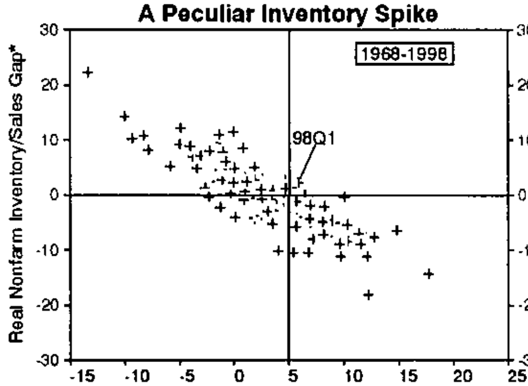
It is also noteworthy that inventory acceleration during the first three months of this year was skewed toward sectors where voluntary factors are more likely to have been at work. Compared to the average pace during the second half of 1997, there was a $40.4-billion (annual rate) pickup in total real

NAPM Survey Does Not Indicate Excessive Accumulation



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

A Peculiar Inventory Spike



*Difference between the annualized quarterly percent changes in real nonfarm inventories and real final sales of nonfarm goods.
Source: Department of Commerce.

nonfarm inventory growth last quarter (to $91.8 billion in 1992 dollars from $51.4 billion). However, one third of this amount was in petroleum products ($13.4 billion), where a price plunge created powerful incentives for firms to pad supplies in anticipation of future needs. An additional 14% contribution ($5.6 billion) came from manufacturers' durable materials and supplies, which comfortably exceeds that group's proportion of all real nonfarm stocks (7%). Given that raw industrial goods quotes have been broadly declining, it seems plausible that this strengthening of purchase volumes by factory firms also primarily reflects a conscious effort to lock in lower production costs. Thus, almost half of the jump in nonfarm stock growth early this year could be tied to intentional, pricing-related demands, rather than to accident.

Meanwhile, retailers experienced little change in their pace of real goods accumulation in the period—only a $3.6-billion pickup excluding petroleum, or just 9% of the overall acceleration. This modest speed-up took place entirely among nondurable goods, where consumer activity has been particularly brisk lately. On a book-value basis, retail inventory/sales ratios in March—both in total and excluding the motor vehicle group—were trivially different from 1997 averages. That helps to explain the absence of cautious commentary regarding stock levels at those outlets.

One area where an unintended inventory buildup does seem to have occurred is at wholesalers, specifically with regard to durable items. Fully 46% of the total first-quarter stocking acceleration took place within wholesale durables, and that is nearly three times as large as this group's proportion of total unsold nonfarm goods. Categories where stock growth

Breakdown of First-Quarter Inventory Accumulation*

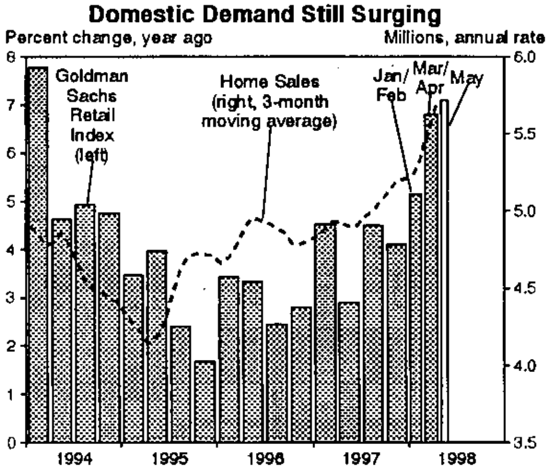
	Annual Rate of Growth (1992 $)			
	Second Half 1997	First Quarter 1998	Change	Percent of Total Acceleration
Nonfarm Total	$51.4	$91.8	+$40.4	100.0 %
Petroleum:				
Manufacturing	0.6	7.3		
Wholesale	0.7	3.6		
Retail	-0.5	3.3		
Total Petroleum	0.7	14.1	+13.4	33.1
Non-Petroleum:				
Manufacturing:				
Dur. Materials & Supplies	2.8	8.4	+5.6	13.9
Other	14.8	22.6	+7.8	19.3
Wholesale:				
Durable Goods	5.0	23.5	+18.5	45.7
Nondurable Goods	11.6	2.2	-9.5	-23.4
Retail:				
Durable Goods	8.5	0.3	-8.2	-20.3
Nondurable Goods	1.8	13.2	+11.4	28.3
Other:				
Durable Goods	1.6	-0.7	-2.3	-5.6
Nondurable Goods	4.5	9.2	+4.7	11.6

* Components do not add to total owing to chain-weight calculation technique.

Source: Department of Commerce. Our calculations.

gained notably last quarter include: professional and commercial items ($5.7 billion), motor vehicles ($3.2 billion), and electrical goods ($2.4 billion). A slowdown in equipment exports undoubtedly played some role here, but so probably did brisk importation of similar items, many of which became available at relative bargain prices due to sharp currency devaluations. Merchandise trade statistics show more than a 30% year-to-year rise in nominal capital goods imports during the first quarter. Hence, there are grounds to believe that a portion of burden for the incipient inventory correction in this sector will fall upon foreign producers, and that will provide some cushion for aggregate domestic activity.

Domestic Demand Still Surging



Source: Department of Commerce. Goldman Sachs.

Spending Vigor Will Dampen Output Adjustments

As businesses endeavor to correct inventory excesses that developed over recent months, they will be aided to the extent that growth in spending on goods remains robust. In this regard, the latest news suggests no letup yet in consumer demand momentum or confidence. The year-to-year change in the Goldman Sachs Retail Index continues to accelerate, to 7.1% in May from 6.8% over March and April combined, and 5.2% in the January/February interval. Deliveries of motor vehicles in the past two months have averaged 16 million annual units, a volume not previously attained in any single month since 1986. Meanwhile, sales of new single-family houses hit a record 888,000 annual units in April, and may have since moved even higher judging from the steady ascent in mortgage applications for purchase transactions. Turnover of existing dwellings has also surged into new high territory. Exceptionally sturdy housing demands, lofty consumer attitudes, and rapid real household income growth all bode favorably for a continuation of consumption vigor, and that should give firms more comfort that a moderate overhang of unwanted products can be worked off without an abrupt pullback in orders and production.

John Youngdahl

Key U.S. Economic Data

	Latest Monthly Data '98 May	'98 Apr	'98 Mar	'98 Feb	6 Mo Trend	12 Mo Trend	Next Release
Nonfarm Payrolls (ch. Thousands)	296	302	82	192	261	266	Jul 2
Unemployment Rate (%)	4.3	4.3	4.7	4.6	4.6	4.7	
Index of Hours Worked (% ch)	0.7	0.1	-0.4	-0.1	2.4	2.6	
Average Hourly Earnings (% ch)	0.3	0.5	0.3	0.4	4.2	4.3	
Producer price finished goods index (% ch)	0.2	0.2	-0.3	-0.2	-1.7	-0.9	Jul 10
Excluding food and energy	0.2	0.2	0.0	0.1	0.8	0.6	
Consumer price index (% ch)	--	0.2	0.0	0.1	1.0	1.5	Jun 16
Excluding food and energy (% ch)	--	0.3	0.1	0.3	2.5	2.2	
Retail sales (% ch)	0.9	0.7	0.1	0.9	8.2	6.6	Jul 14
Excluding motor vehicles (% ch)	0.4	0.5	0.1	0.8	6.3	5.2	
Industrial Production (% ch)	--	0.1	0.3	-0.3	2.0	3.8	Jun 16
Manufacturing	--	0.3	-0.2	-0.3	2.8	4.3	
Capacity utilization (%)	--	81.9	82.2	82.3	82.6	82.6	Jun 16
Manufacturing	--	80.8	81.0	81.5	81.7	81.6	
Housing Starts (annual rate, thousands)	--	1538	1575	1616	1556	1510	Jun 16
Single-family	--	1241	1232	1263	1210	1167	
Trade balance (billions, monthly)	--	--	-13.0	-12.2	-10.9	-10.1	Jun 18
Merchandise	--	--	-20.2	-18.5	-17.8	-17.2	
Factory Orders (% ch)	--	1.2	0.2	-0.7	2.1	4.5	Jul 2
Durable Goods	--	2.2	0.3	-0.9	4.7	7.5	Jun 24
Personal Income (% ch)	--	0.4	0.3	0.6	6.2	5.6	Jun 26
Wages and Salaries	--	0.4	0.2	0.9	8.2	7.3	
Purchasing Managers' Index (%)	51.4	52.9	54.8	53.3	53.0	54.4	Jul 1
Consumer Sentiment U Mich (Feb 66=100)	106.5	108.7	106.5	110.4	106.8	106.3	Jun 26
Conference Board (1985=100)	135.2	137.2	133.8	137.4	134.7	131.1	Jun 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

- Consumer prices are likely to be relatively well-behaved due to lower motor vehicle goods prices. The wild-card, however, is whether the big jump in prescription drug prices evident in the PPI shows through to the CPI (June 16).
- The Fed's Beige Book report should be scrutinized for evidence of the impact from Asia such as excessive inventory building (June 17).
- The trade deficit in April is likely to widen further due to a climb in imports, as well as a drop in aircraft exports (June 18).
- The federal budget balance should continue to improve in May, but some of this will be due to temporary calendar effects. The underlying rate of improvement appears to be softening somewhat in line with the slowdown in corporate profit growth (June 19).

Economic Releases and Other Events

			Estimate		
Date	Time	Indicator	GS	Consensus	Last Report
Tue Jun 16	8:30	Consumer Price Index (May)	+0.2%	+0.2%	+0.2%
		Excluding Food & Energy	+0.2%	+0.2%	+0.3%
	8:30	Housing Starts (May)	+2.0%	+0.8%	-2.3%
	9:15	Industrial Production (May)	+0.4%	+0.2%	+0.1%
	9:15	Capacity Utilization (May)	81.9%	81.9%	81.9%
Thu Jun 18	8:30	Trade Balance (Apr)	-$14.0 Bil	-$13.1 Bil	-$13.0 Bil
	10:00	Philadelphia Fed Survey (Jun)	+12.0%	+15.0%	+17.5%
	10:00	Current Account Balance (Q1 '98)	-$50.0 Bil	n.a.	-$45.6 Bil
Fri Jun 19	2:00	Federal Budget Balance (May)	-$42.5 Bil	-$42.0 Bil	-$48.5 Bil

- Home Builders Survey (Mon, Jun 15 - 1:00)
- Greenspan, Rubin Testify to Senate Banking Committee on Bank Reform (Wed, Jun 17 - 10:00)
- Federal Reserve "Beige Book" Report (Wed, Jun 17 - 2:00)
- Treasury Announces 2- and 5-Year Note Auctions (Wed. Jun 17 - 2:30)
- Treasury 1-Year Bill Auction (Thu, Jun 12 - 1:00)

Interest Rates: Forecast vs. Forward Yields

	3 mo	6 mo	12 mo
LIBOR 3 mo	5.7%	5.8%	6.4%
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Forward	5.5	5.5	5.5
10 Yr T-Note	5.5	5.6	6.0
Forward	5.5	5.5	5.5

Key Numbers in the Business Outlook

	1998				
	Q1	Q2E	Q3E	1997	1998E
Real GDP	4.8%	2.5%	2.8%	3.8%	3.5%
Ind. Prod., Mfg.	2.0	2.5	4.0	5.2	4.2
CPI	0.5	1.7	2.5	2.3	1.6
After-Tax Profits*	7.2	4.4	0.0	9.6	3.2
Unemployment	4.7	4.3	4.2	5.0	4.3

* Excluding inventory profits; adjusted for depreciation distortions.

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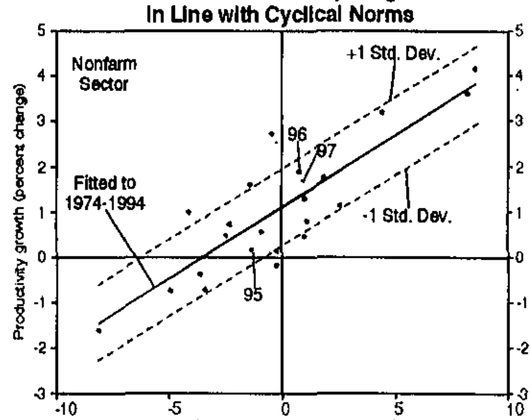
U.S. Economics Analyst

Computers and Productivity: Tails Do Not Wag Dogs

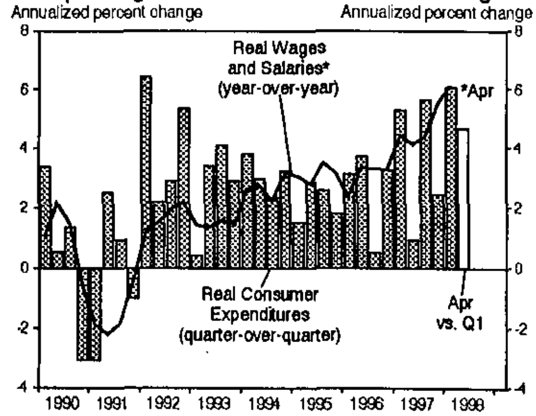
- Over the past quarter century, U.S. productivity growth has benefited only modestly (about ¼ percentage point per year) from investment in computers. This is because computers make up a small part (about 2%) of the U.S. capital stock, as replacement has eaten up most of the large sums invested in such equipment. Perceptions of a larger impact implicitly assume returns on these investments that are unrealistically high.
- Consistent with these findings, the pickup in productivity growth since 1995 is roughly in line with its normal tendency to rise when growth in output accelerates and is not definitive evidence of a stronger trend. The productivity pickup also reflects computational changes to reduce the upward bias in the consumer price index.
- The U.S. growth outlook remains strong despite sharp upward revisions to first-quarter inventory accumulation data and signs of a consequent softening in the factory sector in April and May. In particular, hiring plans have strengthened further, confidence and home sales remain at very high levels, and real consumer spending is on a strong (4%-5%) growth track this quarter.
- Persistently strong tax revenues now point to a surplus of about \$80 billion this year, well above recently revised official estimates and a clear temptation for tax cuts.
- Chairman Greenspan will testify before the Joint Economic Committee on June 10. The content and tone of this testimony will be key to the interest rate outlook, as this session is an ideal forum in which to issue any alerts about the future course of monetary policy.

