STRICTLY CONFIDENTIAL (FR) CLASS I-FOMC

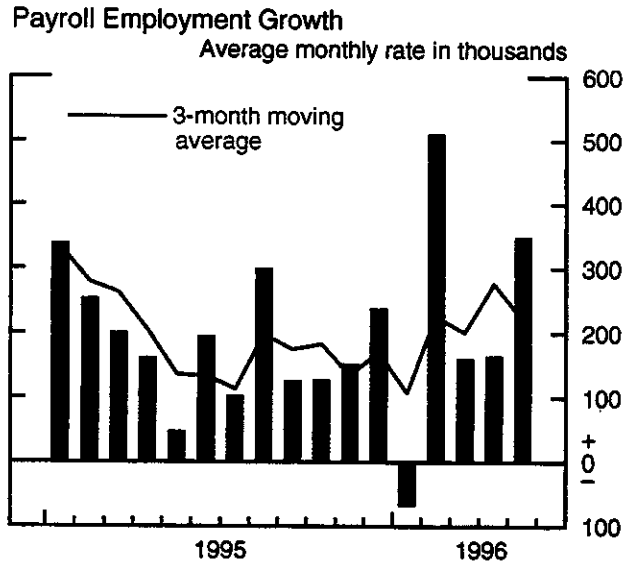
Material for

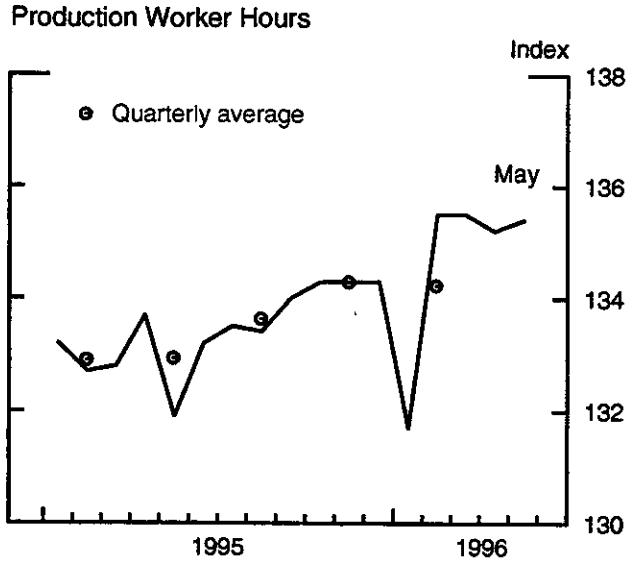
Staff Presentation to the Federal Open Market Committee

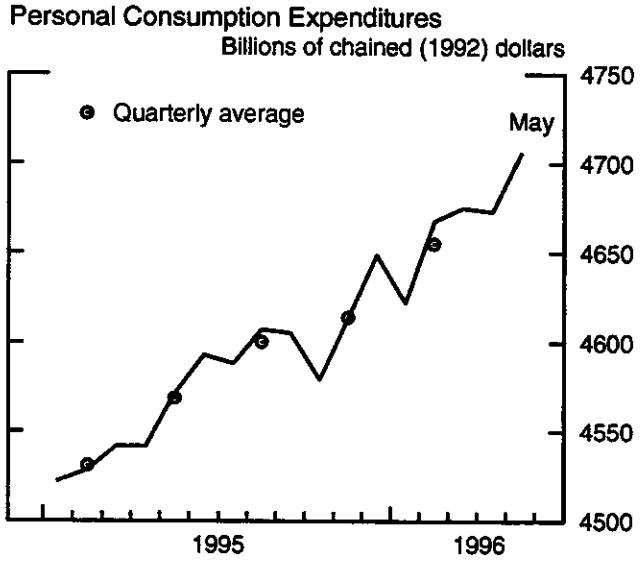
July 2, 1996

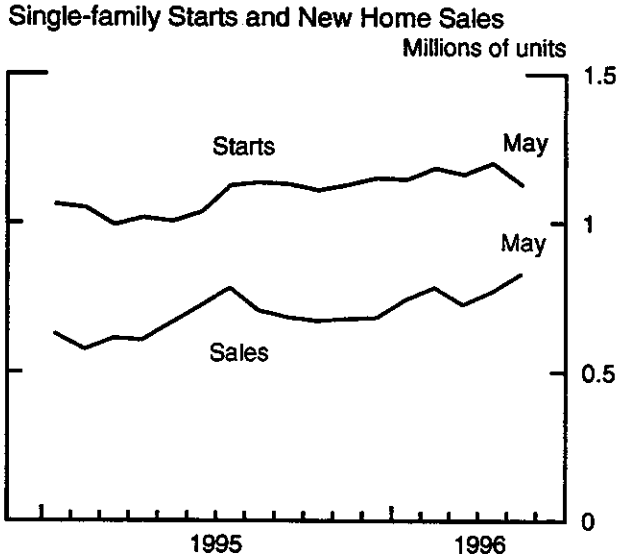
Chart 1

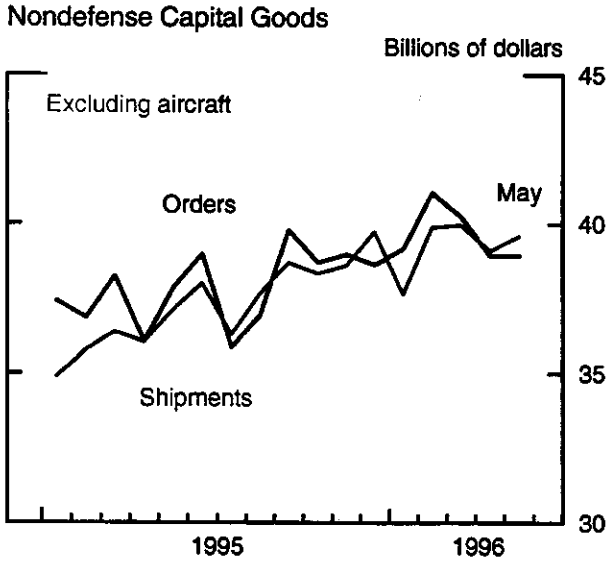
Recent Indicators











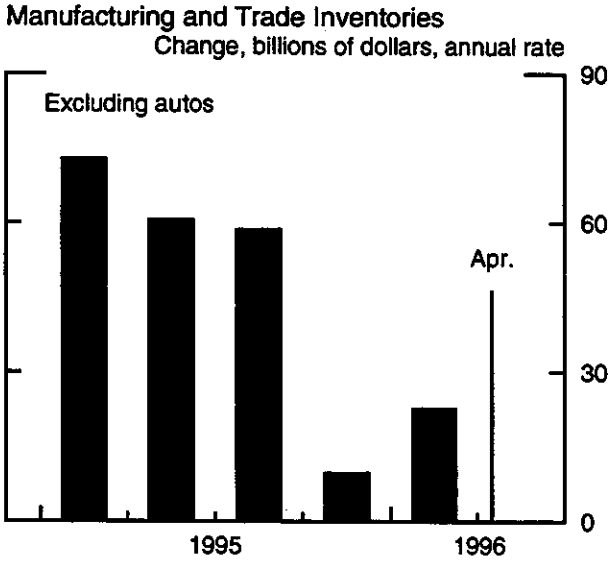
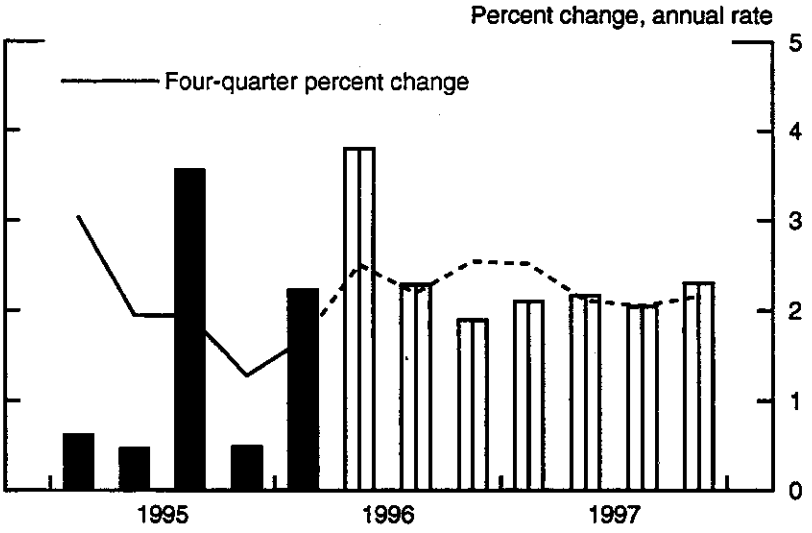


Chart 2

Forecast Summary

Real GDP Growth



Q4/Q4 Percent Change

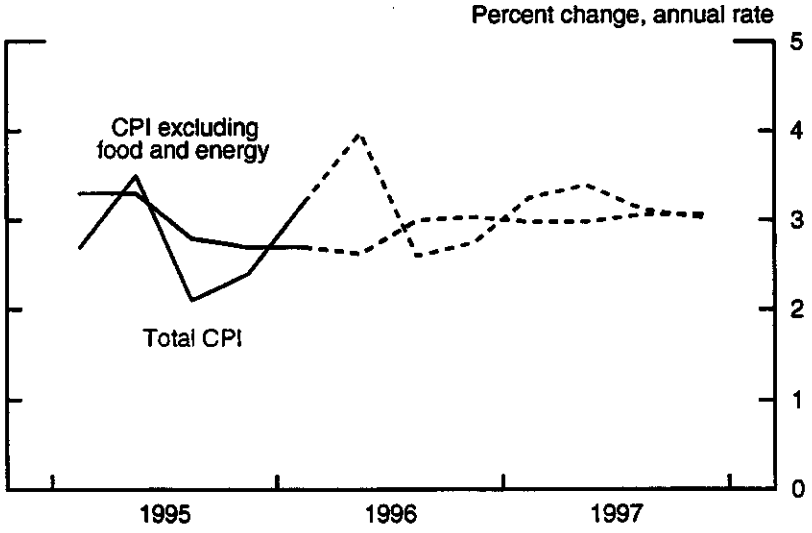
1993	2.2
1994	3.5
1995	1.3
1996	2.5
1997	2.2

