

## Telephone Conference Meeting of the Federal Open Market Committee

### April 16, 2003 Presentation Materials -- Text Version

[Presentation Materials \(708 KB PDF\)](#)

Pages 30 to 47 of the Transcript

#### Appendix 1: Materials used by Mr. Reinhart

##### Exhibit 1

##### Treasury Securities Market

Exhibit 1 includes four panels that provide information on the recent behavior of Treasury yields.

##### Top panel

##### Two- and Ten-year Treasury Yields\*

A line graph displays two- and ten-year Treasury yields over the period from March 12 to April 15, 2003. Both series move up over this period, on net. The two-year yield increases from about 1.4 percent to about 1.7 percent while the ten-year yield increases from about 3.6 percent to about 4.0 percent.

\* On-the-run issues, five-minute intervals. [Return to text](#)

##### Middle-left panel

##### Treasury Yield Curve

A line graph shows the Treasury yield curves for March 12, 2003 at 4:00 pm and for April 15, 2003 at 4:00 pm. Over this period, the yield curve shifted up by about 10 basis points at shorter maturities and by about 25 basis points at longer maturities.

##### Middle-right panel

##### Ten-year TIPS Yield

A line graph plots the ten-year TIPS yield over the period from January to April 2003. The time-series shows a pronounced decline in the TIPS yield from January to early March from about 2.4 percent to about 1.6 percent. Thereafter, the TIPS yield reverses much of the earlier decline, evidently reflecting the resolution of uncertainty about the Iraqi war.

##### Bottom panel

##### Selected Treasury Yields

	Today 4/15/2003* (1)	Wednesday 3/12/2003 (2)	Change (1)-(2)

	<b>Today</b> <b>4/15/2003*</b> <b>(1)</b>	<b>Wednesday</b> <b>3/12/2003</b> <b>(2)</b>	<b>Change</b> <b>(1)-(2)</b>
Nominal			<b>-basis points-</b>
1. Two-year	1.68	1.44	24
2. Five-year	2.91	2.55	36
3. Ten-year	3.97	3.59	38
Indexed			<b>-basis points-</b>
4. Ten-year	2.13	1.65	48

\* Quotes taken at approximately 4:00 pm. [Return to table](#)

## Exhibit 2

### Equity Market

Exhibit 2 presents three panels outlining recent developments in equity markets.

#### Top panel

##### Major Stock Indexes

A line graph displays three major stock indices--the S&P 500, Wilshire 5000, and Nasdaq--over the period from March 12 to April 15, 2003. All three series increase by about 10 percent over this period.

#### Middle panel

##### S&P 100 Implied Volatility (VIX)

A line graph displays an index of S&P 100 implied volatility--the VIX index--from March 12 to April 15, 2003, at five-minute intervals. The VIX declines fairly steadily from about 40 percent at the beginning of the period to about 25 percent on April 15.

#### Bottom panel

##### Selected Equity Market Quotes

	<b>Today</b> <b>4/15/2003*</b> <b>(1)</b>	<b>Wednesday</b> <b>3/12/2003</b> <b>(2)</b>	<b>Change</b> <b>(1)-(2)</b>
Major Indexes			<b>-percent-</b>
1. Wilshire 5000	8431.43	7631.08	10.5
2. S&P 500	890.78	804.15	10.8
3. Nasdaq	1390.99	1279.24	8.7
Option-Implied Volatility			<b>-percentage points-</b>
4. S&P 100 (VIX)	26.21	39.08	-12.87

\* Quotes taken at approximately 4:00 pm. [Return to table](#)

## Exhibit 3

### Monetary Policy Expectations

Exhibit 3 provides information on the evolution of monetary policy expectations.

#### Top panel

##### Interest Rate Futures

A line graph displays the March 2004 Eurodollar futures rate and the May 2003 federal funds futures rate over the period from March 12 to April 15, 2003, at a frequency of five-minute intervals. Both series moved up markedly over this period. The May federal funds futures rate increases from about 1 percent to about 1.20 percent, while the March 2004 Eurodollar futures rate increases from about 1.6 percent to about 1.8 percent.

#### Middle-left panel

##### Expected Federal Funds Rates\*

A line graph displays the expected federal funds rate path for March 12, 2003 and for April 15, 2003. The chart indicates that the path of policy expectations has shifted up by about 20 basis points.

\* Estimates from federal funds and eurodollar futures. [Return to text](#)

#### Middle-right panel

##### Short-term Eurodollar Implied Volatility\*

A line graph displays short-term Eurodollar implied volatility from January 1, 2003 to April 15, 2003. This measure suggests that uncertainty about the path of policy was very elevated in March and early April but declined substantially by mid-April.

\* Contract with approximately 3 months to expiration. [Return to text](#)

#### Bottom panel

##### Probability of 1.00% target as opposed to 1.25% target\*

A line graph displays the evolution of the probability of a 1.00 percent target funds rate after the May 6 FOMC meeting over the period from March 12 to April 15, 2003. The series suggest that investors placed a high probability on a 1 percent target rate through much of March. However, the probability of a 1 percent target rate dropped substantially in April with the April 15 reading suggesting a probability of about 25 percent.