Recent Productivity Surge In Line with Cyclical Norms



Source: Department of Labor. Our calculations.

Spending and Income Trends Remain Strong



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

Trade Recommendations

- Stay short the June '99 Eurodollar futures contract, with a target of 93.50 and a stop on a close above 94.30.

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Issue No: 98/21
May 29, 1998

I. Weekly Wrapup

Economic and Market Overview

Deteriorating financial conditions in several large foreign countries sent a shudder through the U.S. equity market this week, and the resulting flight to safety pushed down U.S. Treasury issue yields.

Revisions to first-quarter real GDP data boosted the growth rate to 4.8% (annual rate) from 4.2%, due to an appreciably larger inventory buildup that offset a much deeper trade deficit. Growth in domestic final sales was left undisturbed by this update, at 5.9%. While brisk inventory accumulation is normal in a well-entrenched expansion, the 8% annualized rate of stockpiling reported for nonfarm goods in the first quarter obviously cannot persist. Although some of the inevitable correction is likely to be mitigated by a coincident pullback in imports, efforts to curb the rate of accumulation are likely to act as a depressant on economic activity in coming months. Indeed, the latest Chicago purchasing managers' survey reveals a softening in industrial conditions in May.

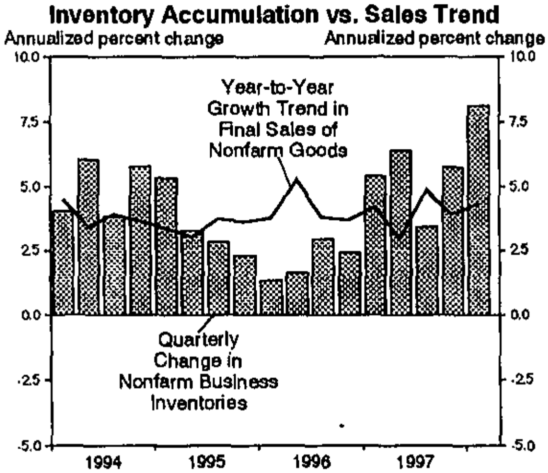
Although orders for durable goods climbed 2.8% in April, the gain was entirely in the volatile defense and aircraft groups. Elsewhere, bookings slipped 0.2% from a March level that was revised down 0.5%. Orders for nondefense capital items other than aircraft fell 3.1% last month, retracing about half of the strong gain registered between the fourth quarter and March. However, producers of durable consumer goods and materials enjoyed a 0.8% rise in new orders during April, sustaining their recovery from a demand slump around the turn of the year.

To the extent this rise was in consumer goods, it foots well with the latest data on personal spending and income, which indicate that real outlays are on a 4%-5% annualized growth track this quarter following an upward-revised 6.1% gain last quarter. These gains are solidly based in real wage and salary growth, which seems destined to continue given the latest job market soundings. In particular, Manpower, Inc. reported that hiring plans for the third quarter hit a new high for the current business expansion, while claims for jobless benefits remain quite low.

Federal Reserve Policy

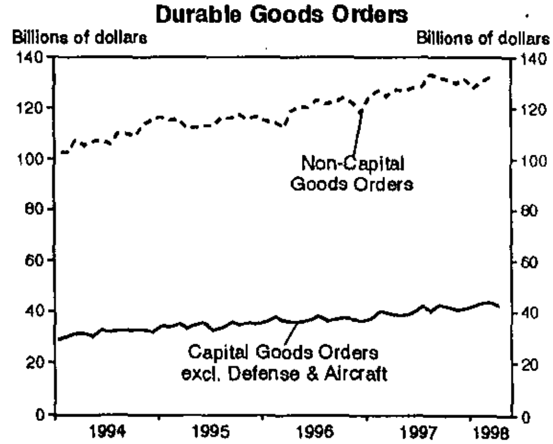
Chairman Greenspan will testify on U.S. monetary policy and the economic outlook before the Joint Economic Committee of the Congress on June 10, squarely between the May 19 FOMC meeting and the June 30-July 1 midyear policy review session. This development is noteworthy for at least two reasons. First, the minutes of the March FOMC meeting and the subsequent news story leaking the renewed bias toward tightening both make it clear that any rate rise will be foreshadowed by an unmistakable rhetorical signal. It has been Mr. Greenspan's normal practice to deliver such warnings personally, particularly when there has been a lengthy interval since the last change (now 14 months) or when a directional shift looms. Second, the anxieties about potential inflation risks among central bankers aired at the March meeting were probably heightened by the demand and labor market data released during April and early May. Hence, the pressure for some sort of formal warning was probably high at the May meeting.

Inventory Accumulation vs. Sales Trend



Source: Department of Commerce.

Durable Goods Orders



Source: Department of Commerce.

Fiscal and Political Developments

The Office of Management and Budget has revised up sharply its projections for the budget surplus this fiscal year and next, to $39 billion and $54 billion, respectively. By our reckoning, however, the budget outlook is substantially better in the near term than official forecasters are willing to acknowledge, due to extraordinary momentum in tax revenues. This year's surplus will likely total about $80 billion, marking an even bigger year-to-year improvement than occurred in fiscal 1997. As this becomes more obvious, the pressure from lawmakers to enact tax relief before the fall elections could become intense.

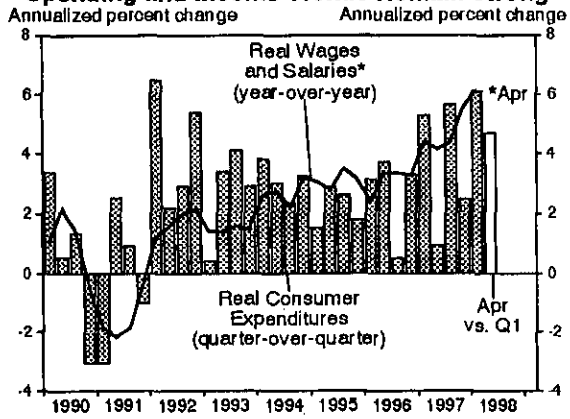
President Clinton's legal difficulties may soon reach a critical stage, as Independent Counsel Kenneth Starr is reportedly preparing to issue a preliminary report of his findings to Congress next month. If that document contains suggestions of possible serious offenses by the chief executive, it could trigger a formal impeachment inquiry by the House Judiciary Committee, perhaps as soon as this summer. Over the past few weeks Starr has won a series of procedural victories before a federal judge, who has rejected claims of testimonial privilege invoked by senior White House aides and Secret Service agents. If those rulings are permitted to stand or upheld on appeal, as most legal analysts believe likely, then prosecutors will gain access to additional first-hand information which they believe to be highly relevant to their investigation.

Market Outlook and Comments on Value

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

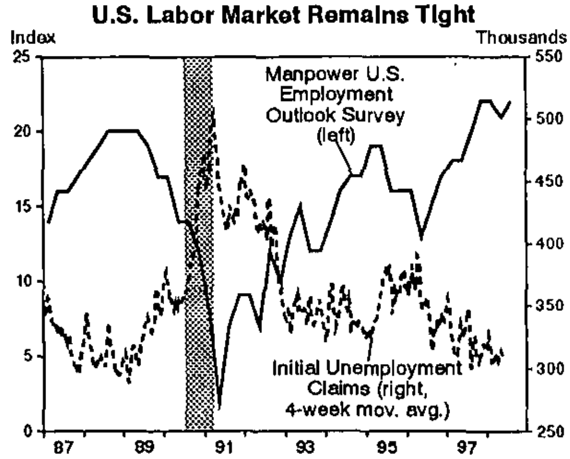
We would remain short the June '99 Eurodollar futures contract, with a target of 93.50 and a stop on a close above 94.30. No tightening in monetary policy is priced in despite clear indications from the FOMC minutes that most members anticipate such a move in the not-too-distant future. Moreover, given these sentiments, Chairman Greenspan's upcoming testimony on June 10 will almost certainly have a hawkish tilt. On the long end, we are becoming more bearish, but we would wait to initiate shorts until yields on the 30-year T-bond get to the bottom end of a 5¾%-6¼% trading range.

Spending and Income Trends Remain Strong



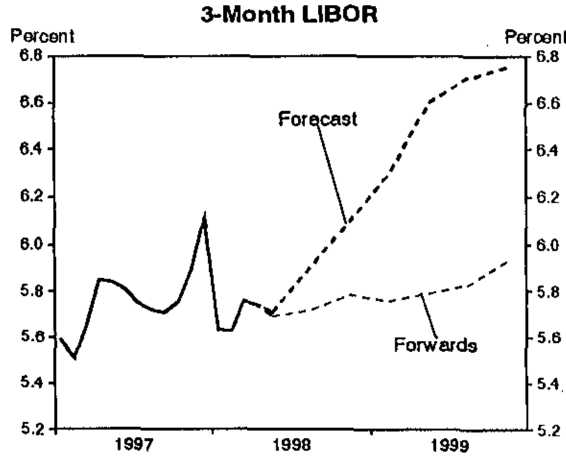
*Adjusted for tax-induced changes in income realizations.
Source: Department of Commerce

U.S. Labor Market Remains Tight



Source: Manpower, Department of Labor.

3-Month LIBOR



Source: International Financial Statistics, Bloomberg.

II. Computers and Productivity: Tails Do Not Wag Dogs

"You can see the computer age everywhere but in the productivity statistics." So said no less a luminary than Robert M. Solow, the Nobel laureate who made his reputation as a growth theorist. He made this remark more than 10 years ago, in 1987,[1] but it seems just as valid today. Despite a stronger showing in the past two years, government data on productivity—defined as output per hour worked—imply that it has risen a scant 1% per year in the private nonfarm sector in the decade since Solow made his now famous remark—the same as in the preceding decade.

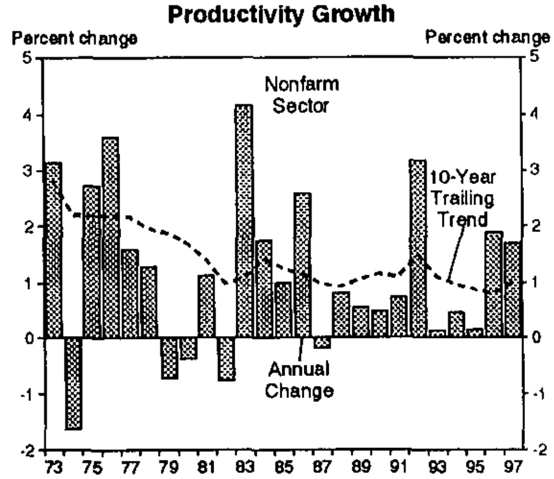
This flies in the face of received wisdom in the U.S. business and financial communities, which holds that the growing use of computers has caused productivity to soar. However, a careful examination of the role that computers play in the U.S. economy shows that they cannot have added much more than about ¼ percentage point to annual productivity growth. This is because computers make up only a small fraction—about 2%—of the U.S. capital stock. Rates of return on these investments would have to be unrealistically high, topping 150% per year, to confirm the existence of a computer-driven productivity miracle, which we arbitrarily define as a boost of at least 1 percentage point per year to growth.

Meanwhile, the latest uptick in productivity growth, to an average of 1¾% per year since 1995, is roughly in line with the normal cyclical tendency for growth in productivity to rise in response to an acceleration in output growth. Over this period, the productivity index has also received a small computational boost from measures taken to reduce the overstatement of inflation in the consumer price index. Thus, evidence that the capital spending boom of the 1990s has lifted productivity growth has yet to materialize, probably because that boom is largely a reflection of outlays for computers, whose effect has been modest.

Tails Do Not Wag Dogs

According to many business executives, the growing usage of computers has caused U.S. productivity to advance by leaps and bounds in recent years. However, the official productivity data have generally failed to corroborate this view, at least until very recently. Why have the data been so stubborn?