Unemployment Rate

Q4 Average

1993	6.6
1994	5.6
1995	5.5
1996	5.5
1997	5.5

Consumer Price Indexes



Q4/Q4 Percent Change

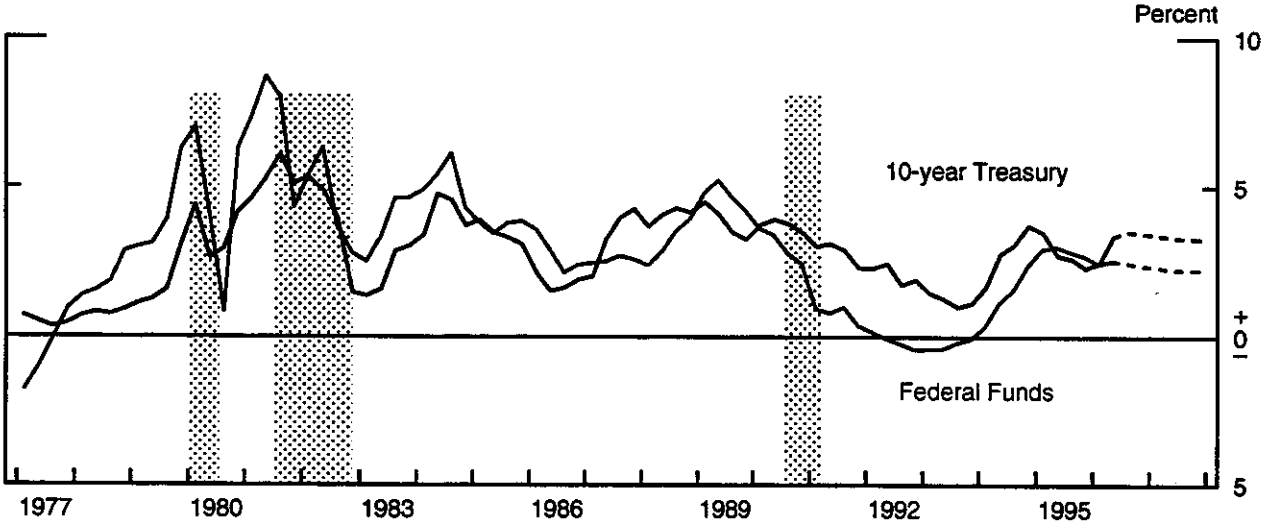
	CPI	CPIX
1993	2.7	3.1
1994	2.6	2.8
1995	2.7	3.0
1996	3.1	2.9
1997	3.2	3.0

Chart 3

Interest Rates

- Federal funds rate remains near 5 1/4 percent through 1997.
- Long-term interest rates decline just a little from current levels.

Real Interest Rates*



*Nominal rate minus rate of increase in core CPI over prior year for funds rate and over prior 5 years for 10-year Treasury.

Yield Curve and GDP Growth

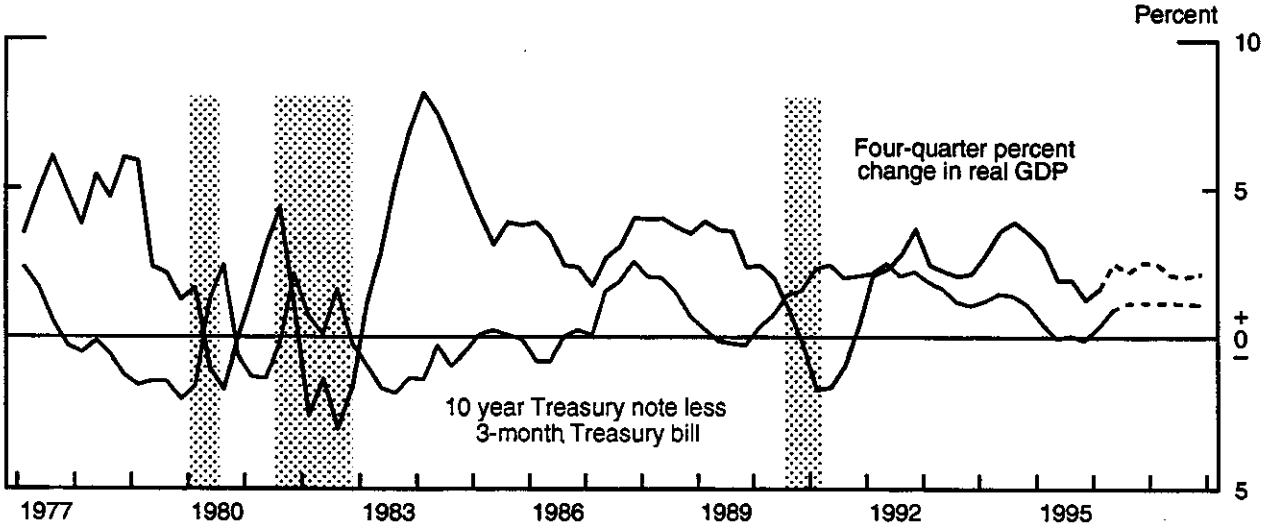
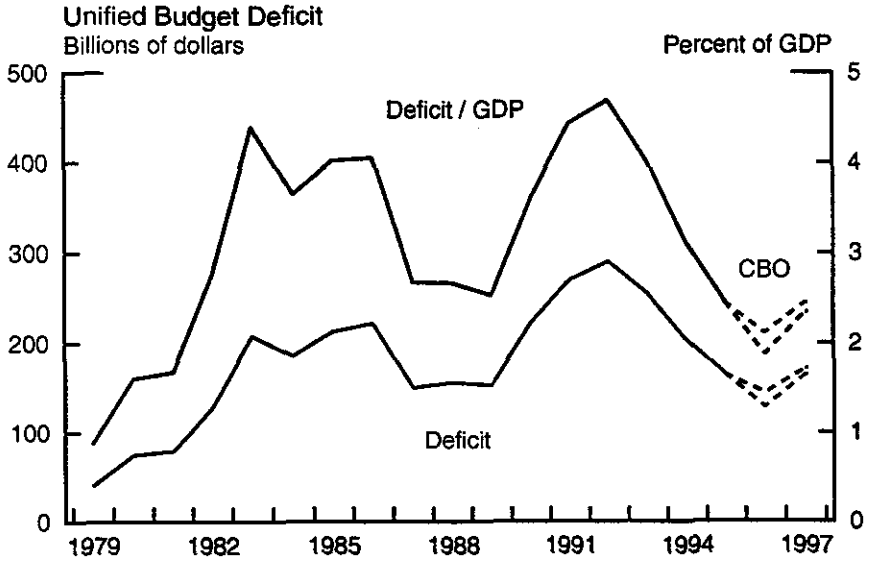


Chart 4

Fiscal Policy



Deficit

Fiscal years

	Billions of dollars	Percent of GDP
1993	255	4.0
1994	203	3.1
1995	163	2.4
1996	128	1.9
1997	163	2.3

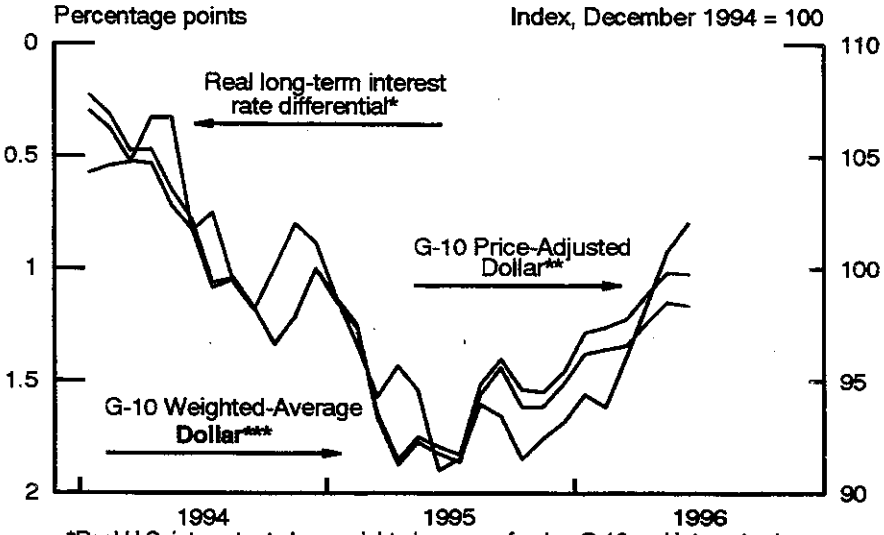
Why does the deficit bounce back in FY 1997?

- We are assuming some cuts from baseline in discretionary programs, but not large enough to reduce the absolute level of spending.
- We are not anticipating a continuation of the slow FY 1996 growth in entitlement (especially health) outlays.
- No more OBRA retroactive tax installment payments.
- Individual withholding apparently is up in FY 1996, implies less of a final-payments bulge next year.

Chart 5

Exchange Rates and Interest Rates

The Dollar and Real Interest Differential



*Real U.S. interest rate less weighted average foreign G-10 real interest rate.
**Weighted average against foreign G-10 countries, adjusted by relative prices, 36-month centered moving average CPI.
***Weighted average against foreign G-10 countries.

Price-Adjusted Dollar

	Percent Change
	12/94 to 6/96
G-10	-0.2
8 Non-G-10*	-1.1
G-18	-0.5
	12/95 to 6/96
G-10	4.6
8 Non-G-10*	-2.3
G-18	3.0

*Chile, Hong Kong, Korea, Malaysia, Mexico, the Phillipines, Singapore, and Taiwan.

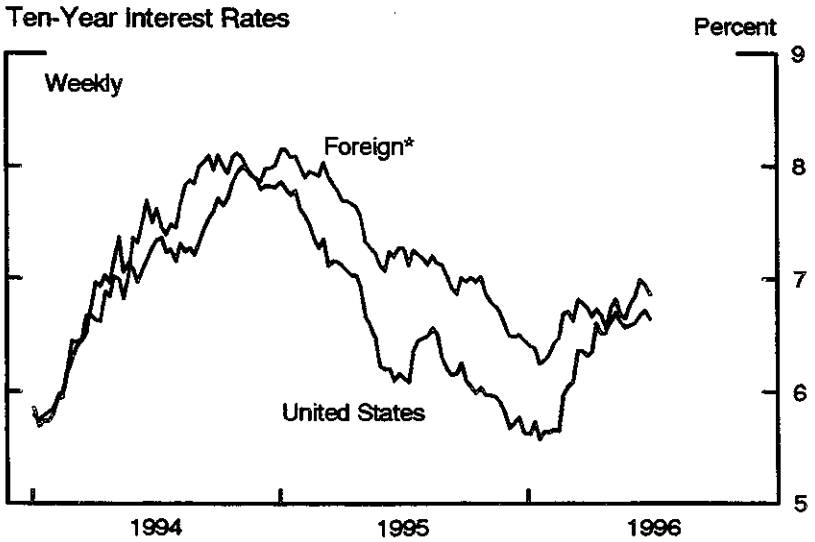
Dollar Exchange Rates

	Percent change 12/95 to 7/1/96
Yen	7.6
Swiss franc	7.4
Deutschemark	5.8
Korean won	5.0
G-10 Average	**3.3**
Mexican peso	-1.0
Italian lira	-3.8

Interest Rates

	Level 7/1/96	Change 12/95 to 7/1/96
Three-month		
Germany	3.30	-0.52
Japan	0.61	0.09
United States	5.45	-0.17
Ten-year		
Germany	6.52	0.44
Japan	3.17	0.31
United States	6.75	1.04

Ten-Year Interest Rates



* Multilateral trade-weighted average for foreign G-10 countries.