Productivity Growth



Source: Department of Labor.

Believers in the productivity miracle have a simple, almost reflexive answer: The government cannot hope to measure productivity properly in an economy as complex and dynamic as this one. This view has obvious appeal. It is hard to put much faith in the precision of aggregate output indexes, on which the productivity data are ultimately based, when metrics for output are missing for vast parts of the economy.

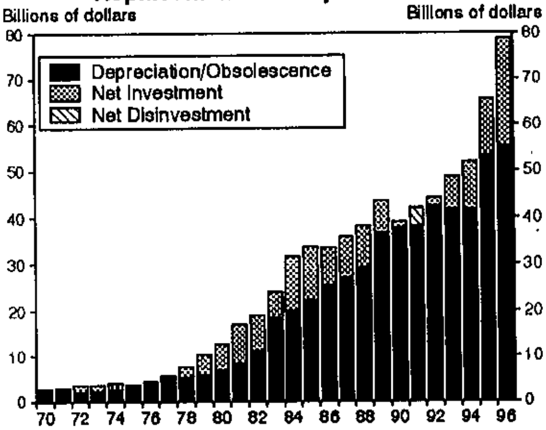
But by the same token, there is no clear evidence that the measurement error, however big or small it may be, is getting worse. In fact, the Boskin Commission found reason to believe that the overstatement of inflation—in essence, a mirror image of the error in productivity growth—had been substantial for at least two decades.[2] It is the likelihood of a shift in this error, rather than its magnitude, that financial market participants should focus on, given that most of the benchmarks to which they compare productivity growth—in particular, growth in potential output and inflation—are affected by the same difficulties.

So the issue remains: Why has productivity growth not picked up more decisively given all the money that U.S. business firms have poured into computers in recent years and all the handsome returns they have apparently realized on these investments? A careful analysis of the role of computers in the American economy, authored by Daniel Sichel, an economist at

[1] Robert M. Solow, "We'd Better Watch Out," *New York Times Book Review*, July 12, 1987, p. 36.

[2] "Toward a More Accurate Measure of the Cost of Living," Final Report to the Senate Finance Committee from the Advisory Commission to Study the Consumer Price Index, December 4, 1996, p. ii.

Investment in Computers: Replacement Eats Up Most of It



Source: Department of Commerce.

the Federal Reserve Board, reconciles this apparent inconsistency by showing that the short service lives of computers virtually preclude them from generating a productivity bonanza credited to them.[3]

The key point is that computers make up only a small fraction of the U.S. capital stock—less than 2% at the end of 1996, the latest year for which the data are available. This is because most of the money invested in them goes to replace and upgrade existing equipment, as shown in the chart above. Thus, for computers to contribute significantly to productivity growth, they must realize extremely high returns—in essence, the tail must wag the dog.

A simple example will make the point. We assume, for the sake of argument, that the contribution of computers to growth in productivity is 1 percentage point per year and then show that the rate of return needed to get this result is unreasonably high. This contribution can be calculated as the product of (1) the growth rate in the stock of computers and (2) the share of income accruing to their owners, which in turn equals the rate of return on computers times the ratio of the stock of computers to GDP. If this ratio is also about 2%, as it was in 1996, and the trend growth rate in the stock of computers is about 30% per year, as it has been over the past quarter century, then a mere 0.1-point boost to productivity growth requires a 16.7% annual rate of return on computers (30 x 0.02 x 0.167 = 0.1). A 1-point boost would therefore require 10 times that rate of return, or a whopping 167% per year!

This simple arithmetic raises an obvious question: If the returns on investments in computers are really that high and—more to the point—so far above those that can be earned anywhere else, then why aren't U.S. companies spending every last cent they can get on computers and borrowing heavily to buy more?

The answer should be equally obvious: Returns on investments in computers are not so sky-high, and their contribution to productivity growth is therefore much smaller than 1 point per year. In fact, Sichel estimates that the contribution of computer hardware alone to annual productivity growth has been on the order of 0.2 points over the past two decades. This figure rises to about 0.3 points when software and labor services are factored into the analysis.[4]

In one sense, these estimates are not all that small. Cumulated over many years, they imply that the computer age has boosted U.S. living standards in a meaningful way. For example, real per capita income appears to be 5%-8% higher today as a result. However, these estimates clearly fall far short of what most casual observers would have assumed based on anecdotal reports.

Readers with sharp pencils will quickly see that the returns on computer hardware implicit in the estimate of a 0.2-point contribution to productivity growth are well above 30% per year—37% is the precise figure used. The contrast between these two figures goes a long way toward explaining why the gulf between business perceptions and government statistics is so large. It also highlights a second implication of short computer service lives—namely, that businesses must earn high returns on these assets to offset the speed at which they are losing value. In recent years, the real stock of computers has been depreciating 25%-30% per year, as shown in the chart on the top of page 6. In nominal terms, the depreciation has been even sharper, reflecting the downward trend in prices.

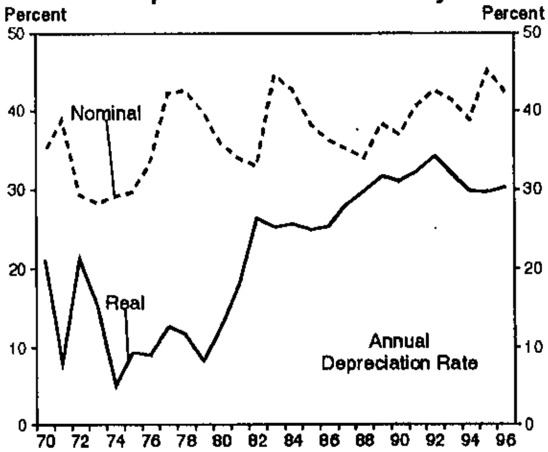
Not So Fast!

If computers have had such a minimal effect on productivity growth, then what lies behind the latest pickup? Since 1995, the index of output per hour worked in the nonfarm sector has risen about 1¾% per year—hardly a spectacular gain, but well above the 1% long-term trend.

[3] Daniel E. Sichel, *The Computer Revolution: An Economic Perspective*, Brookings Institution Press, May 1997.

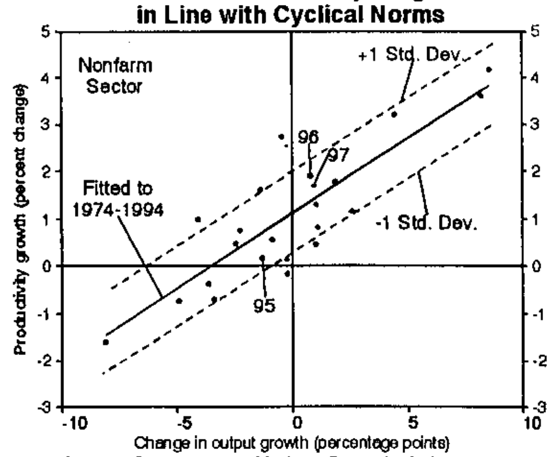
[4] See also Stephen D. Oliner and Daniel E. Sichel, "Computers and Output Growth Revisited: How Big is the Puzzle?" *Brookings Papers on Economic Activity*, 1994:2, pp. 273-334.

Computers Lose Value Quickly



Source: Department of Commerce.

Recent Productivity Surge in Line with Cyclical Norms



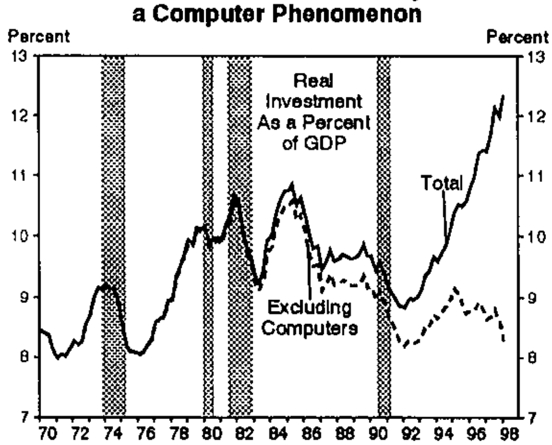
Source: Department of Labor. Our calculations.

The boom in business investment that began in 1992 is an obvious candidate, and one that should not be dismissed out of hand. However, in light of the foregoing analysis, the fact that this boom has been concentrated in purchases of computers, as shown in the chart below, suggests that it is not the main story.

In fact, most of the 1996-1997 surge in productivity growth can be explained by its normal tendency to rise in response to an acceleration in output growth. This pattern exists because producers' first response to a desire to increase output is to squeeze more out of their existing work forces. The growth rate of productivity is thus highly correlated with the *change* in the growth rate of output, as illustrated above.

The line on this chart shows the link that prevailed from 1973, when the productivity trend appears to have slowed sharply, through 1994, when capacity utilization was last at a cyclical high, as it was in 1973. By itself, the change in output growth explains more than three-fifths (62%) of the annual variation in productivity growth over this period.

Investment Boom Entirely a Computer Phenomenon



Source: Department of Commerce.

In 1996, nonfarm output rose 3.3%, up from 2.5% in 1995, and in 1997 it strengthened further, to 4.2%. The advances in nonfarm productivity during these two years—1.7% and 1.9%, respectively—were slightly better than would have been predicted by the experience of the preceding two decades, but not outside the normal degree of variation. As shown in the chart, the overshoots in both years—0.52% and 0.28%, respectively—fell well within the 0.85% standard error of estimate that encompasses roughly two-thirds of the variation. Moreover, they followed a year (1995) in which productivity growth undershot the norm by about ½%.

Thus, in the context of accelerating growth in real output, the 1996-1997 surge in productivity growth has not been strong enough to require a special explanation. Even so, a technical one is available. In the past two to three years, the Bureau of Labor Statistics has taken steps to fix small pieces of the overstatement of inflation in the consumer price index. To the extent that these have passed through to the GDP deflator, they would have resulted in a slightly stronger growth rate of real GDP and, hence, productivity. This would be enough to explain most of the 1997 overshoot, leaving very little to show for the investment boom of the 1990s, perhaps because that boom has been mainly a process of buying new computers to replace old ones.

Ed McKelvey

Key U.S. Economic Data

	'98 May	Latest Monthly Data '98 Apr	'98 Mar	'98 Feb	6 Mo Trend	12 Mo Trend	Next Release
Nonfarm Payrolls (ch. thousands)	--	262	-24	259	280	258	Jun 5
Unemployment Rate (%)	--	4.3	4.7	4.6	4.6	4.7	
Index of Hours Worked (% ch)	--	-0.4	-0.7	0.6	2.4	2.4	
Average Hourly Earnings (% ch)	--	0.3	0.3	0.6	4.4	4.4	
Producer price finished goods index (% ch)	--	0.2	-0.3	-0.1	-2.3	-1.2	Jun 12
Excluding food and energy	--	0.2	0.0	0.1	0.3	0.1	
Consumer price index (% ch)	--	0.2	0.0	0.1	1.0	1.5	Jun 16
Excluding food and energy (% ch)	--	0.3	0.1	0.3	2.5	2.2	
Retail sales (% ch)	--	0.5	0.0	0.9	6.5	5.2	Jun 11
Excluding motor vehicles (% ch)	--	0.5	0.0	0.8	5.4	4.8	
Industrial Production (% ch)	--	0.1	0.3	-0.3	2.0	3.8	Jun 16
Manufacturing	--	0.3	-0.2	-0.3	2.8	4.3	
Capacity utilization (%)	--	81.9	82.2	82.3	82.6	82.6	Jun 16
Manufacturing	--	80.8	81.0	81.5	81.7	81.6	
Housing Starts (annual rate, thousands)	--	1538	1575	1616	1556	1510	Jun 16
Single-family	--	1241	1232	1263	1210	1167	
Trade balance (billions, monthly)	--	--	-13.0	-12.2	-10.9	-10.1	Jun 18
Merchandise	--	--	-20.2	-18.5	-17.8	-17.2	
Factory Orders (% ch)	--	--	0.3	-0.7	0.0	4.7	Jun 4
Durable Goods	--	2.6	0.2	-0.9	5.6	7.9	Jun 24
Personal Income (% ch)	--	0.4	0.3	0.6	6.2	5.6	Jun 26
Wages and Salaries	--	0.4	0.2	0.9	8.2	7.3	
Purchasing Managers' Index (%)	--	52.9	54.8	53.3	53.5	54.8	Jun 1
Consumer Sentiment U Mich (Feb 66=100)	106.5	108.7	106.5	110.4	106.8	106.3	Jun 26
Conference Board (1985=100)	135.2	137.2	133.8	137.4	134.7	131.1	Jun 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.

Goldman Sachs

U.S. Calendar

Focus for the Week Ahead

- The May employment report should confirm that April's 4.3% unemployment rate was not a fluke, and that wage pressures remain intense. We estimate that nonfarm payrolls rose another quarter million in May, although smaller figures could simply signal that the pool of available idle workers is evaporating. Payroll and other data from the survey of establishments will be benchmarked in this report, and figures for average hourly earnings and work weeks will be reported on revised basis, eliminating the "day-count" bias (June 5).
- Signs of slowing in many regional purchasing managers' surveys suggest that the national survey will show only moderate growth in factory conditions, as manufacturers cope with inventory accumulation that appears somewhat faster than intended (June 1).
- Reports on May sales from auto manufacturers and major retailers should show a continuation of robust spending, judging from weekly sales indexes and reports that auto incentives have spurred a heavy volume of transactions (June 1 through June 4).

Economic Releases and Other Events

			Estimate		
Date	**Time**	**Indicator**	**GS**	**Consensus**	**Last Report**
Mon Jun 1	10:00	National Purchasing Managers Index (May)	53.5%	52.8%	52.9%
	10:00	Construction Spending (Apr)	+1.7%	+0.3%	-0.5%
		Domestic Motor Vehicle Sales (May)	13.5M	13.3M	13.4M
Tue Jun 2	10:00	New Home Sales (Apr)	+2.7%	+0.6%	-5.0%
	10:00	Leading Indicators (Apr)	-0.2%	-0.1%	+0.2%
Thu Jun 4	10:00	Factory Orders (Apr)	+1.7%	+0.4%	+0.3%
	10:00	Nonfarm Productivity (Q1 '98—Revised)	+0.7%	n.a.	+0.2%
Fri Jun 5	8:30	Civilian Unemployment Rate (May)	4.3%	4.5%	4.3%
	8:30	Nonfarm Payroll Employment (May)	250,000	213,000	262,000
	8:30	Average Hourly Earnings (May)	+0.3%	+0.3%	+0.3%
	3:00	Consumer Credit (Apr)	+$5.0 Bil	+$4.0 Bil	+$1.0 Bil

- **Chain-Store Sales Results (Thu, Jun 4)**

Interest Rates: Forecast vs. Forward Yields

	3 mo	6 mo	12 mo
LIBOR 3 mo	5.8%	5.9%	6.2%
Forward	5.7	5.8	5.8
2 Yr T-Note	5.6	5.8	6.2
Forward	5.6	5.6	5.6
10 Yr T-Note	5.7	5.9	6.2
Forward	5.6	5.6	5.7

Key Numbers in the Business Outlook

	1998				
	Q1	Q2E	Q3E	1997	1998E
Real GDP	4.8%	3.0%	3.3%	3.8%	3.5%
Ind. Prod., Mfg.	1.8	1.0	4.6	5.6	4.1
CPI	0.5	1.3	2.3	2.3	1.5
After-Tax Profits*	7.2	6.6	3.2	9.6	5.4
Unemployment	4.7	4.3	4.4	5.0	4.4

* Excluding inventory profits; adjusted for depreciation distortions.

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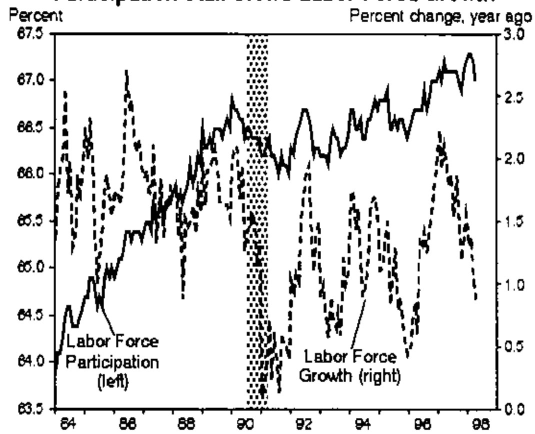
U.S. Economics Analyst

Labor Market in the Inflationary Danger Zone

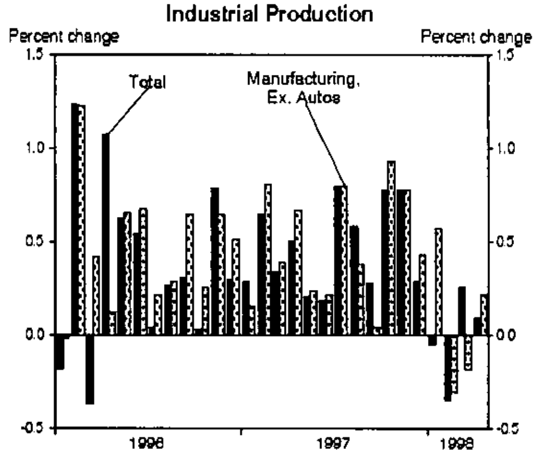
- An increasing number of labor market indicators are flashing warning signs of exceptional tightness. Meanwhile, labor compensation costs, whether measured by the employment cost index or average hourly earnings, are gaining momentum. It appears that these pressures are becoming fairly diffuse across occupational and industry groups. Moreover, the damping effect of benefit costs on the overall ECI is dissipating.
- A stall in labor force participation over the past year elevates the risk that this upswing in business expenses will persist. In the past, an intersection of slow labor force expansion with a tight labor market has usually foreshadowed a more aggressive competition for workers and a faster climb in compensation expenses.
- The economic news is also increasing the pressures on Fed officials to tighten monetary policy. In particular, the April retail sales report indicates that consumer spending remains robust and the rebound in manufacturing output last month suggests that this strength may be overwhelming the trade drag from Asia. Also, the PPI and CPI reports were less favorable, which suggests that inflation may be bottoming out. As a result, the hawks are likely to actively press their case for an early tightening of monetary policy at the May 19 FOMC meeting.
- However, Chairman Greenspan is likely to prevail and keep policy steady, given the turmoil in Asia, the still-benign inflation climate, and the fact that he has not yet prepared the markets for a tightening. The cost of maintaining the status quo could be a commitment by the Chairman to begin to prepare the markets for a tightening at some point.

Participation Stall Slows Labor Force Growth



Source: Department of Labor.

Industrial Production



Source: Federal Reserve Board.

Trade Recommendations

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Contributors: Bill Dudley, Ed McKelvey, John Youngdahl, Alex Patelis (212) 902-6807

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Issue No: 98/19
May 15, 1998

I. Weekly Wrapup

Economic and Market Overview

Bond yields have fluctuated within a narrow range this week, caught between renewed Asian turmoil and fears of Fed tightening, while equity prices scaled new heights at midweek. Most recent economic data, meanwhile, support the notion that a tightening in monetary policy might soon be appropriate.

For the first time in a while, the data on producer and consumer prices surprised markets on the high side. In the case of producer prices, the culprits were food and tobacco prices, which rose 0.4% and 3.4% in April, respectively. Largely due to these increases, both the total and the core indexes for finished goods were up 0.2% on the month. Even so, the producer price data show no systematic evidence of rising inflation in the goods sector; core indexes for finished and partly processed goods are both within spitting distance of their year-earlier levels.

The story is a bit less sanguine for consumer prices, which rose 0.2% overall and 0.3% excluding food and energy in April. Although tobacco prices were once again a factor (+3.8%), increases of 0.4% apiece for medical care and owners' equivalent rent were also surprisingly firm, offsetting an unexpected 0.1% dip in apparel prices. On a year-to-year basis, the April data extend the sharp divergence that has emerged between the trends in goods inflation, which is still moving down, and services inflation, where a modest upward turn is now discernible.

Meanwhile, the government's retail sales report for April confirmed earlier indications from major chain stores that consumer spending is on a solid upward track, as outlays rose 0.5% both overall and excluding motor vehicles. Stripping out purchases of autos, building materials (because they are intermediate products), and gasoline (because they have been dominated by price changes lately), spending in April was up 5% annualized from its first-quarter average.

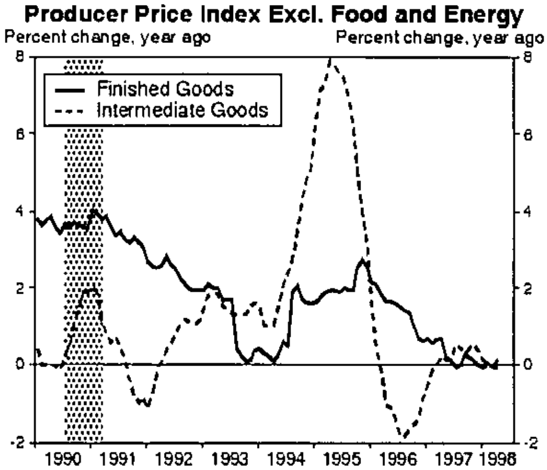
Finally, the industrial production report for April indicated that the domestic economy may be winning the tug-of-war with Asia. Although industrial production advanced just 0.1%, manufacturing output was much firmer (+0.3%) as a sharp fall in utilities output (-1.9%) restrained overall output.

Federal Reserve Policy

Rumors that three FOMC members dissented at the panel's March 31 meeting will probably prove to be unfounded when the minutes of that session become public on May 21; it is more likely that the decision to reinstate the biased directive mollified the FOMC's hawks. However, the rumors underscore not only the market's heightened sensitivity to Fed policy making but also the mounting tensions within the Committee. Most of the data released since the March meeting suggest that any slowing in growth due to the Asian crisis has been confined to the factory sector, and the most recent data suggest that the slowdown there may be ending. This news, along with hints of a climb in services price inflation, will undoubtedly embolden the policy hawks.

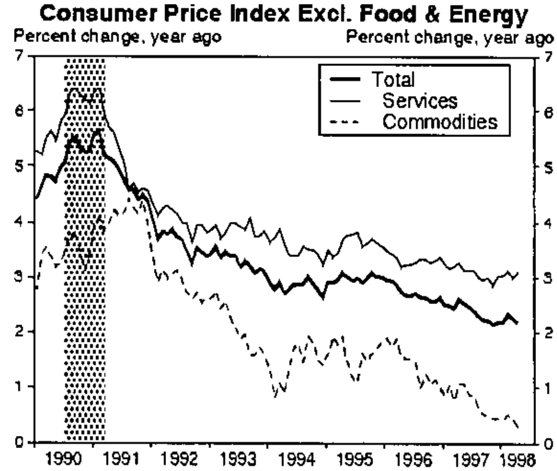
However, the governing fact in gauging what the FOMC is likely to do is Chairman Greenspan's

Producer Price Index Excl. Food and Energy



Source: Department of Labor.

Consumer Price Index Excl. Food & Energy



Source: Department of Labor.

refusal to add his voice to the chorus of worrisome comments coming from central bank officials, despite plenty of opportunities to do so. The fact that he has held his tongue suggests that his strategy is one of tactical retreat, with the hope that signs of softer growth may ultimately take the Fed off the hook. In the end, we expect that he will prevail in keeping rates unchanged at this session, although the price of that victory may well be that he commits himself to deliver a warning soon to the financial markets. Thus, the Chairman's public appearances should be monitored especially closely in the weeks ahead.

Fiscal and Political Developments

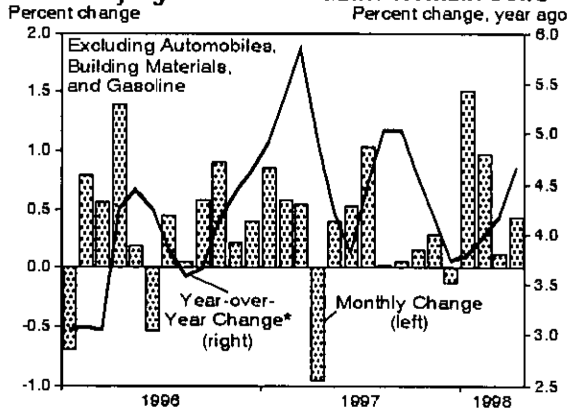
The inertia of Congressional gridlock suggests that a policy of passive fiscal restraint may persist despite the move of the budget into surplus. This can be seen in the fact that Representative John Kasich (R-OH), Chairman of the House Budget Committee, has yet to put forward a budget resolution, which was due to have been adopted a month ago today. Evidently, he is having difficulty mustering support within the Republican caucus for the spending cuts needed to finance the tax cuts he would like to incorporate in the resolution. If he does not succeed in resolving this impasse soon, the need to begin working on specific appropriation and tax bills will probably force the House to accept the Senate's version of the resolution, and forego significant tax cuts this year.

Market Outlook and Comments on Value

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

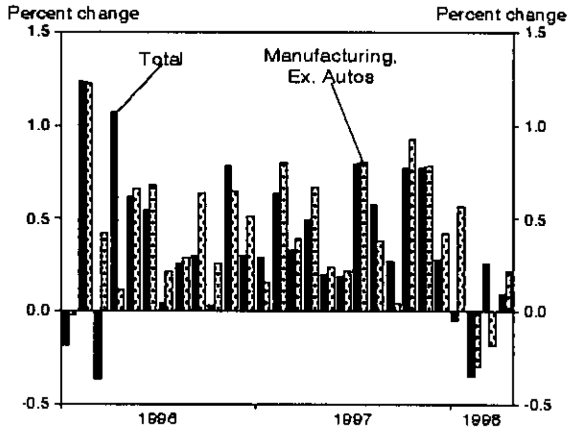
Although the market could stage a small relief rally if the FOMC maintains the status quo on May 19 as we expect, we would stick with our short position in the June '99 Eurodollar futures contract. First, the minutes to the March meeting, which will be released on May 21, could make it clear that the pressures for tightening are continuing to ratchet up quickly. Second, once the blackout period ends, Chairman Greenspan could step forward with the type of pointed remarks that would prepare the markets for a tightening. Third, if we are wrong and the Fed does tighten, the sell-off in this contract is likely to be much greater than any rally if policy is kept unchanged because very little tightening is currently priced in. Our target remains 93.50, with a stop on a close above 94.30. On the long end, we remain neutral, but would have a bias toward getting short should the market rally sharply after the FOMC meeting.