Three-Month Interest Differentials*

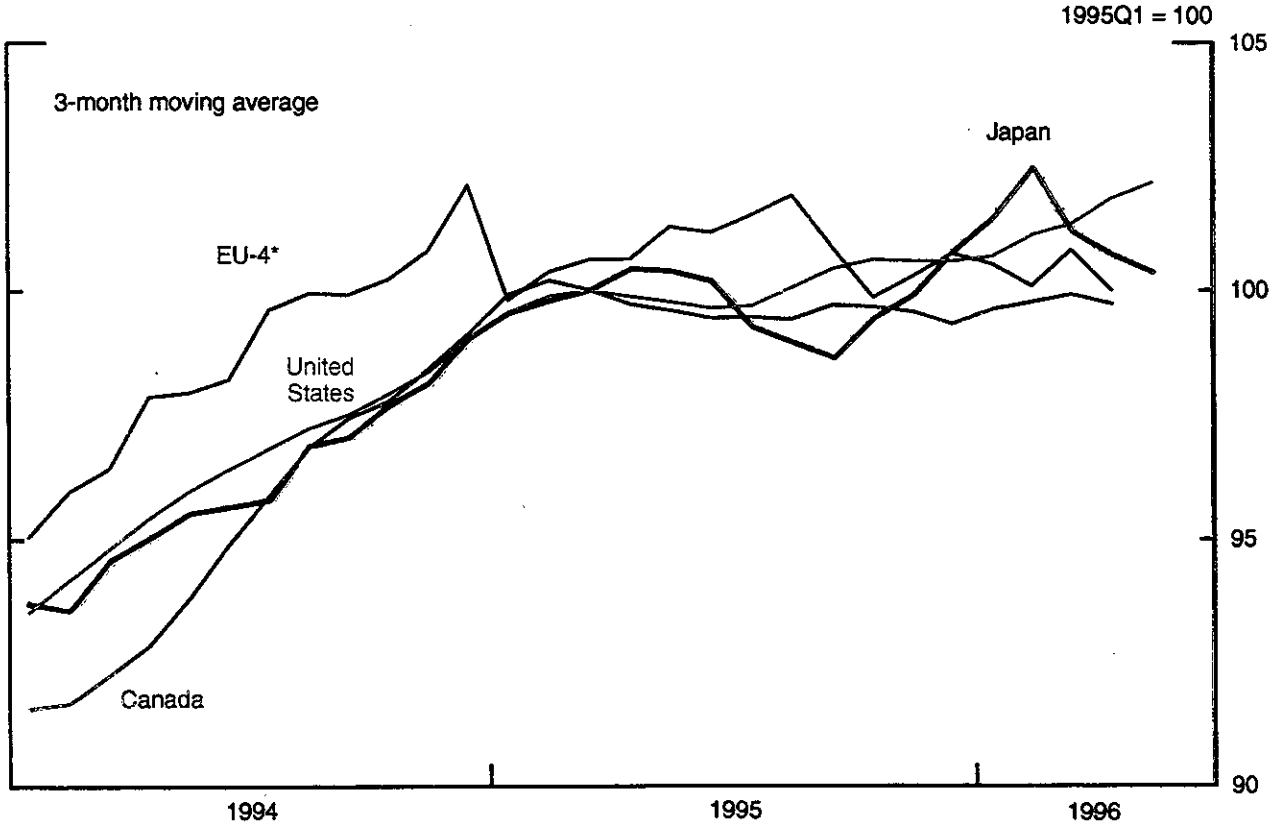
	U.S.-Germany	U.S.-Japan
Actual 7/1/96	2.30	4.89
Futures 12/96	2.40	4.91
Futures 12/97	1.63	4.44

*Euro-Market Rates

Chart 6

Foreign Industrial Countries

Industrial Production



*Gemany, Italy, France and the United Kingdom, weighted by U.S. exports.

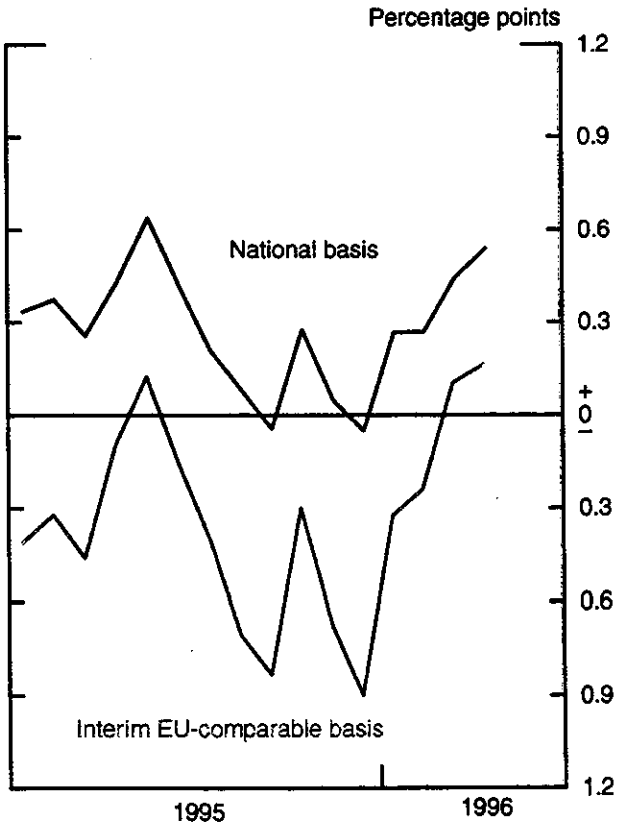
Consumer Prices

Percent change, Q4/Q4

	1995	1996	1997
1. W. Germany	1.6	1.5	1.8
2. France	1.9	1.8	1.9
3. Italy	5.9	4.1	3.5
4. United Kingdom*	2.9	2.7	2.7
5. Canada	2.1	1.8	1.6
6. Japan	-0.8	0.4	1.5
7. G-10 Average**	1.0	1.3	1.7
8. United States	2.7	3.1	3.2

*Excluding mortgage interest payments.
**Weighted by U.S. non-oil imports.

U.S.-EU* Inflation Differential

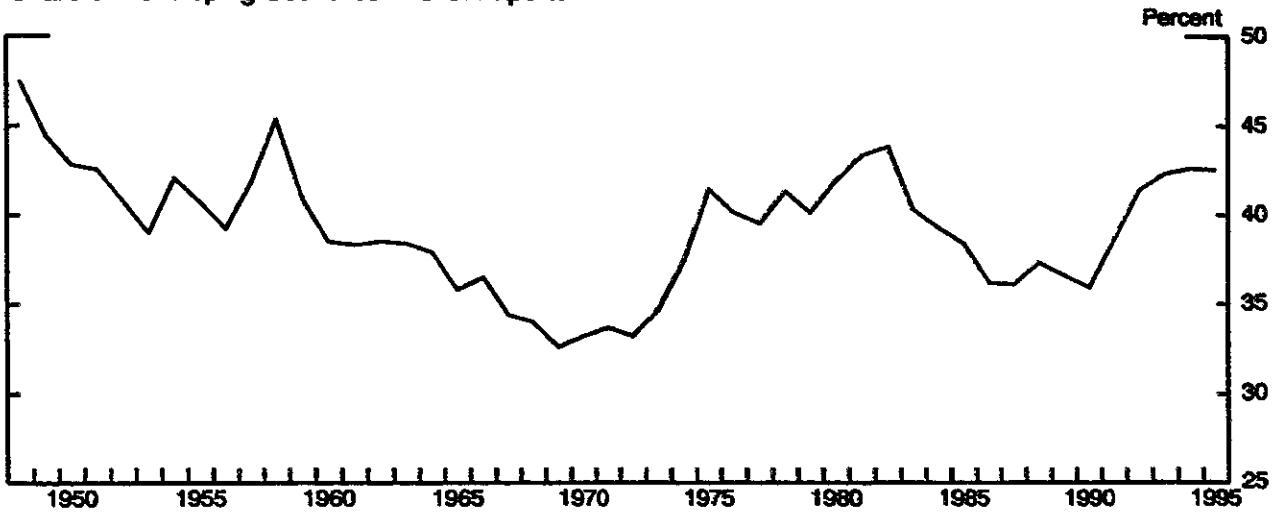


*EU members of the G-10, weighted by U.S. non-oil imports.

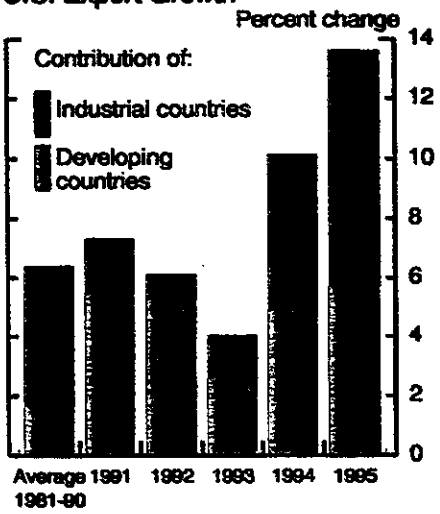
Chart 7

Foreign Growth and U.S. Exports

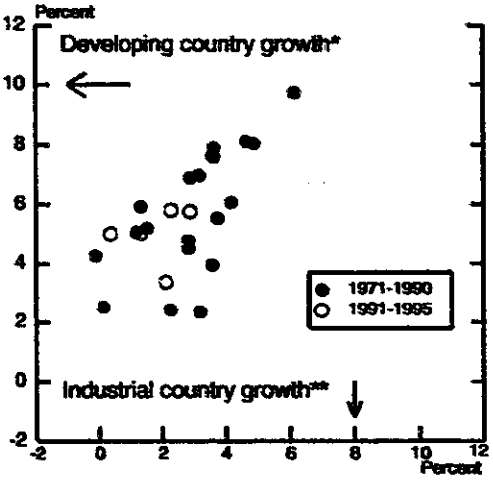
Share of Developing Countries in U.S. Exports



U.S. Export Growth



Relationship between Developing and Industrial Country Growth

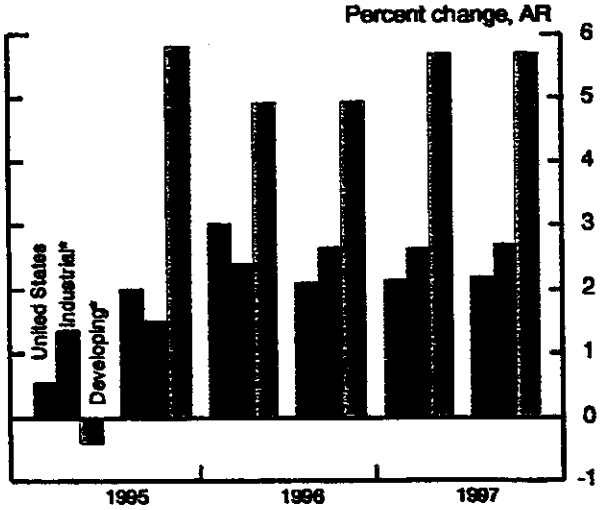


*Weighted by share in U.S. nonagricultural exports.
**Weighted by share in global trade.

Regression coefficient	
1971-90	0.89
	[.23]
1991-95	0.17
	[.57]

[standard errors in brackets]

Real GDP



*U.S. nonagricultural export weights.