Underlying Retail Sales Gains Remain Solid



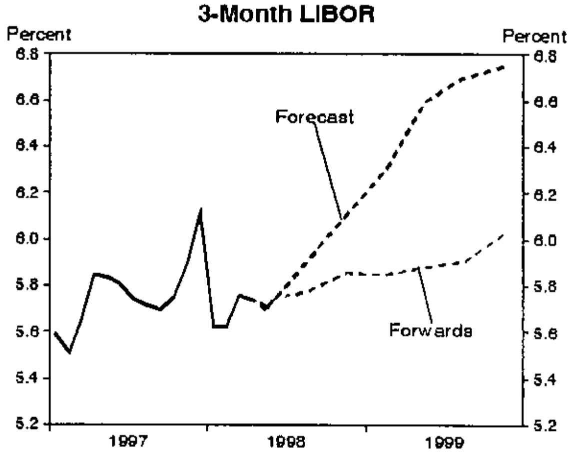
*3-month moving average
Source: Department of Commerce.

Industrial Production



Source: Federal Reserve Board.

3-Month LIBOR



Source: International Financial Statistics, Bloomberg.

II. Labor Market in the Inflationary Danger Zone

U.S. financial asset markets breathed a huge sigh of relief on April 30, when the Department of Labor's quarterly employment cost index showed a 0.7% rise in total compensation expenses between December and March, down from an average 0.9% gain over the prior two periods. Analysts had feared a much larger increase, and many took this news to mean that labor costs are not gaining strength despite unusually low and declining joblessness. This judgment, in turn, triggered a steep drop in forward short-term interest rates, as investors ratcheted down the probabilities assigned to future Federal Reserve monetary tightening.

In our view, the markets have assigned far too much weight to the modest one-quarter change in the adjusted ECI for the purpose of judging current trends in pay awards. The bulk of recent evidence, in fact, continues to suggest a steady rise in the degree and breadth of underlying wage and benefit cost growth amid an intensifying squeeze on labor supplies. Perhaps the most ominous development has been a sustained slowdown in labor force growth, a condition that in the past has been a reliable harbinger of an appreciable wage upturn when labor markets are already tight. We believe, therefore, that Fed officials should and will remain on high alert for any statistical or anecdotal signs that a buildup in compensation expenses is pushing firms to adopt more aggressive pricing behavior.

Markets Misread First-Quarter ECI Figures

While the 0.7% first-quarter change in the seasonally-adjusted ECI for total compensation was lower than we and others had anticipated, the report as a whole does not indicate that central bankers and others can relax about the effects of labor scarcity on wage determination. To the contrary, the year-to-year changes in most ECI series—which are smoother, more statistically reliable measures than annualized quarterly data—continue to gain altitude. Private wages and salaries climbed 4.0% in the latest four quarters, up from 3.4% in the 12 months ending March 1997 and 3.2% in the prior year. As can be seen in the table at right, the recent wage acceleration is even more pronounced (to 4.0% from 3.1%) after excluding sales workers, whose compensation fluctuates with irregular commission incomes. Across different occupational groups, there continues to be some skewing in pay gains toward white-collar positions (4.2% versus 3.2% a year earlier), but blue-collar workers also are now enjoying a modest wage upturn (3.3% compared to 2.9%). It is noteworthy as well that all major non-sales occupational classes have experienced faster wage and salary increases in the past four quarters than in the prior two years.

ECI Wages and Salaries, by Industry Type
(March-to-March percent change, not seasonally adjusted)

	1996	1997	1998
Total Private, Excluding Sales	3.1%	3.1%	4.0%
Construction	3.0	3.1	3.3
Manufacturing			
White-Collar	2.9	2.6	3.5
Blue-Collar	3.2	3.1	3.4
Service			
White-Collar	3.2	3.4	4.4
Blue-Collar	2.9	2.7	3.3

Source: Department of Labor.

A widening diffusion of firmer wage trends across industries is also apparent. Not only did service-producing firms hike wage and salary growth substantially in the past year (to 4.4% excluding sales, from 3.4%), but faster gains also occurred within the goods-producing sector. Non-sales manufacturing wage gains strengthened 0.6% to 3.5% over the latest four quarters. Both white- and blue-collar factory workers have been getting larger pay raises, with durable and nondurable producer firms alike boosting awards. Construction workers also are

ECI Wages and Salaries, by Occupational Type
(March-to-March percent change, not seasonally adjusted)

	1996	1997	1998
Total Private, Excluding Sales	3.1%	3.1%	4.0%
White-Collar, excluding Sales	3.2	3.2	4.2
Professional Specialty and Technical	3.3	2.5	3.7
Executive, Administrative, and Managerial	3.3	4.1	5.2
Administrative Support, Including Clerical	2.9	3.2	3.6
Blue-Collar	2.9	2.9	3.3
Precision Production, Craft, and Repair	3.0	2.8	3.2
Machine Operators, Assemblers, and Inspectors	3.2	3.1	3.5
Transportation and Material Moving	2.6	1.9	2.9
Handlers, Equipment Cleaners, Helpers, and Laborers	3.4	3.4	3.7

Source: Department of Labor.

seeing slightly firmer wage growth, at 3.3% compared to 3.1% a year earlier.

The average hourly earnings data in the payroll employment report conform closely with this ascending pattern in the year-to-year ECI figures. Using data adjusted by the Bureau of Labor Statistics to remove variance related to the number of business days in the reporting period (which will become the official methodology next month), average hourly earnings are rising at a 4.1% year-on-year pace, up from 3.6% a year ago. Since the end of 1997, this series has strengthened further, to 4.6% annualized.

Benefit Costs Losing Suppressive Influence

Thus far, as private sector wage pressures have built up, there have been two main mitigating factors for the overall ECI compensation results: (1) slow growth in public-sector wages, and (2) low and stable benefits cost inflation. The first of these is still very much present; year-to-year changes in state and local government worker compensation have been holding steady at around 2.5%. Benefits, however, are fading as a suppressive influence on the ECI, and by 1999 they could well.begin to exert an upward tug.

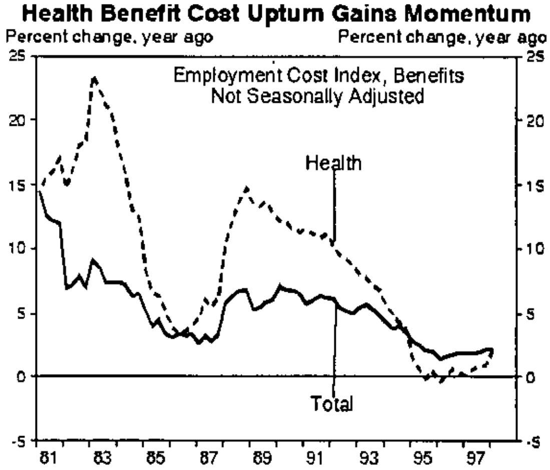
Though total benefit costs thus far have remained under control (up 2.2% year-to-year in March), they are likely to gain speed due to a sharp upswing in the roughly one-third portion comprised by healthcare insurance. The ECI for health benefits has already strengthened notably, to 2.2% year-to-year last quarter following three years of approximate stability. Numerous surveys of benefits consultants have revealed expectations of sharply escalating health insurance charges, with some large providers already jacking up their quotes for 1999 by double-digit percentages in an effort to rebuild profitability. A pickup in health benefits cost growth into a 5.0%-7.0% range over the next year would single-handedly raise the trend in annual ECI gains by about 0.3%.

Meanwhile, the Labor Market Is Still Tightening

As if these signs of intensifying and spreading labor cost pressures were not enough, central bankers and market participants also are faced with fresh evidence that labor is becoming progressively scarcer. The number of civilian jobless persons plunged 670,000 during April, driving the unemployment rate down 0.4% to 4.3%, the lowest since February 1970. Although a sizable amount of this huge decline can be attributed to a steep drop in the labor force, most of it appears genuine and durable. Moreover, there have been numerous other indications that the labor market continues to tighten. For instance, respondents to the Conference Board's monthly poll of consumers report the greatest degree of job availability in the over-31-year history of that survey question. The last time that perceptions of job availability came close to the current lofty territory was in 1969, when the national jobless rate hovered around 3½%. Additionally, the total number of state unemployment insurance claimants has fallen more than 5% in the past four months alone, and the ratio of beneficiaries to the insured population (1.8%) is at an all-time low.

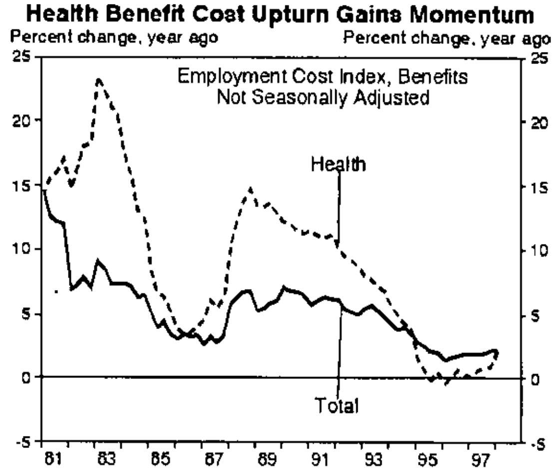
Within the household survey of the civilian population, indications of extreme labor scarcity are rife. Among married persons with a spouse present, the unemployment rate last month hit 2.5%, a depth not plumbed for almost three decades. Joblessness for people with a high-school diploma but lacking a

Health Benefit Cost Upturn Gains Momentum



Source: Department of Labor.

Health Benefit Cost Upturn Gains Momentum



Source: Department of Labor.

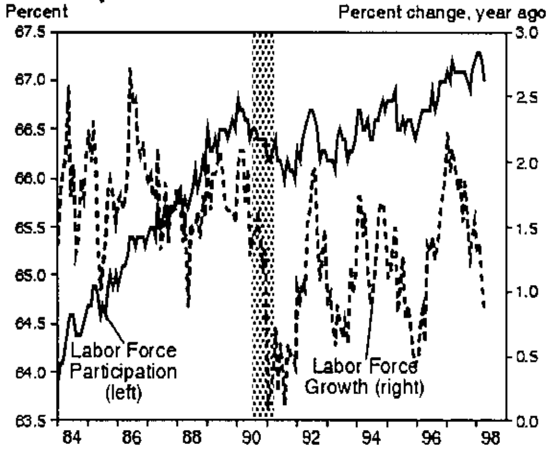
college degree is down to only 3.3%. The number of persons working part-time due to economic factors has fallen 14.3% over the past year, or by 625,000. There also has been a substantial decline in the average and median durations of unemployment, particularly due to a falloff in long-term unemployment. The number of persons who have been out of work for 15 weeks or more is down almost one-third in the past year, with the bulk of that decline occurring in just the past four months.

Labor Force Stagnation an Ominous Development

What makes these heightened constraints on worker supplies especially worrisome is the unusually slow recent growth trend in the volume of people holding or actively seeking a job. Between the fourth quarter of 1995 and the first quarter of 1997, the labor force grew at an annual rate of slightly more than 2.0%, as strong demands for employees fostered rising labor market participation among the working-age population. Since last spring, however, the participation rate has been stuck just above 67.0%, and consequently labor force growth has progressively slowed, to just 0.9% for the latest 12 months. The upshot of this leveling off in participation has been a rapid absorption of the unemployed and people marginally attached to the labor market into the work force. Since April 1997, the combined number of unemployed and discouraged persons plus those who work part-time for economic reasons has plummeted as a percentage of the labor force plus marginally attached persons, to 7.7% from 9.0% on an unadjusted basis. That is more than twice the net decline in the unadjusted unemployment rate.

Our analysis suggests that the periods of maximum risk for an acceleration in labor compensation arise when a tight labor market intersects with slower-than-normal labor force growth (see "Labor Supply Growth Key to Compensation Prospects," *U.S. Economics Analyst*, October 3, 1997). In those intervals, employers are forced to compete more actively for workers within the existing labor pool, rather than relying on new entrants, and that can foster an increased willingness to grant outsized wage boosts. Judging from the latest information, the U.S. economy may well have entered just such a phase, which could generate an even more powerful upward push on real wages than what has been seen to date. That would have the twin effects of: (1) heightening pressure on businesses to defend profit margins by lifting prices, and (2) providing a firmer earnings underpinning for household demands to be sustained in the face of small interest rate increases.

Participation Stall Slows Labor Force Growth



Source: Department of Labor.