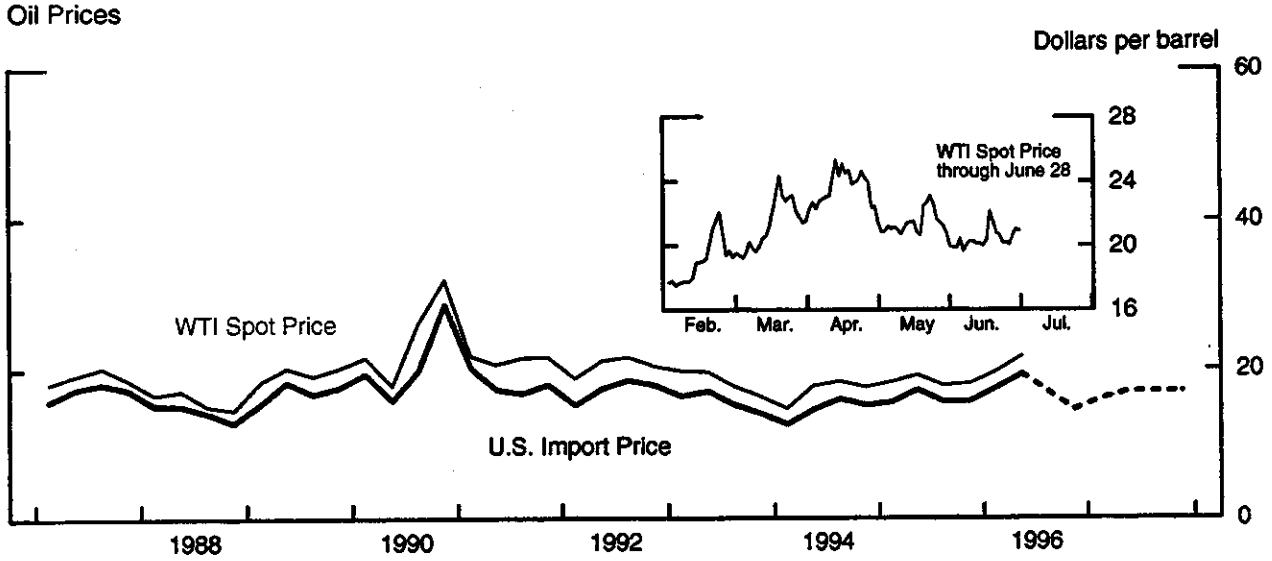
	Percent change, Q4/Q4		
	1995	1996	1997
1. Germany	1.0	1.4	2.3
2. France	0.5	2.4	2.7
3. Italy	2.3	2.0	2.2
4. United Kingdom	1.9	2.1	2.5
5. Canada	0.7	2.4	2.8
6. Japan	2.5	4.0	2.6
7. Industrial countries*	1.4	2.5	2.6
8. Mexico	-5.8	3.8	5.2
9. Total foreign*	1.7	3.5	3.8
10. United States	1.3	2.5	2.2

*U.S. nonagricultural export weights.

Chart 8

World Oil Markets

Oil Prices



Growth in World Consumption and Production of Oil

Year-to-year change, mb/d

	1994	1995	1996p	1997p
Consumption				
1. World	1.0	1.5	1.7	1.7
Production				
2. World	0.8	1.6	1.9	1.7
3. Iraq	0.0	0.0	0.3	0.5
4. OPEC*	0.3	0.5	0.3	0.4
5. North Sea	0.7	0.4	0.4	0.3
6. Non-OPEC LDCs	0.5	0.4	0.7	0.6
7. Former USSR	-1.0	0.1	0.1	0.0
8. United States	-0.1	-0.1	-0.2	-0.2
9. Other	0.4	0.3	0.1	0.1
Stockbuilding**	-0.2	0.1	0.2	0.0

* OPEC excluding Iraq.
** Includes reported stock changes and oil in transit. Amount shown is the change in the change of stocks.

Excess Capacity at End of 1995

Mb/d

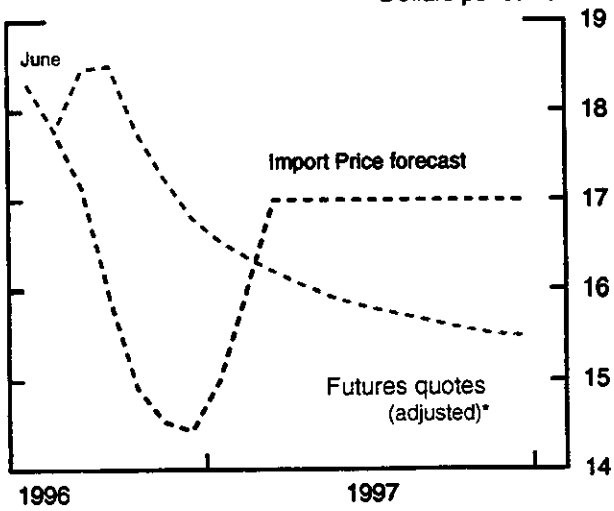
Total	6.5
Iraq	3.0
OPEC*	3.5
ROW	0.0

Longer-term Sources of Additional Oil Production

1. Middle East
2. Former USSR
3. Latin America
4. Africa

* OPEC excluding Iraq.

U.S. Import Prices



* Quotes on WTI adjusted to be consistent with import prices.

U.S. Developments

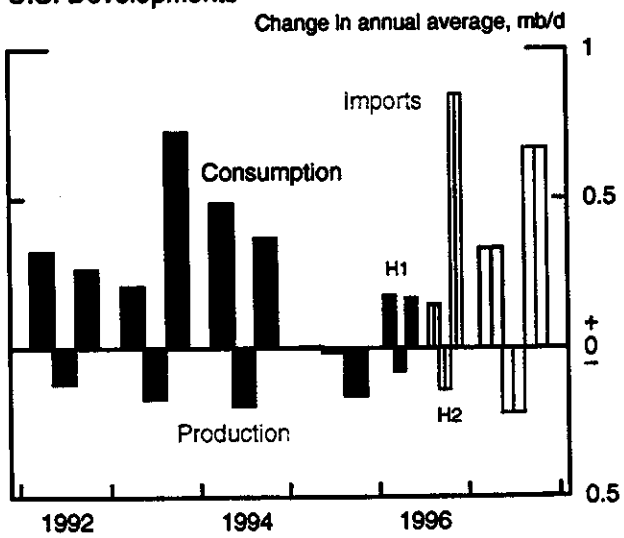
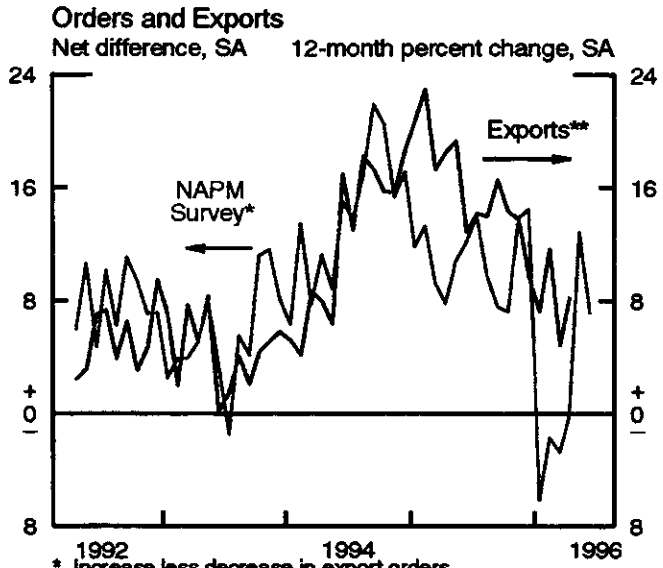
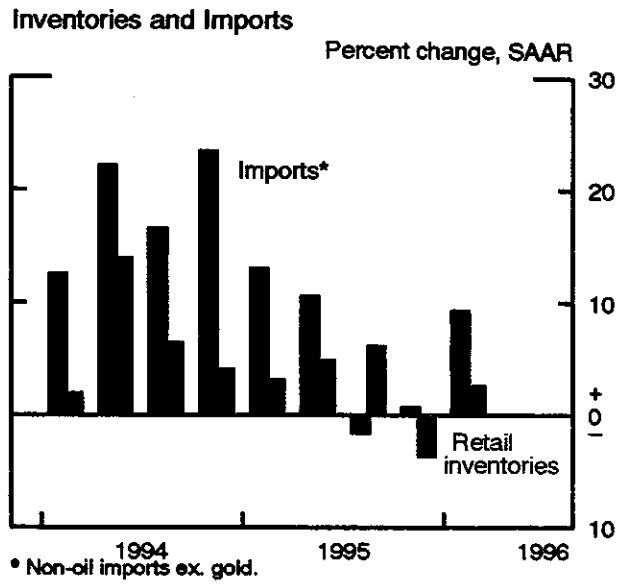


Chart 9

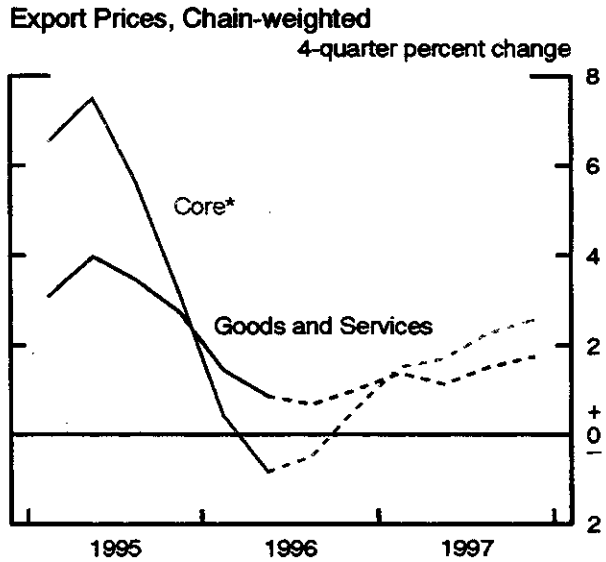
Exports and Imports



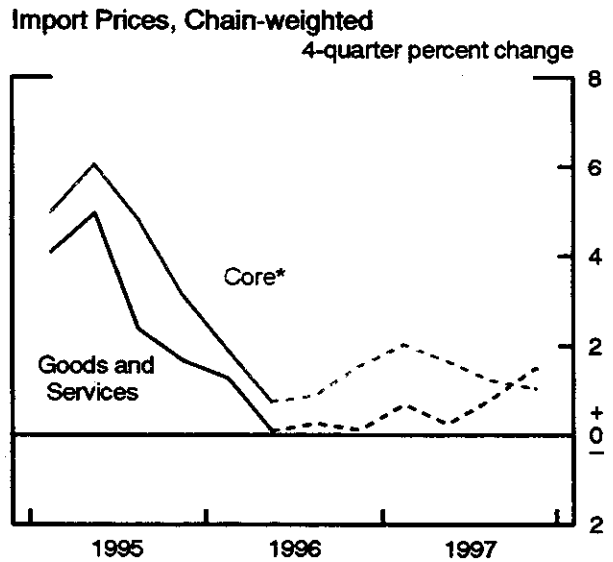
* Increase less decrease in export orders.
** Nonagricultural exports ex. aircraft.



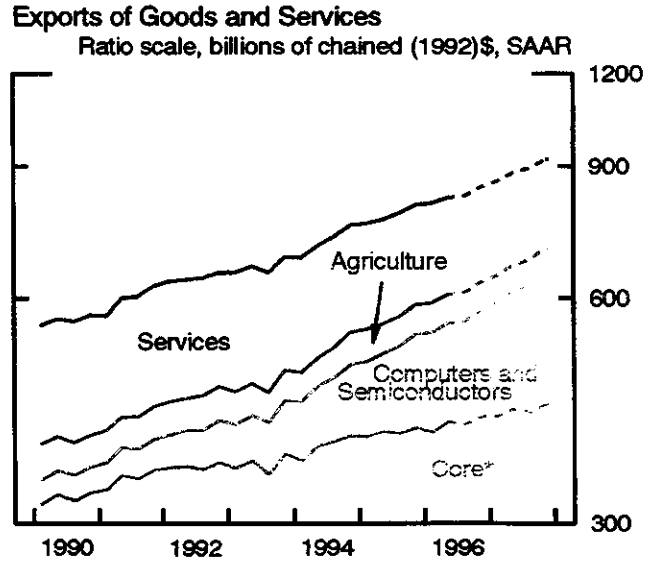
* Non-oil imports ex. gold.



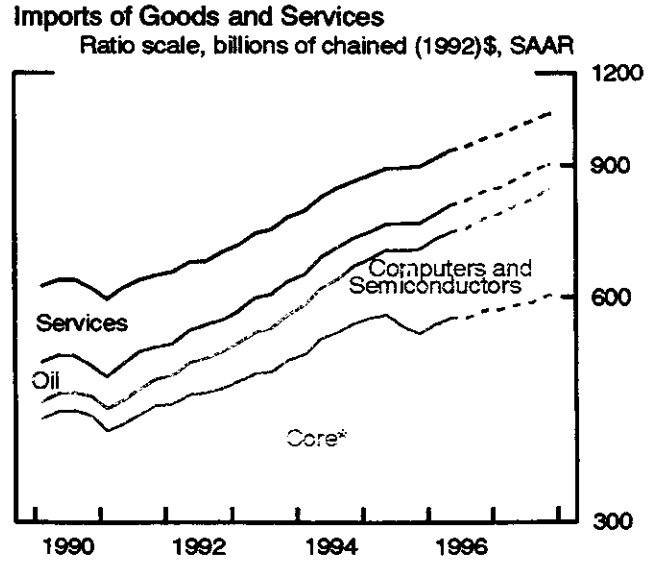
* Nonagricultural goods ex. computers and semiconductors.



* Non-oil goods ex. computers and semiconductors.



* Nonagricultural goods ex. computers and semiconductors.



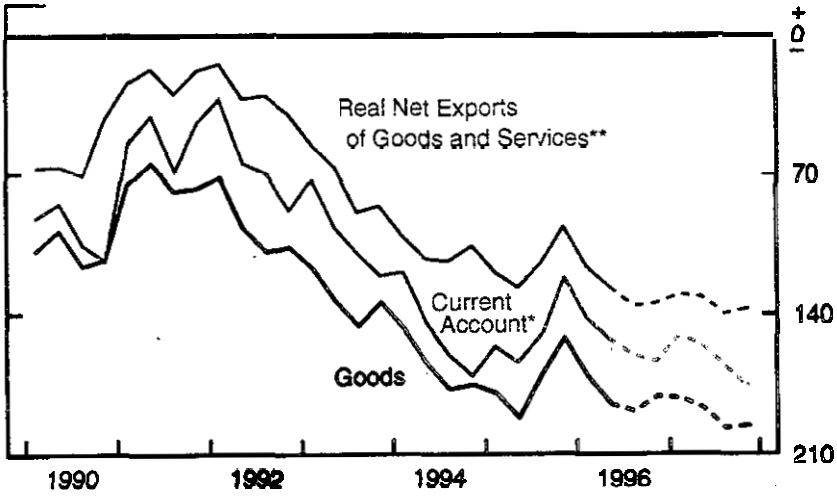
* Non-oil goods ex. computers and semiconductors.

Chart 10

Summary

External Balances

Billions of dollars, SAAR



* Adjusted for Gulf War transfers.
** Billions of chained (1992) dollars.

Contribution of Net Exports to Real GDP Growth*

	Percentage Points
1990	0.6
1991	0.4
1992	-0.4
1993	-0.7
1994	-0.3
1995-H1	-0.6
1995-H2	0.9
1996-H1	-0.9
1996-H2	-0.2
1997	0.0

* From end of previous period.

Alternative Scenarios

Baseline: Greenbook forecast extended.

Alternatives: (a) **Growth spurt in industrial** countries equal to 1-1/2 percent of real GDP.

(b) Growth spurt in developing countries equal to 2-1/2 percent of real GDP.

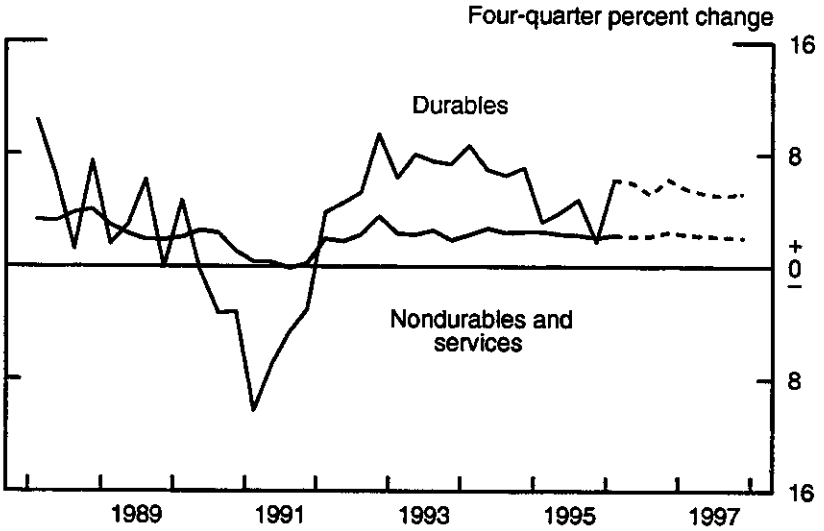
Policy asumption: U.S. and foreign monetary authorities target baseline nominal GDP.

	Percent change, Q4 to Q4			
	1996	1997	1998	1999
U.S. Real GDP				
Baseline	2.5	2.2	1.7	1.7
(a) Industrial spurt	2.7	2.5	1.7	1.6
(b) Developing spurt	2.6	2.4	1.7	1.7
U.S. Consumer Prices				
Baseline	3.1	3.2	3.2	3.2
(a) Industrial spurt	3.2	3.4	3.4	3.4
(b) Developing spurt	3.1	3.3	3.3	3.3
	Billions of Dollars, Q4			
U.S. Current Account				
Baseline	-164	-175	-169	-190
(a) Industrial spurt	-146	-136	-125	-144
(b) Developing spurt	-159	-163	-151	-168

Chart 11

Consumer Spending

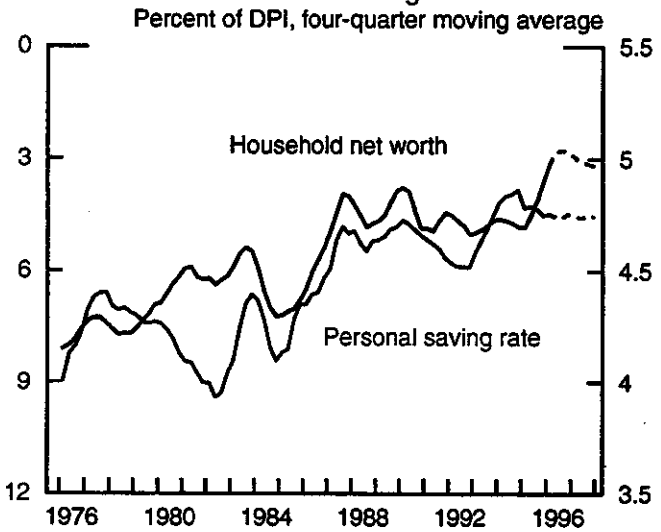
Personal Consumption Expenditures



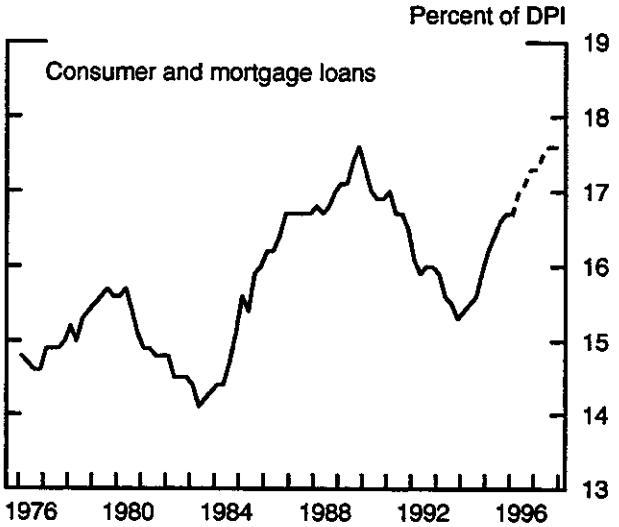
Q4/Q4 percent change

	PCE	Dur.	Nondur. & Serv.
1993	2.5	7.3	1.9
1994	3.0	7.0	2.5
1995	2.0	1.8	2.1
1996	2.9	6.2	2.5
1997	2.5	5.2	2.1