Implications for Financial Markets

Federal Reserve officials are likely to view the latest signs of increasing constraints on labor supplies and gradually escalating compensation growth with considerable concern. In particular, the expanding breadth of the wage pickup and indications that labor force participation is close to an upper bound for the time being suggest a serious and widening imbalance between demand and supply in this crucial resource market. A furtherance of these trends would risk allowing inflationary forces to once again take root in the economy, which could force the Fed into adopting a restrictive policy course that ultimately might threaten to choke off growth completely.

The effects on prices from changes in compensation awards typically manifest themselves only slowly, and they can be mitigated or offset for a time by other influences, such as productivity gains, narrower profit margins, or foreign demand and pricing shocks. As long as inflation remains well contained, therefore, we expect the Fed to react to the labor squeeze very cautiously, with nothing more than a slight tightening (25 or 50 basis points) over the next several quarters. If, however, it were to turn out that companies could post and sustain price advances to protect profit margins against encroachment from labor expenses, then a far more aggressive interest rate hike than is now contemplated in the forward interest rate structure might well ensue.

John Youngdahl

Key U.S. Economic Data

	Latest Monthly Data '98 Apr	'98 Mar	'98 Feb	'98 Jan	6 Mo Trend	12 Mo Trend	Next Release
Nonfarm Payrolls (ch. thousands)	262	-24	259	399	280	258	Jun 5
Unemployment Rate (%)	4.3	4.7	4.6	4.7	4.6	4.7	
Index of Hours Worked (% ch)	-0.4	-0.7	0.6	0.8	2.4	2.4	
Average Hourly Earnings (% ch)	0.3	0.3	0.6	0.3	4.4	4.4	
Producer price finished goods index (% ch)	0.2	-0.3	-0.1	-0.7	-2.3	-1.2	Jun 12
Excluding food and energy	0.2	0.0	0.1	-0.1	0.3	0.1	
Consumer price index (% ch)	0.2	0.0	0.1	0.0	1.0	1.5	Jun 16
Excluding food and energy (% ch)	0.3	0.1	0.3	0.2	2.5	2.2	
Retail sales (% ch)	0.5	0.0	0.9	1.0	6.5	5.2	Jun 11
Excluding motor vehicles (% ch)	0.5	0.0	0.8	1.4	5.4	4.8	
Industrial Production (% ch)	0.1	0.3	-0.3	-0.1	2.0	3.8	Jun 16
Manufacturing	0.3	-0.2	-0.3	0.2	2.8	4.3	
Capacity utilization (%)	81.9	82.2	82.3	82.9	82.6	82.6	Jun 16
Manufacturing	80.8	81.0	81.5	82.0	81.7	81.6	
Housing Starts (annual rate, thousands)	--	1590	1635	1545	1560	1508	May 19
Single-family	--	1238	1269	1225	1192	1159	
Trade balance (billions, monthly)	--	--	-12.1	-11.6	-10.6	-9.7	May 20
Merchandise	--	--	-18.6	-18.3	-17.6	-16.7	
Factory Orders (% ch)	--	0.3	-0.7	0.6	0.0	4.7	Jun 4
Durable Goods	--	0.5	-0.9	1.6	0.6	7.4	May 28
Personal Income (% ch)	--	0.3	0.6	0.5	6.5	5.4	May 29
Wages and Salaries	--	0.2	0.9	0.7	8.7	6.9	
Purchasing Managers' Index (%)	52.9	54.8	53.3	52.4	53.5	54.8	June 1
Consumer Sentiment U Mich (Feb 66=100)	108.7	106.5	110.4	106.6	106.9	106.0	May 29
Conference Board (1985=100)	136.7	133.8	137.4	128.3	133.4	130.5	May 26

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 the FOMC meeting is apt to be a contentious affair, in the end we expect no change in interest rates (May 19). Minutes from the last meeting, when reportedly a formal bias toward possible tightening was reinstated, may be instructive as to how wide are the divisions of views among policy makers (May 21).
- Housing starts probably stayed at very high levels in April, reflecting low inventories and indications of strong demand. For example, the Mortgage Bankers Association's index of applications for home purchase loans was up almost 40% in April from its year-earlier level (May 19).
- Some narrowing in the trade balance is likely in March, due to a rebound in exports, declines in energy prices, and the disappearance of Olympics-related effects that boosted the February deficit (May 20).

Economic Releases and Other Events

Date	Time	Indicator	Estimate: GS	Estimate: Consensus	Last Report
Tue May 19	8:30	Housing Starts (Apr)	+1.0%	-1.3%	-2.8%
Wed May 20	8:30	Trade Balance (Mar)	-$11.0 Bil	-$11.9 Bil	-$12.1 Bil
Thu May 21	10:00	Philadelphia Fed Survey (May)	+12.0%	n.a.	+13.4%
	2:00	Federal Budget Balance (Apr)	+$118.0 Bil	+$115.0 Bil	+$93.9 Bil

- Home Builders' Survey (Mon, May 18)
- FOMC Meeting (Tue, May 19)
- Kansas City Fed Survey (Wed, May 20 - 11:00)
- Treasury Announces 2- and 5-Year Notes (Wed, May 20 - 2:30)
- March FOMC Minutes (Thu, May 21 - 2:00)
- Treasury 1-Year Bill Auction (Thu, May 21)

Interest Rates: Forecast vs. Forward Yields

	3 mo	6 mo	12 mo
LIBOR 3 mo	5.8%	5.9%	6.2%
Forward	5.8	5.8	5.9
2 Yr T-Note	5.6	5.8	6.2
Forward	5.7	5.7	5.7
10 Yr T-Note	5.7	5.9	6.2
Forward	5.7	5.7	5.8

Key Numbers in the Business Outlook

	1998 Q1	1998 Q2E	1998 Q3E	1997	1998E
Real GDP	4.2%	3.0%	3.3%	3.8%	3.5%
Ind. Prod., Mfg.	1.8	1.0	4.6	5.6	4.1
CPI	0.5	1.3	2.3	2.3	1.5
After-Tax Profits*	7.9E	6.6	3.2	9.6	5.4
Unemployment	4.7	4.3	4.4	5.0	4.4

* Excluding inventory profits; adjusted for depreciation distortions.

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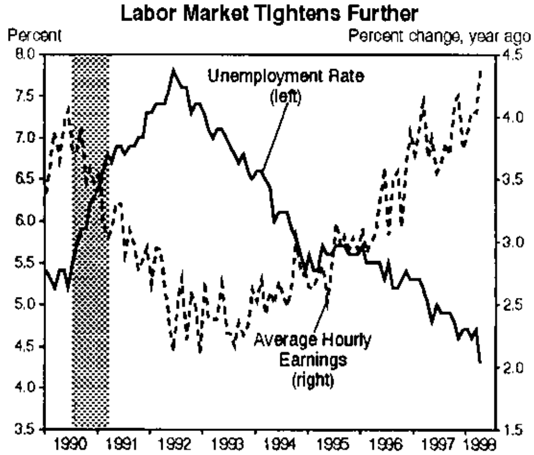
U.S. Economics Analyst

The Equity Risk Premium and the Economy

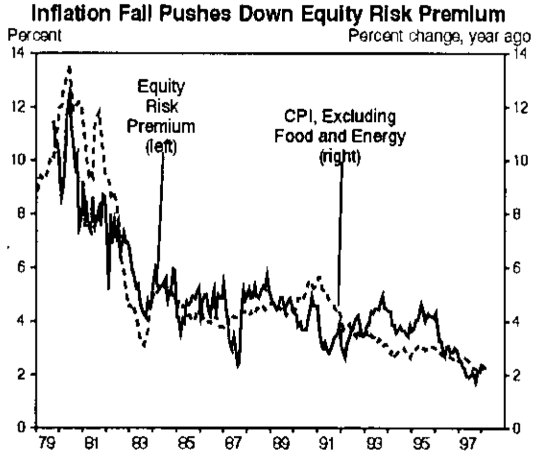
- The domestic economy remains robust, with auto and chain-store sales both firm in April. Meanwhile, the labor market has tightened further. In particular, the unemployment rate fell sharply in April to 4.3%, and average hourly earnings are now rising 4.4% year-over-year.
- Although the hawks on the FOMC will undoubtedly pressure Chairman Greenspan to tighten monetary policy at the May 19 meeting, no change in monetary policy is likely for a few more months. Greenspan will probably cite the absence of inflation pressures and uncertainty about the persistence of the trade drag from Asia as reasons to stand pat for now.
- The equity risk premium has been shrinking, helping to push equity prices sharply higher. Low inflation, less volatile earnings, and improved earnings visibility all suggest that a lower equity risk premium is appropriate.
- At the same time, the decline in the size of the equity risk premium may have about run its course. In particular, investors may already be too optimistic in their assessment of future expected returns. After all, a narrower equity risk premium implies lower expected returns, all else equal. To the extent that expectations are based on past performance, there is room for disappointment.
- Moreover, the economic environment is unlikely to improve much further. Rising compensation costs and slower productivity growth imply either gradually higher inflation or slower profit growth over time.

Labor Market Tightens Further



Source: Department of Labor.

Inflation Fall Pushes Down Equity Risk Premium



Source: Department of Labor. Goldman Sachs.

Trade Recommendations

- Go short the June '99 Eurodollar futures contract (currently 94.17), with a stop on a close above 94.30 and a target of 93.50.

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Issue No: 98/18
May 8, 1998

I. Weekly Wrapup

Economic and Market Overview

Indications of unrelenting strength in U.S. economic activity have put pressure on U.S. financial asset prices in recent days, as the risks of an eventual monetary policy tightening increase.

The latest job report shows that the trend in net hiring remains at an unsustainable pace. Nonfarm payrolls rose 262,000 in April, helped to only a modest degree by favorable weather; over the past six months, this gauge of labor demand has risen 280,000 per month on average. Meanwhile, the labor force fell, dragging the unemployment rate down to 4.3%, a 28-year low. In all likelihood, data in coming months will indicate that the jobless rate is not quite as low as 4.3%, but also not as high as the previous 4¾% plateau. Setting aside sharp declines in the workweek, which were distorted by the fact that Easter fell in the survey week, the only softness in the report was the modest setback in factory payrolls, reflecting ongoing efforts to curb inventory accumulation.

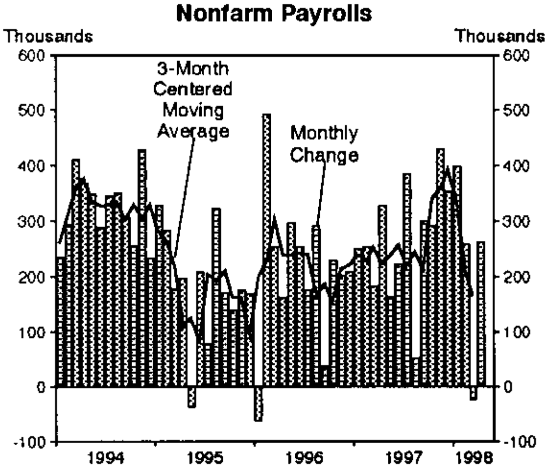
This correction should not last too long, judging from the latest spending data. Outlays maintained strong upward momentum through April, implying that last quarter's surge was more genuine and less tied to favorable weather. The Goldman Sachs Retail Index of same-store sales results recorded a 10.2% year-to-year jump last month, the largest gain in over four years. Easter's late timing clearly inflated the figures, but even when smoothed the index is displaying acceleration. Motor vehicle dealers also enjoyed solid demands last month, as combined sales of cars and light trucks hit an annual pace of 15.6 million units, the highest since last summer. As a result of these reports, we have boosted our estimate of second-quarter real GDP growth to 3.0% from 2.0%.

Despite last quarter's sharp rise in output, nonfarm business productivity growth stalled, rising a scant 0.2% at an annual rate and pulling the year-to-year trend down to 1.9%. As labor compensation gains have remained sturdy, unit labor costs have picked up a bit, to 2.2% year-on-year. Although quarterly data will undoubtedly remain volatile, it seems likely that the productivity trend will weaken further as domestic output slows and robust output-per-hour results from last year's second and third quarter (2.3% and 3.6%, respectively) recede into the past. That should sustain upward pressure on unit labor costs, with potential deleterious influences on corporate profitability.

Federal Reserve Policy

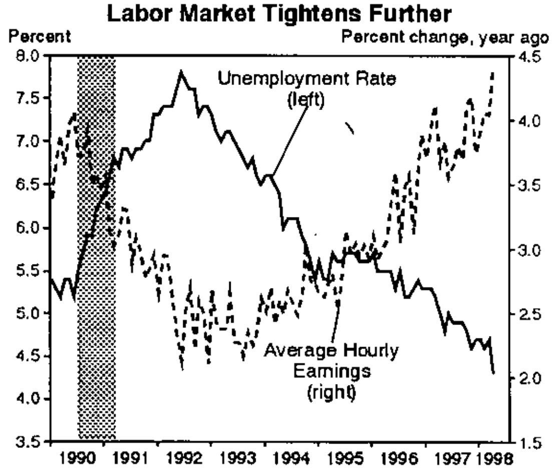
The FOMC will almost certainly leave interest rates unchanged after its meeting on May 19, notwithstanding members' anxieties about the unrelenting strength of domestic demand and their vertiginous feelings about current stock market valuations. There are still many unresolved questions about the effects of Asian economic problems on U.S. business conditions: The latest trade statistics available at the meeting will date from February, and recent weakening in Japan raises the specter of fresh difficulties. The Fed will be in a much better position to assess these influences later in the year. Exceptionally low inflation, meanwhile, gives Chairman Greenspan wide latitude for patience with a

Nonfarm Payrolls



Source: Department of Labor.

Labor Market Tightens Further



Source: Department of Labor.

tightening labor market situation and proliferating signs of upward-creeping compensation costs. However, we would expect Fed officials to continue slanting their rhetoric in a cautionary direction over the weeks ahead, in part out of a desire to prevent a speculative surge in equity prices that might fuel an unwanted further explosion in spending.

Fiscal and Political Developments

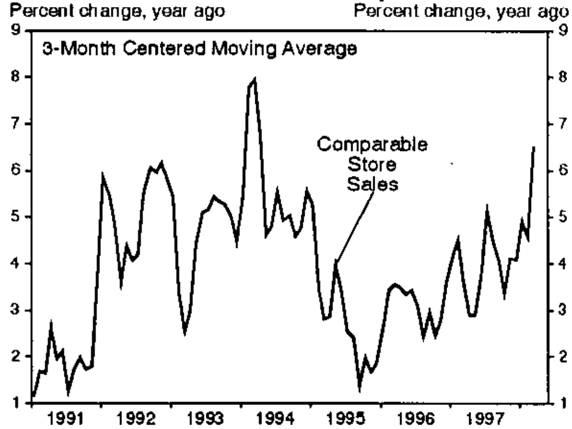
The U.S. Treasury has unveiled a new borrowing structure that will materially reduce both the volume and frequency of coupon debt sales, particularly in the intermediate maturity zone. Beginning next quarter, the quarterly 3-year note cycle will be canceled, and the 5-year note series will be sold quarterly instead of monthly. These changes, which we had advocated, will have a number of beneficial effects on federal funding and cash management. First, they will enable a restoration of some of the steep supply cuts in T-bills, which had progressively damaged investor participation in that sector. Second, they will permit debt managers to enlarge the average coupon issue size, and the resulting liquidity enhancements should buttress the benchmark status of Treasury securities in the global fixed-income marketplace. Third, the new schedule holds the prospect of a better match between the timing of auction settlements and cash needs related to coupon interest and debt repayment obligations, which are concentrated in the middle of each quarter. Finally, these reforms were fashioned so as to shorten the average maturity of the Treasury's debt only slightly over the next two years, merely reversing the 3-month extension that recently occurred as a consequence of the T-bill supply contraction.

Market Outlook and Comments on Value

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

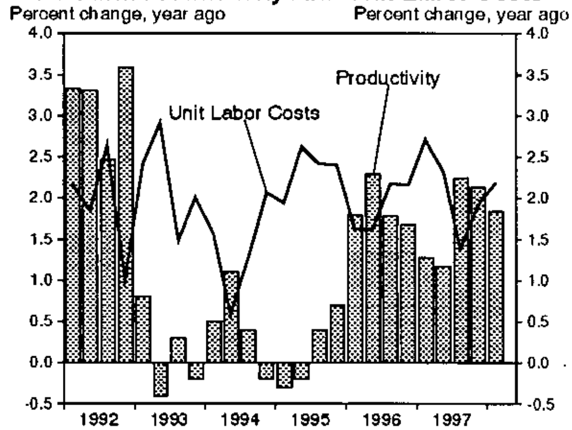
Given the growing pressures on Fed officials to tighten monetary policy, we would get short the June '99 Eurodollar futures contract at the current level (94.17). Although tightening is not imminent, it would not take much more evidence for Chairman Greenspan to decide that it is now time to put the market on notice. At current levels, the market has priced in virtually no tightening over the next year. Our target would be 93.50 and we would maintain a stop on a close above 94.30. On the long end, we remain neutral, stuck close to the middle of the 5¾%-6¼% range that we have been using for the 30-year Treasury bond yield.

Goldman Sachs Retail Composite Index



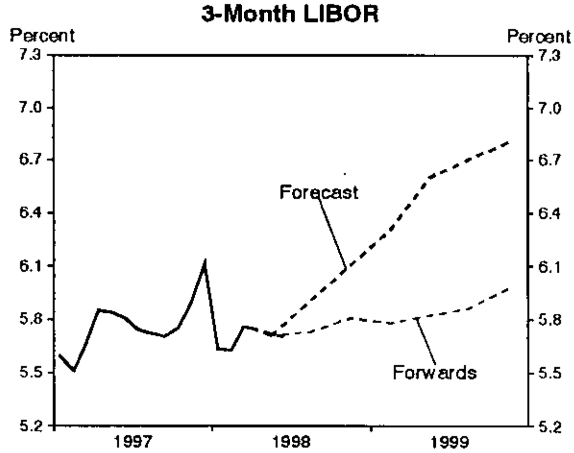
Source: Goldman Sachs.

Nonfarm Productivity And Unit Labor Costs



Source: Department of Labor.

3-Month LIBOR



Source: International Financial Statistics, Bloomberg.

II. The Equity Risk Premium and the Economy

In recent years, the equity risk premium—the expected excess return from holding equities versus long-term Treasuries—has narrowed sharply. This shrinkage in the equity risk premium appears appropriate for three reasons. First, inflation is well-behaved, which reduces the risk of a hostile monetary policy regime and results in higher-quality earnings. Second, earnings have become less volatile as the economic expansion has been sustained. Third, in recent years, equity returns have generally become less volatile relative to bond returns.

The unprecedented level of the stock market has raised concerns that the shrinkage of the equity risk premium and the rise in stock prices has gone too far. Although we find little evidence of this, there are three ways in which the equity risk premium could become too narrow. First, if investors misperceive recent equity returns for what is sustainable over a longer time horizon, then disappointment in equity returns could ensue once the narrowing of the equity risk premium stops. Second, the economic fundamentals could stop improving. This is a real risk because with compensation costs rising and productivity growth likely to slow, either the growth rate of corporate profits should slow or inflation climb. Third, interest rates could climb as Fed officials tighten monetary policy in response to the economic momentum generated by a rising equity market. The historical record, however, indicates that the equity market has typically been quite resistant to modest changes in interest rates. Moreover, given the absence of inflationary pressures, Fed officials have no incentive to embark on the type of hostile monetary policy regime that could cave in the equity market.

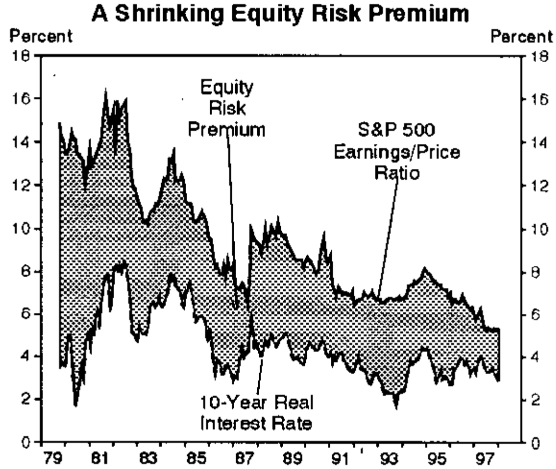
A Narrowing Equity Risk Premium

To measure the equity risk premium, we use the methodology contained in the Federal Reserve's most recent Humphrey/Hawkins report to Congress. In that report, the Fed measures the real expected return on equities as the earnings/price ratio of the S&P 500 index based on I/B/E/S bottoms-up earnings estimates. The real return on 10-year Treasury notes is calculated by subtracting the 10-year inflation expectations from the Philadelphia Federal Reserve Bank's survey of professional forecasters from the nominal 10-year yield. The difference between the two is our estimate of the equity risk premium.[1]

Although not without its own flaws, we view this methodology as far superior to equity risk premium calculations based upon the *ex post* performance of equities versus bonds. That is because when the equity risk premium is shrinking, equities appreciate sharply, causing them to vastly outperform bonds, all else equal. As a result, the resulting equity risk premium calculated from *ex post* returns is overstated. For *ex post* calculations of the equity risk premium to have some validity, the equity risk premium must be stable over time. Unfortunately, there is little evidence that this is the case.

As shown in the chart below, our rough proxy for the equity risk premium has narrowed sharply in recent years, from about 10% in 1980 to about 2% currently. This means that the expected return on equities has also declined dramatically. With nominal yields on 10-year Treasury notes having fallen to about 5¾% currently from around 10% in 1980, the expected nominal return on equities has fallen to about 8% currently from about 20% in 1980. As this has happened, we have experienced a fabulous bull market in equities.

A Shrinking Equity Risk Premium



Source: I/B/E/S International. Federal Reserve Board.

[1] This is only a rough estimate because the gap between the 10-year real yield and the E/P ratio is also affected by shifts in expectations concerning the long-term earnings growth rate. If earning expectations increase, the gap would narrow without this having any implications for the size of the equity risk premium.

Is the Narrowing Appropriate?

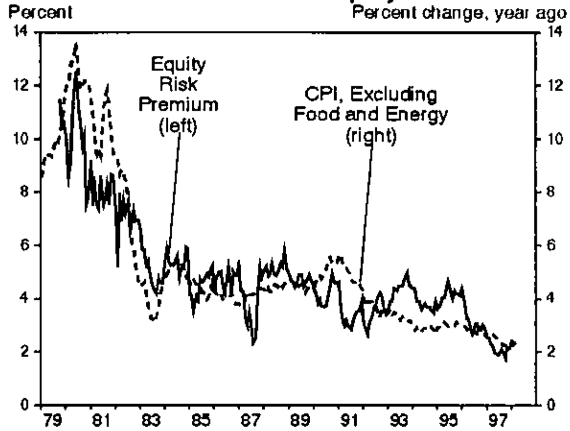
A year ago, we looked at the factors that influence the equity risk premium and concluded that ". . . the sharp and sustained appreciation of equity prices in recent years has a more solid foundation than generally realized . . . continued economic expansion could lead to a further shrinkage in the equity risk premium relative to bonds."[2]

The factors that caused us to be optimistic that the equity risk premium could shrink further are still in place. Just-in-time inventory management, trade liberalization, more flexible labor and capital markets, and financial market deregulation have reduced the incidence of recession. For example, over the past 15 years, the economy has been in recession less than 5% of the time, compared to about 25% of the time over the prior thirty years.

Moreover, inflation is unusually docile. This is important because we find that fluctuations in the size of our proxy for the equity risk premium can best be explained by changes in the inflation rate. As shown in the accompanying chart, the equity risk premium moves closely with inflation, with a decline in inflation leading to a lower equity risk premium and a stronger stock market. This makes sense because when inflation is low, the risk of a stringent monetary policy regime that could cause a recession is diminished. Also, when inflation is low, earnings quality tends to be higher. Earnings are not artificially boosted by inventory-related accounting gains caused by rising prices.

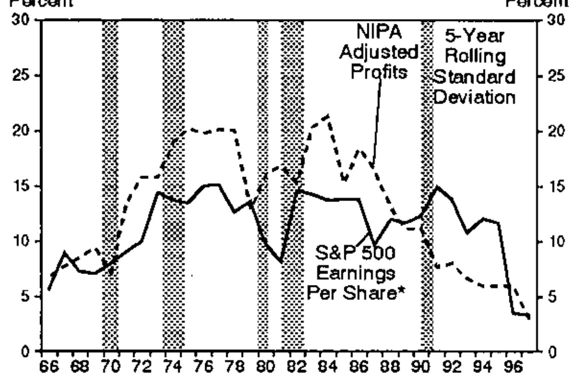
The fact that the macroeconomy is more stable has helped to shrink the equity risk premium by dampening earnings volatility and improving earnings visibility. As shown in the accompanying chart, earnings volatility has continued to fall. Moreover, aggregate earnings have come in remarkably close to consensus forecasts. As illustrated in the accompanying chart, I/B/E/S estimates and the actual operating S&P 500 EPS have been very close in recent years. Thus, we continue to conclude that the shrinkage of the equity risk premium that has occurred to date has generally been appropriate given the excellent economic fundamentals.

Inflation Fall Pushes Down Equity Risk Premium



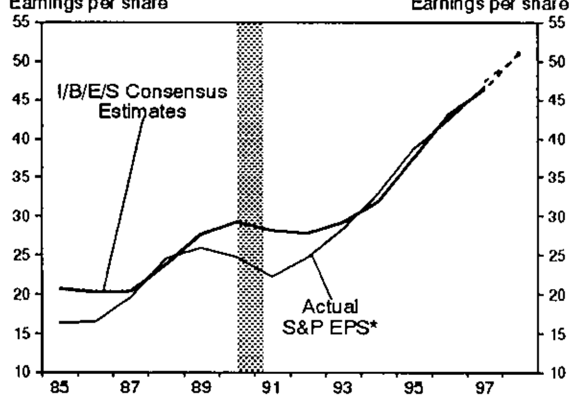
Source: Department of Labor, Goldman Sachs.