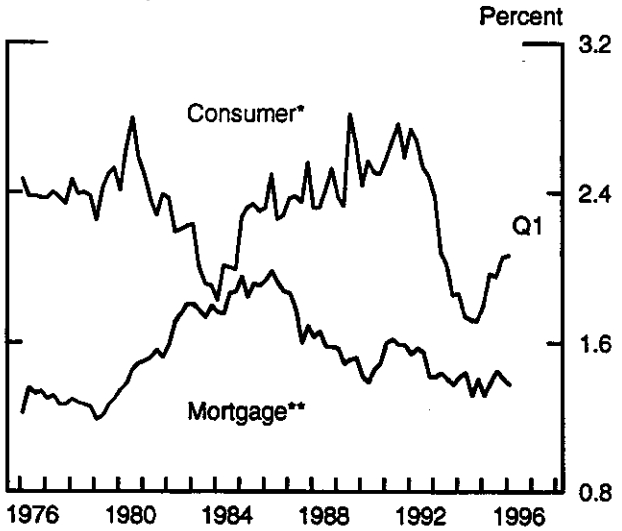
Net Worth and Personal Saving



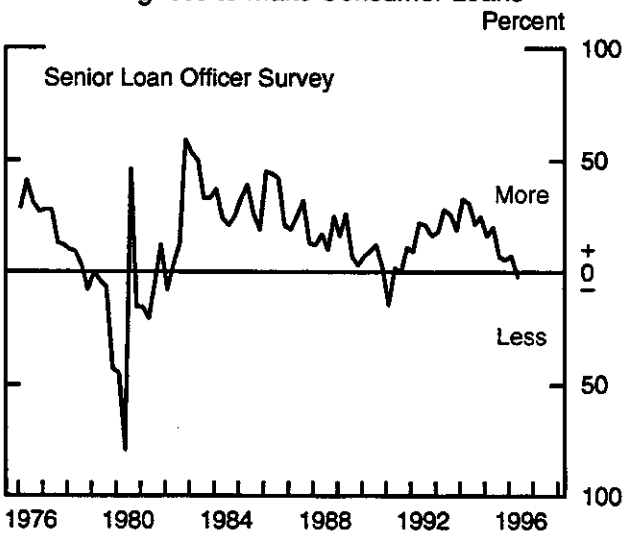
Debt Service Burdens



Loan Delinquencies



Bank Willingness to Make Consumer Loans

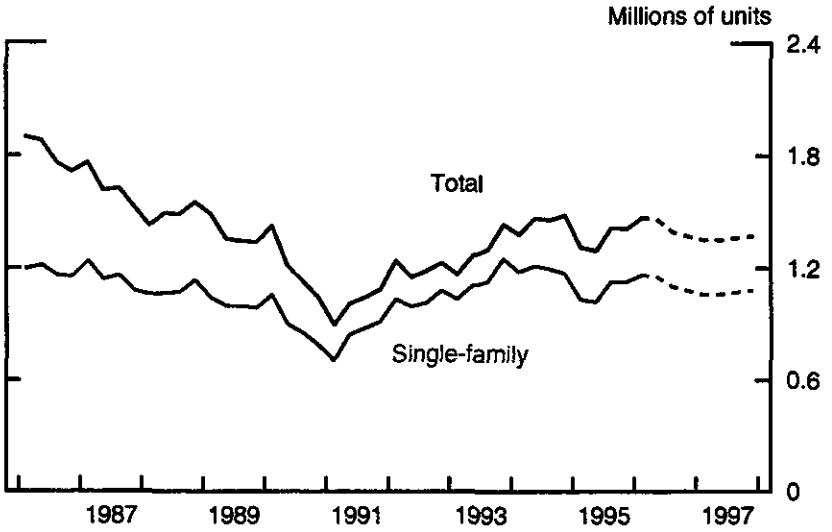


* Consumer installment loans - ABA - 30 or more days.
**For all mortgages - MBA - 60 or more days.

Chart 12

Housing

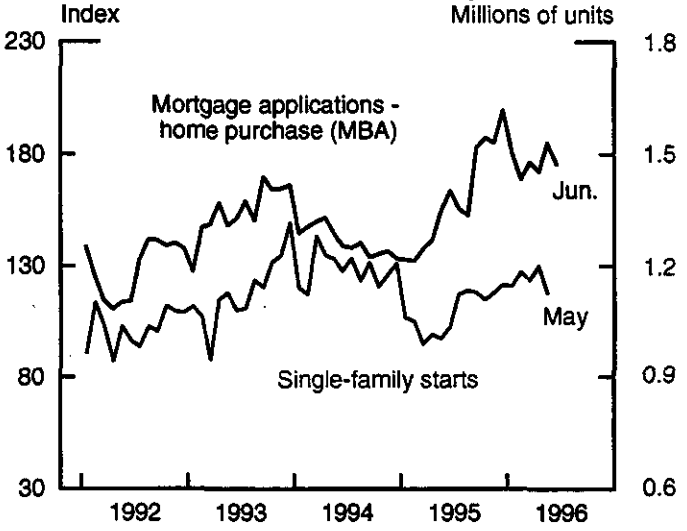
Housing Starts



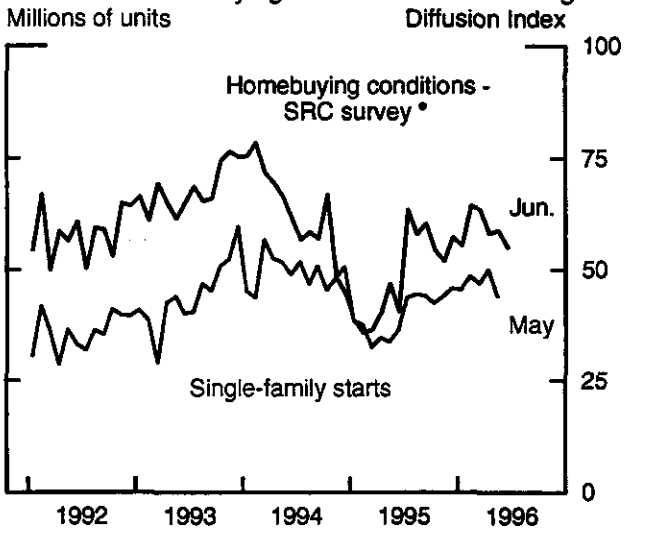
Millions of units

	Total	Single-family
1993	1.29	1.13
1994	1.46	1.20
1995	1.35	1.08
1996	1.42	1.13
1997	1.36	1.07

Mortgage Applications and Housing Starts

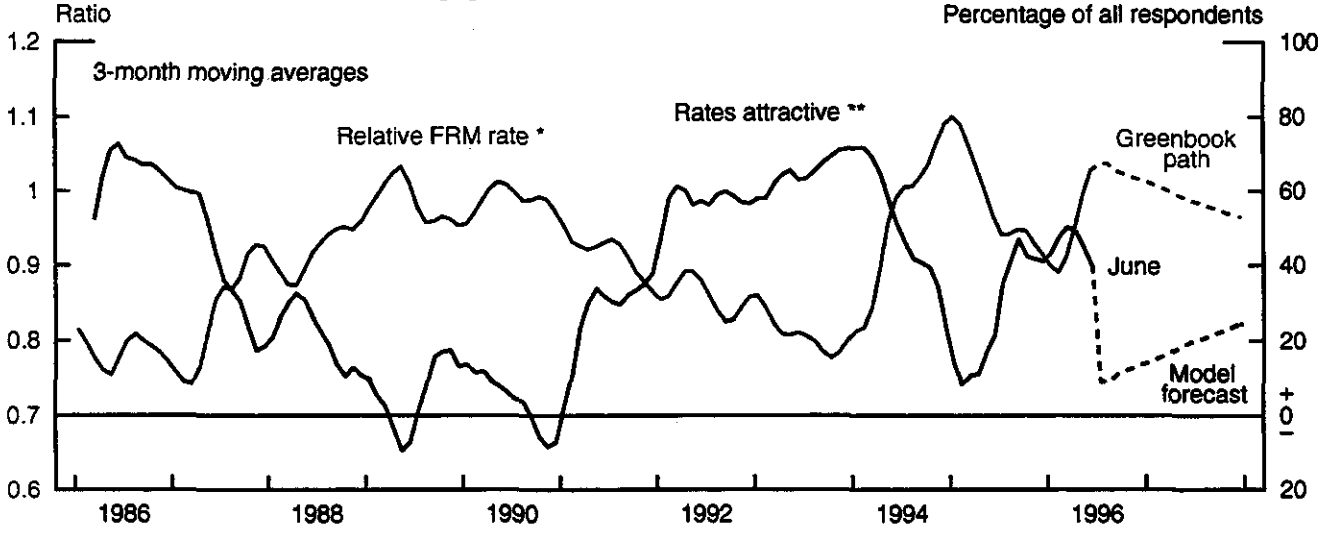


Perceived Homebuying Conditions and Housing Starts



* Good time to buy minus bad time to buy.

Perceived Attractiveness of Mortgage Rates



* Ratio of current FRM rate to average of past four years.

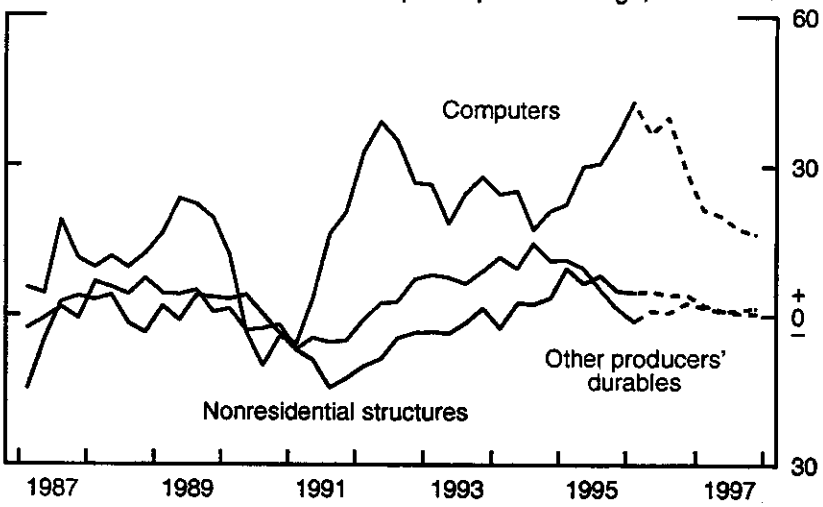
** Good time to buy because rates low minus bad time to buy because rates high - SRC survey.

Chart 13

Business Investment

Business Fixed Investment

Four-quarter percent change, annual rate

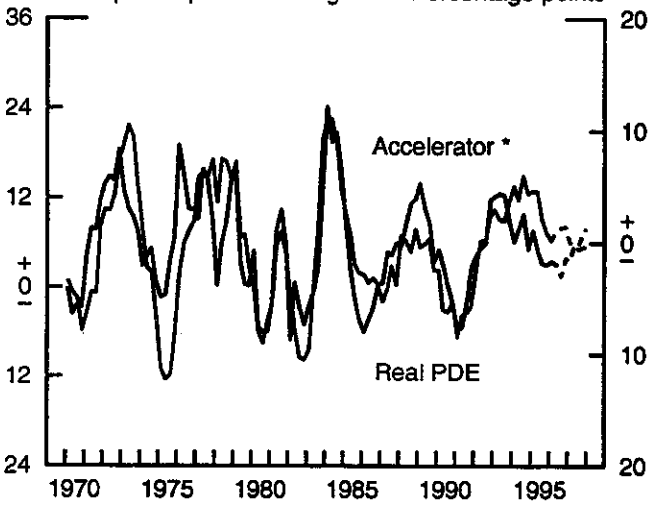


Q4/Q4 Percent Change

	PDE	NRS
1993	11.5	1.5
1994	12.6	3.7
1995	7.3	5.0
1996	8.2	4.3
1997	5.4	0.5

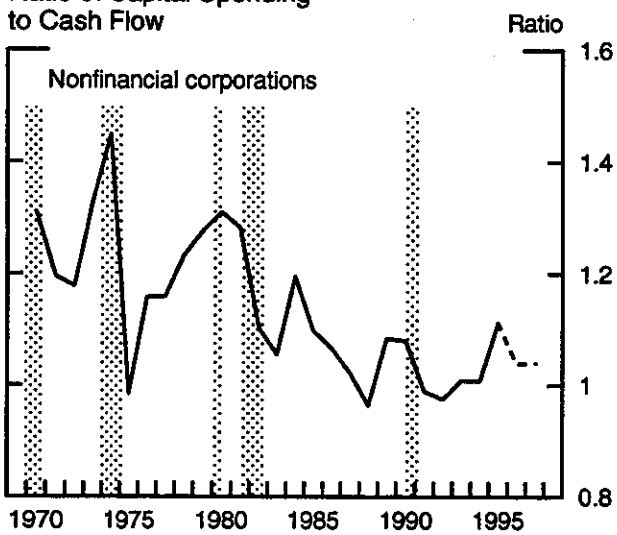
Real PDE and the Acceleration of Business Output

Four-quarter percent change — Percentage points



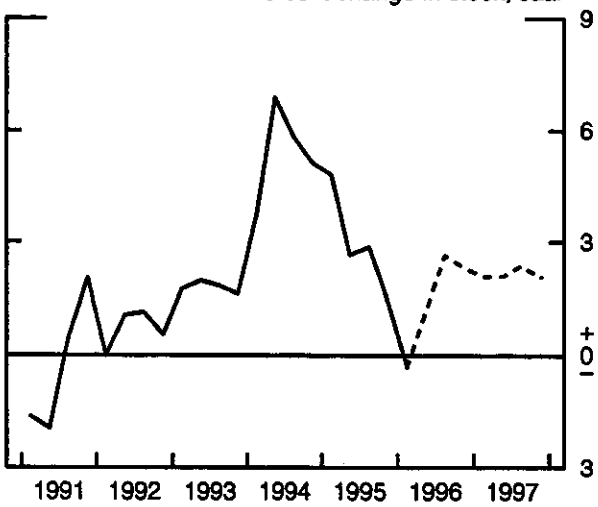
*The accelerator is the eight-quarter percent change in business output less the year-earlier eight-quarter percent change.