Earnings Volatility Declining



*Based on operating earnings. Data before 1985 based on reported earnings.
Source: Department of Commerce, Goldman Sachs.

I/B/E/S Estimates vs. Actual Operating EPS



*1998 forecast from Goldman Sachs Portfolio Strategy Group.
Source: I/B/E/S International, Goldman Sachs.

2 See "The Equity Risk Premium and the Brave New Business Cycle", *U.S. Economics Analyst* (February 21, 1997).

Finally, the equity risk premium has shrunk because equity prices have become less volatile compared to bonds in recent years. However, so far in 1998, equity market volatility has increased and bond market volatility has declined. This suggests that this favorable influence may be fading.

How Small is Too Small?

However, there are also good reasons for believing that the fundamentals do not support significant further shrinkage of the equity risk premium. First, the expected returns on equities implied by the current level of the equity risk premium may be quite low relative to what many investors expect to earn holding equities. Some investors may mistake the rapid appreciation of the equity market in recent years for what is sustainable on a longer-term basis.

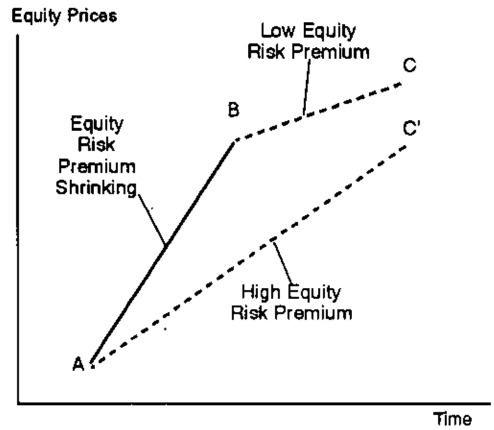
When the equity risk premium is shrinking, the expected return on equities relative to bonds is falling. But, ironically, to reduce the expected return, all else equal, the level of equity prices has to rise sharply. The possibility for error arises if investors base their expectations for future returns based upon the rapid appreciation generated by the shrinking equity risk premium.

As shown in the accompanying chart, if the equity risk premium shrinks, expected returns drop to the path from point B to point C from point A to point C'. The slope of the line between points B to C is flatter than from A to C' because the return is lower. But for the return to be lower, equities first have to climb rapidly from point A to point B. In this chart, C is higher than C' because with a lower equity risk premium, the price/earnings ratio is higher.

The risk is that investors might keep more funds in equities based upon the expectations of continued returns at a pace consistent with the path from points A to B. If this is the case, then there is room for disappointment at some point when returns are lower and equities only rise from points B to C.

A second reason why the fundamentals are unlikely to support further significant shrinkage of the equity risk premium is that the economic environment is unlikely to continue to improve. The last few years have been marked by strong profit growth and declining inflation. With compensation costs now likely to increase at a time that productivity growth is likely to slow, either profit growth should slow or inflation drift higher (or both). The favorable mix of rising profit margins and falling inflation, which has helped to shrink the equity risk premium, is unlikely to persist.

Lower Risk Premium Leads to Higher Prices



Evaluating what is an appropriate equity risk premium (and by extension what the appropriate valuation of the equity market should be) is very difficult. This is particularly true when the equity market is buoyant and the equity risk premium is low. For example, for our rough proxy of the equity risk premium to shrink by one percentage point would imply a 25% shrinkage of the earnings/price ratio and a 25% rise in equity prices, all else equal. This is a bit unsettling given that the equity risk premium has ranged between 2% and 10% over the past twenty years. If estimates of the equity risk premium to within a percentage point are difficult, this means that one should not be very confident about precise estimates concerning how much the stock market is under- or over-valued.

Market Implications

Higher interest rates also pose a potential obstacle for the equity market. However, an examination of past bull markets indicates that the equity market typically is quite resistant to modest changes in interest rates. Only when the Federal Reserve tightens monetary policy sufficiently to threaten the end of the economic expansion do bull markets typically end. Under such circumstances, equities suffer a double-whammy—higher bond yields and a higher equity risk premium. With inflation well-behaved, it is premature to anticipate the type of stringent monetary policy regime that could be expected to terminate the bull market in stocks.

Bill Dudley

Key U.S. Economic Data

	Latest Monthly Data '98 Apr	'98 Mar	'98 Feb	'98 Jan	6 Mo Trend	12 Mo Trend	Next Release
Nonfarm Payrolls (ch. thousands)	262	-24	259	399	280	258	Jun 5
Unemployment Rate (%)	4.3	4.7	4.6	4.7	4.6	4.7	
Index of Hours Worked (% ch)	-0.4	-0.7	0.6	0.8	2.4	2.4	
Average Hourly Earnings (% ch)	0.3	0.3	0.6	0.3	4.4	4.4	
Producer price finished goods index (% ch)	--	-0.3	-0.1	-0.7	-2.7	-1.8	May 13
Excluding food and energy	--	0.0	0.1	-0.1	-0.3	-0.1	
Consumer price index (% ch)	--	0.0	0.1	0.0	0.9	1.4	May 14
Excluding food and energy (% ch)	--	0.1	0.3	0.2	2.4	2.3	
Retail sales (% ch)	--	0.0	0.7	1.0	4.7	3.2	May 13
Excluding motor vehicles (% ch)	--	0.2	0.6	1.4	4.9	3.6	
Industrial Production (% ch)	--	0.2	-0.2	-0.2	3.4	4.3	May 15
Manufacturing	--	-0.2	-0.2	0.0	3.8	4.4	
Capacity utilization (%)	--	82.2	82.3	82.8	82.8	82.7	May 15
Manufacturing	--	80.9	81.5	82.0	81.8	81.7	
Housing Starts (annual rate, thousands)	--	1590	1635	1545	1560	1508	May 19
Single-family	--	1238	1269	1225	1192	1159	
Trade balance (billions, monthly)	--	--	-12.1	-11.6	-10.6	-9.7	May 20
Merchandise	--	--	-18.6	-18.3	-17.6	-16.7	
Factory Orders (% ch)	--	0.3	-0.7	0.6	0.0	4.7	Jun 4
Durable Goods	--	0.5	-0.9	1.6	0.6	7.4	May 28
Personal Income (% ch)	--	0.3	0.6	0.5	6.5	5.4	May 29
Wages and Salaries	--	0.2	0.9	0.7	6.7	6.9	
Purchasing Managers' Index (%)	52.9	54.8	53.3	52.4	53.5	54.8	June 1
Consumer Sentiment U Mich (Feb 66=100)	108.7	106.5	110.4	106.6	106.9	106.0	May 29
Conference Board (1985=100)	136.7	133.8	137.4	128.3	133.4	130.5	May 26

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.

Goldman Sachs

U.S. Calendar

Focus for the Week Ahead

- April's producer and consumer prices are apt to show modest acceleration, as the impact of declines in energy prices wanes. In the PPI (May 13), we look for firmness in food (+0.5%) and tobacco (+1.0%). In the CPI (May 14), gains in apparel and housing costs should be mitigated by softer air fares and vehicle prices.
- Vigorous chain-store gains, slightly above 10% on a year-to-year basis, coupled with a surge in vehicle sales set the stage for a solid increase in the government's retail sales figures for April (May 13).
- Industrial production should remain soft as producers respond to a rise in inventories caused by Asian trade drag by temporarily restraining production. The capacity utilization rate should also slip further (May 15).

Economic Releases and Other Events

Date	Time	Indicator	Estimate GS	Estimate Consensus	Last Report
Wed May 13	8:30	Producer Price Index (Apr)	+0.2%	+0.1%	-0.3%
		Excluding Food & Energy	+0.1%	0.0%	0.0%
	8:30	Retail Sales (Apr)	+0.8%	+0.3%	0.0%R
		Excluding Autos	+0.5%	+0.4%	+0.2%R
Thu May 14	8:30	Consumer Price Index (Apr)	+0.2%	+0.2%	0.0%
		Excluding Food & Energy	+0.2%	+0.2%	+0.1%
	8:30	Business Inventories (Mar)	+0.3%	+0.4%	+0.6%
Fri May 15	9:15	Industrial Production (Apr)	+0.1%	+0.2%	+0.2%
	9:15	Capacity Utilization (Apr)	82.0%	82.2%	82.2%

- **Atlanta Fed Survey (Tue, May 12 - 9:00)**
- **Import and Export Prices (Tue, May 12 - 10:00)**
- **Richmond Fed Survey (Tue, May 12 - 10:00)**
- **Treasury 3-Year Note Auction (Tue, May 12)**
- **Treasury 10-Year Note Auction (Wed, May 13)**
- **U. of Michigan Consumer Sentiment—Preliminary (Fri, May 15 - 10:00)**
- **Treasury Announces 1-Year Bill (Fri, May 15 - 2:30)**
- **G-7 Economic Summit Meeting—Birmingham, England (Fri through Sun, May 15-17)**

Interest Rates: Forecast vs. Forward Yields

	3 mo	6 mo	12 mo
LIBOR 3 mo	5.8%	5.9%	6.2%
Forward	5.7	5.8	5.8
2 Yr T-Note	5.6	5.8	6.2
Forward	5.6	5.6	5.7
10 Yr T-Note	5.7	5.9	6.2
Forward	5.7	5.8	5.8

Key Numbers in the Business Outlook

	1998 Q1	1998 Q2E	1998 Q3E	1997	1998E
Real GDP	4.2%	3.0%	3.3%	3.8%	3.5%
Ind. Prod., Mfg.	1.8	1.0	4.6	5.6	4.1
CPI	0.5	1.3	2.3	2.3	1.5
After-Tax Profits*	7.9E	6.6	3.2	9.6	5.4
Unemployment	4.7	4.3	4.4	5.0	4.4

* Excluding inventory profits; adjusted for depreciation distortions.

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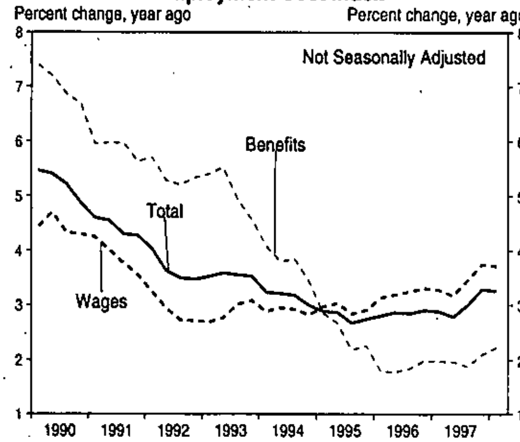
U.S. Economics Analyst

The Case of the Missing Inflation—Part II

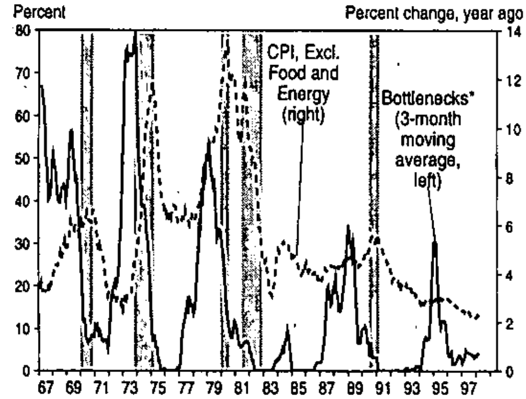
- The Federal Open Market Committee's decision to reinstate its bias toward policy tightening has come a bit sooner than we expected. Even so, a rate hike is quite unlikely until after midyear, despite last quarter's robust 4.2% growth, given the benign performance of inflation and the lack of any warning from Chairman Greenspan.
- Labor costs rose only 0.7% in the first quarter, well below market expectations. Meanwhile, the chain-weight price index for GDP posted a 0.9% annualized increase—the smallest in 34 years.
- Inflation is low, in part, because this business expansion has been extremely well-balanced. As a result, there are many fewer bottlenecks in the U.S. economy compared to past episodes when the average capacity utilization rate was at similar levels.
- Employment growth has also been quite even across industries. This helps to explain why wage pressures have been quite moderate despite the low unemployment rate.
- As long as the expansion remains well balanced, any upturn in inflation is likely to remain mild and gradual. This will enable Fed officials to remain relatively patient, most likely increasing rates only once later this year as growth remains above its long-term potential and labor costs accelerate modestly in response to tight labor-market conditions. Most of the 100 basis points of cumulative tightening we envision does not occur until next year.

Employment Cost Index



Source: Department of Labor.

Bottlenecks Lead Inflation



*Percentage of industries operating at a utilization rate higher than their long-term average plus one standard deviation.
Source: Department of Labor. Goldman Sachs.

Trade Recommendations

- We closed out our short position in June 1999 Eurodollar futures at Monday's close (93.99), but would reinstate this short position on a trade at 94.23 or higher. If the trade is triggered, our target would be 93.50, with a stop on a close at or above 94.35.

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