Ratio of Capital Spending to Cash Flow

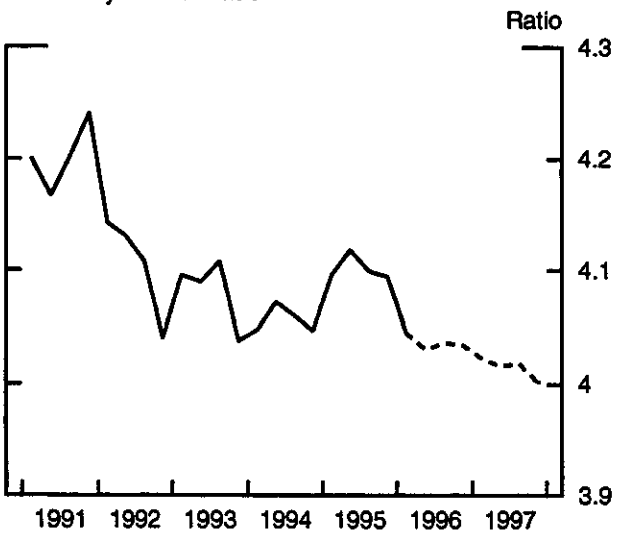


Nonfarm Inventory Investment

Percent change in stock, saar



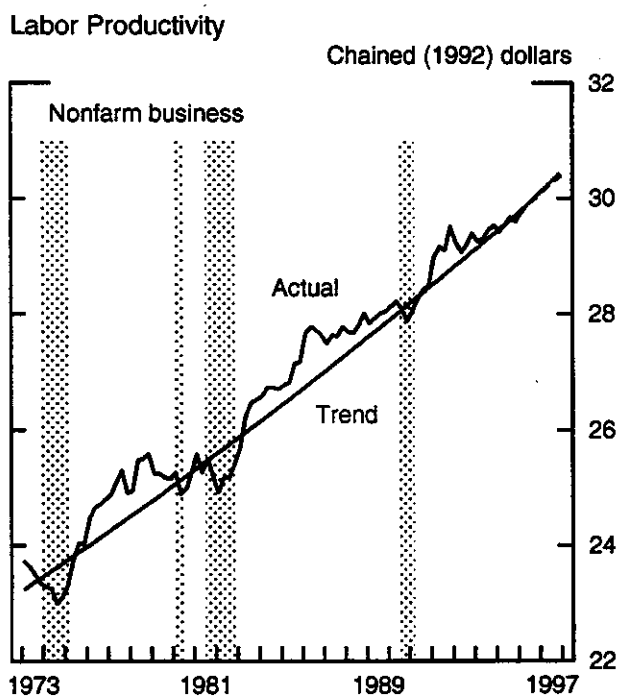
Inventory-Sales Ratio *

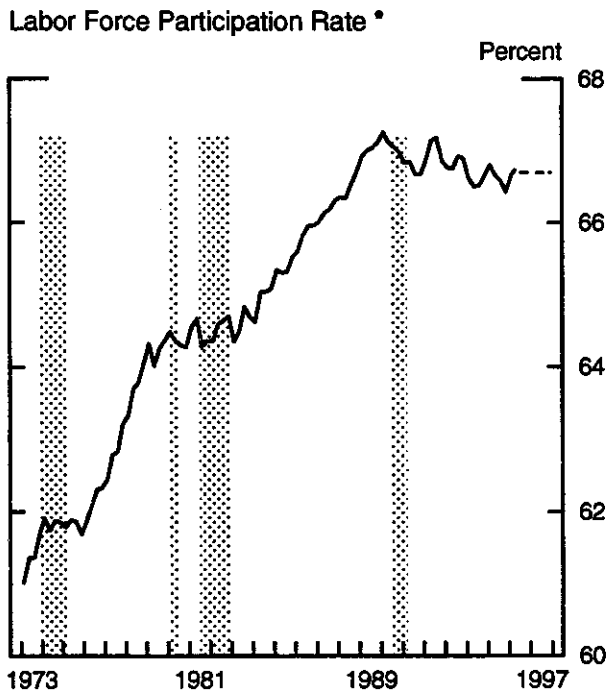


* Nonfarm inventories relative to final sales of goods and structures.

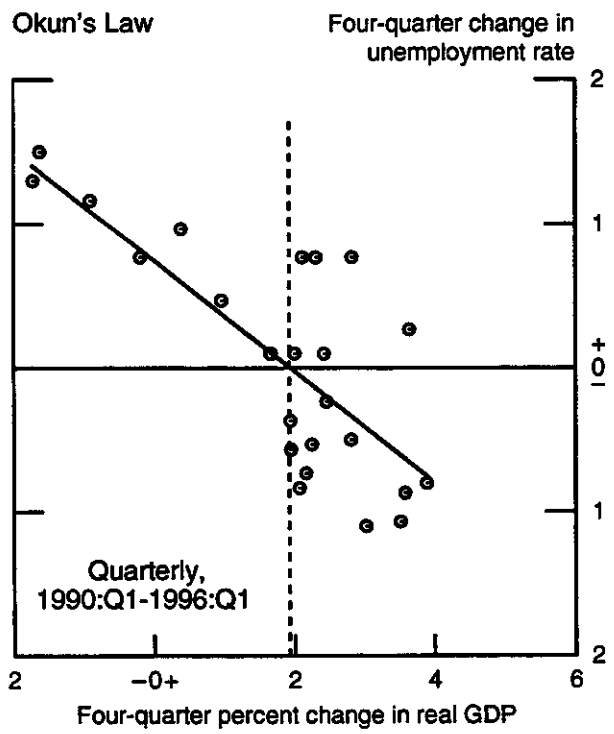
Chart 14

Labor Markets





* Pre-1994 data adjusted for change in CPS.



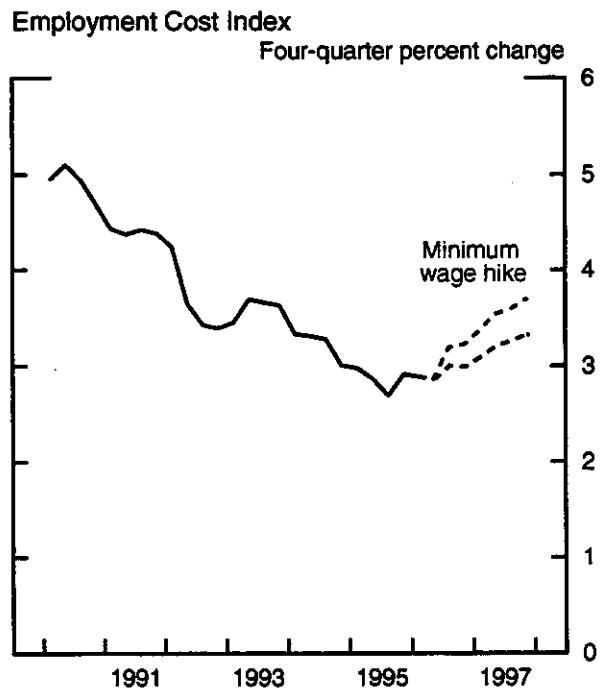
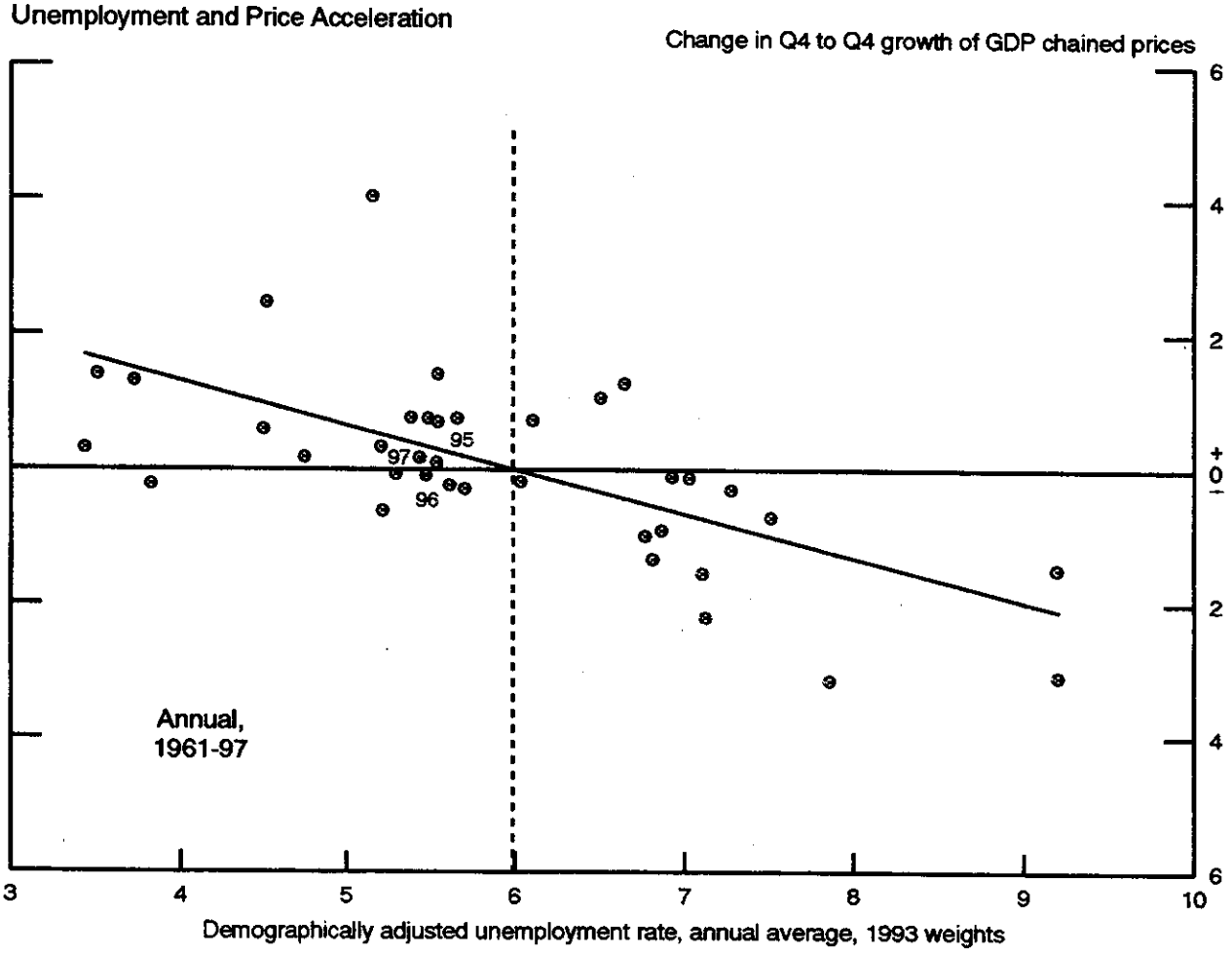
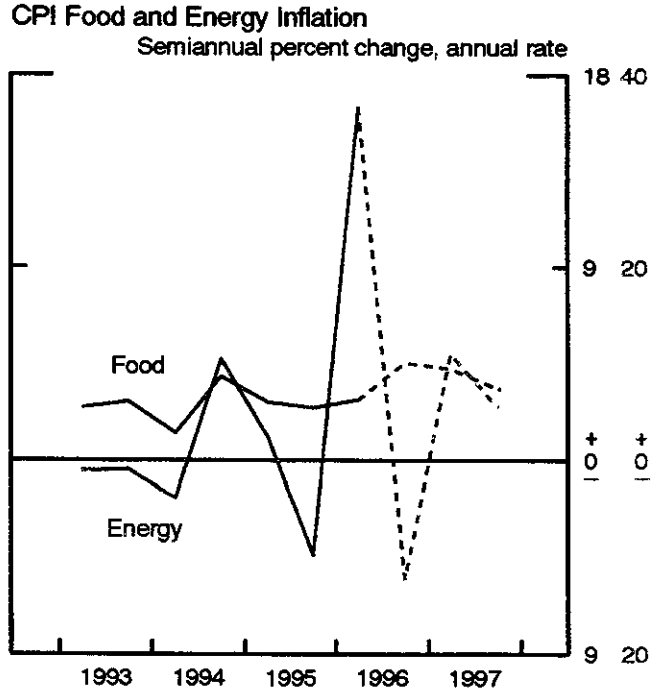
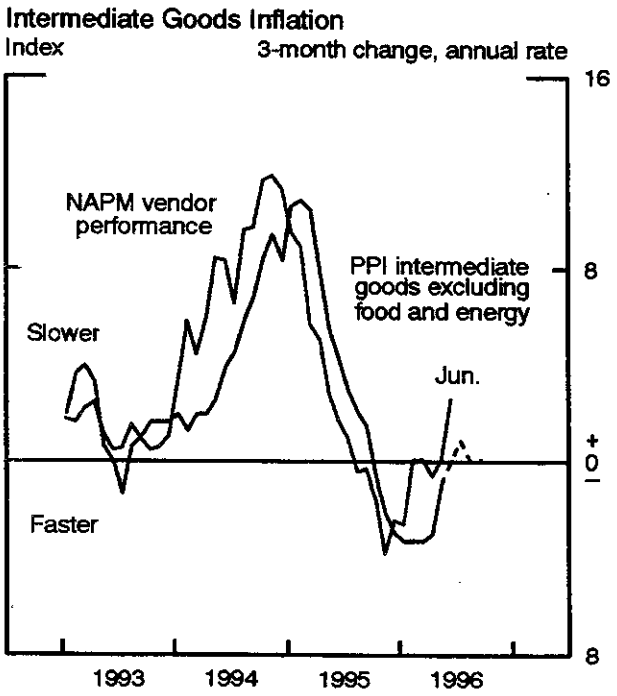


Chart 15

Prices







ECONOMIC PROJECTIONS FOR 1996

	FOMC		
	Range	Central Tendency	Staff
	Percent change, Q4 to Q4		
Nominal GDP	$4^3/_4$ to 6	$4^3/_4$ to $5^1/_2$	4.7
previous estimate	4 to 5	$4^1/_4$ to $4^3/_4$	4.5
Real GDP	$2^1/_4$ to 3	$2^1/_2$ to $2^3/_4$	2.5
previous estimate	$1^1/_2$ to $2^1/_2$	2 to $2^1/_4$	1.8
CPI	$2^3/_4$ to $3^1/_2$	3 to $3^1/_4$	3.1
previous estimate	$2^1/_2$ to 3	$2^3/_4$ to 3	3.0
	Average level, Q4, percent		
Unemployment rate	$5^1/_4$ to $5^3/_4$	About $5^1/_2$	5.5
previous estimate	$5^1/_2$ to 6	$5^1/_2$ to $5^3/_4$	5.6

ECONOMIC PROJECTIONS FOR 1997

	FOMC		
	Range	Central Tendency	Staff
	Percent change, Q4 to Q4		
Nominal GDP	$3^3/_4$ to 5	4 to 5	4.5
Real GDP	$1^1/_4$ to $2^1/_2$	$1^3/_4$ to $2^1/_4$	2.2
CPI	$2^1/_2$ to $3^1/_4$	$2^1/_2$ to 3	3.2
	Average level, Q4, percent		
Unemployment rate	$5^1/_2$ to 6	$5^1/_2$ to $5^3/_4$	5.5

NOTE: Central tendencies constructed by dropping top and bottom three from distribution, and rounding to nearest quarter percent.

July 2, 1996

Long-Run Ranges
David E. Lindsey

M2 and M3 so far this year have been growing around the upper bounds of their annual ranges. We expect these broader aggregates to continue expanding at such rates over the next year and a half. This prospect again raises familiar issues for the Committee's decision at this meeting about the ranges for this year and next year.

Chart 1 in your package captures the essentials underlying the staff's view of the outlook for M2. It shows a scatter plot with quarterly data of the relationship between M2's velocity, on the vertical axis, and its opportunity cost, on the horizontal axis, since early 1959. The dots and line in black represent what we once had confidence in--the co-movement of M2's velocity and its opportunity cost prior to the 1990s. That is, M2 tended to move together with nominal GDP, except as influenced by changes in its opportunity cost. The solid black line represents a regression fit over this period, which is a simplified version of the staff's standard M2 demand equation. The two broken lines show the 95 percent confidence interval around it.

The red dots, which begin in 1990:Q1, indicate the progressive upward structural drift in M2 velocity through the early 1990s as the historical relationship between velocity and opportunity cost increasingly broke down. A number of reasons for this updrift in M2 velocity and associated weakness in M2 demand were adduced at the time. They involved the unusually steeply sloped yield curve and very low level of short-term interest rates, which helped to attract the public to more readily available long-term mutual funds out of liquid balances; the credit crunch at banks and the resolution of troubled

thrifts, which reduced the aggressiveness with which these institutions sought retail deposits; and the household balance-sheet restructuring, which entailed repayment of loans out of liquid money balances.

I've plotted the data starting in late 1994 in green. These six quarters all lie close to the green regression line fit over just this recent time frame. The close conformity with the lower black regression line might suggest that the upward structural drift in velocity has ended and that the behavioral patterns typifying M2 demand in the 1960s, 1970s, and 1980s have reemerged. This is what we've adopted as our working assumption in our forecasts, shown by the blue Xs, of M2 velocity for the fourth quarters of this year and next year. As the bluebook discussion indicated, we expect the opportunity cost of M2 to be edging down as competitive forces push up rates on small time deposits. So, M2's velocity should continue to diminish marginally through next year. With nominal GDP projected to grow at a 4-1/2 percent rate, this velocity behavior yields our M2 forecast of 5 percent growth this year and next.

Your second chart gives a different perspective on the relationship of M2 and GDP--it shows the behavior of real M2 in a business cycle context, as well as the record of real GDP. This chart indicates that, although real M2 was an imperfect leading indicator of real GDP prior to the 1990s, its properties in this regard broke down completely during the first half of the 1990s. Real M2 continued to decline while the expansion in real GDP persisted. Only about a year ago did real M2 resume its earlier uptrend. We have forecast continued growth in real M2 through the end of next year given the Greenbook's projection of sustained expansion in real GDP.

Judging by either chart, the evident return of M2's behavior to historical norms has lasted only for a brief recent period. This observation implies a wide range of uncertainty around the staff M2 projection and makes a significant upgrading M2's policy role seem premature.

The first column of your next exhibit, taken from page 11 of the bluebook, shows our M2 growth forecast of 5 percent over this year and next, along with our M3 growth projection of 6 percent for the two years. Also, we see debt expanding at a 4-1/2 percent rate over both years, matching the anticipated pace of nominal GDP. The central tendency of your own forecasts of nominal GDP is a bit higher than the staff's this year but about the same next year.

Two alternative sets of ranges are presented for Committee consideration. Alternative I replicates the current year's ranges previously selected by the Committee. The M2 range of 1 to 5 percent was originally reduced to its current specification in July 1993. At that time, forecasts for that year suggested, correctly as it turned out, that M2 growth would undershoot the lower bound of the 2 to 6 percent range previously set in February of that year. By July 1995 the restraining effects on M2 of special factors and of hikes in short-term interest rates had abated and faster growth of M2 apparently had resumed. Even so, the Committee was reluctant to readjust the M2 range upward for 1995 or to use a higher range for 1996 to align these ranges better with likely M2 growth. The Committee was concerned that the market could misperceive a decision to raise the range as signalling either lessened anti-inflationary resolve or heightened confidence about velocity patterns that would lead the FOMC to upgrade the monetary aggregates as policy variables.

These concerns did not deter the Committee a year ago, however, from making a large technical upward adjustment to the M3 range for 1995. It raised that range from 0 to 4 percent, which had been in effect since July 1993, to 2 to 6 percent. The Committee used this higher range for 1996 as well. This adjustment recognized that M3 seemingly had resumed its historical tendency to outpace M2. Historically, the velocity of M3 had trended down, while trend velocity of M2 had been flat. In reports to the Congress, both a year ago and last February after the ranges were reaffirmed, the Committee characterized the alternative I specifications for both M2 and M3 as benchmarks for longer-run growth of the monetary aggregates that, on the assumption of historically typical velocity trends, would be consistent with effective price stability.

To be sure, over this year and next, nominal GDP growth is likely to run noticeably above the pace that would be associated with effective price stability. Also, the velocities of M2 and M3 are likely to be marginally depressed by the edging lower of the average opportunity costs of holding retail deposits. Thus, the staff's baseline projections for M2 and M3 this year and next are around the upper ends of their alternative I ranges. In the framework of the staff projection, it would take a substantial increase in short-term interest rates, as in the tighter policy scenario in the second column, to move M2 and M3 comfortably within the alternative I ranges.

The alternative II ranges for the broad monetary aggregates are 1 percentage point higher than the alternative I ranges, enough to clearly encompass the staff's M2 and M3 projections. The Committee may judge that an additional half year of monetary data has lent credence to the staff's view that growth in broad money roughly in line with

nominal GDP will continue over the rest of this year and through next year as well. Even if the Committee has no intention of upgrading the broad monetary aggregates as guides for monetary policy adjustments, it may still wish for the ranges to line up better with the probable outcomes for M2 and M3.