\* Calculation based on May 2003 federal funds futures contract. [Return to text](#)

## Exhibit 4

### Selected Credit Market Indicators

Exhibit 4 includes three panels of selected credit market indicators.

#### Top panel

##### Ten-year Swap Spread

A line graph displays the ten-year swap spread, shown in basis points. Overall, the spread declined slightly from a little over 40 basis points on March 12, 2003 to below 38 basis points on April 15.

### Middle panel

#### Stock Prices and Credit Default Swap Premia for Selected Financial Intermediaries

	Stock Prices			CDS Premia		
	Today 4/15/2003* (1)	Wednesday 3/12/2003 (2)	Change (1)-(2)	Today 4/15/2003* (3)	Wednesday 3/12/2003 (4)	Change (3)-(4)
			-percent-			-basis points-
1. Bank of America	72.69	65.84	10.4	27.0	32.5	-5.5
2. Citigroup	39.27	31.66	24.0	22.0	35.0	-13.0
3. Goldman Sachs	76.54	62.85	21.8	45.0	59.5	-14.5
4. Lehman Brothers	63.11	52.43	20.4	45.0	60.0	-15.0
5. Merrill Lynch	39.78	31.99	24.4	47.0	62.0	-15.0

\* Quotes taken at approximately 4:00 pm. [Return to table](#)

### Bottom panel

#### Swaption Implied Volatility (Ten-year Swap Rate)

The line graph displays swaption implied volatility for the ten-year swap rate one-year ahead and three-months ahead, beginning in January 2003. The chart suggests that uncertainty about long-term interest rates in the near future declined significantly. Uncertainty about long-term interest rates over the next year also declined, but not by as much.

### Exhibit 5

#### Other Indicators of Market Stress

Exhibit 5 presents four panels of other indicators of market stress.

### Top panel

#### Foreign Exchange Rates

	Today 4/15/2003* (1)	Wednesday 3/12/2003 (2)	Change (1)-(2)
			-percent-
Dollar/Euro	1.08	1.10	-1.8
Yen/Dollar	120.18	117.36	2.4
Dollar/Pound	1.57	1.61	-2.6
Swiss Franc/Dollar	1.39	1.33	4.2

\* Quotes taken at approximately 4:00 pm. [Return to table](#)

### Middle panels

The middle two panels display information on crude oil prices.

**Middle-left panel**  
**West Texas Intermediate Crude Oil Spot Price**

A line graph displays the spot price of West Texas Intermediate (WTI) crude oil over the period from January 2003 to April 15, 2003. The series generally increases over the period from January through mid-March, reaching a peak of about \$38 per barrel in early March. Oil prices drop sharply after mid-March to a level of about \$28 per barrel at the end of the period.

**Middle-right panel**  
**West Texas Intermediate Crude Oil Futures Prices**

Crude oil futures prices for three different settlement months are shown in a line graph over the period from January 2003 to April 15, 2003. The three different contracts follow a similar trend, steadily rising to peak levels in early March 2003 and then dropping sharply in mid-March.

**Bottom panel**  
**Gold Spot Price**

A line graph plots the spot price of gold over the period from January 2003 to April 15, 2003. The series increases to a peak level of about \$380 in early February 2003, but then generally declines to around \$325 in mid-April.

**Appendix 2: Material used by Ms. Johnson**

*Recent Developments in International Financial Markets*  
*April 16, 2003*  
Note: Today's data are as of 9:30 am EST.

**STRICTLY CONFIDENTIAL (FR) CLASS II-FOMC**

**Chart 1**

04-16-03

**Top panel**  
**Selected Exchange Rates**

**(Foreign currency per dollar)**

Index, March 12, 2003 = 100

Date	Canadian Dollar	Swiss Franc	Euro	Yen	Sterling
1-Jan-2003	<a href="#">ND</a>	ND	ND	ND	ND
2-Jan-2003	106.94	105.26	106.39	102.29	100.96
3-Jan-2003	106.36	104.96	105.81	102.28	100.52
6-Jan-2003	105.91	104.60	105.29	101.60	100.30
7-Jan-2003	105.85	105.02	105.80	102.56	100.46
8-Jan-2003	106.01	104.87	105.51	101.85	100.41
9-Jan-2003	105.52	104.72	105.31	102.04	100.59
10-Jan-2003	105.26	104.09	104.63	101.93	100.31

Date	Canadian Dollar	Swiss Franc	Euro	Yen	Sterling
13-Jan-2003	104.72	104.15	104.63	101.58	100.62
14-Jan-2003	104.54	103.94	104.28	100.67	100.37
15-Jan-2003	104.24	103.86	104.23	100.62	100.62
16-Jan-2003	104.33	103.85	104.30	100.72	100.35
17-Jan-2003	104.26	102.73	103.41	100.60	99.73
20-Jan-2003	ND	ND	ND	ND	ND
21-Jan-2003	104.10	102.79	103.24	101.19	100.04
22-Jan-2003	104.05	102.36	102.74	100.83	99.80
23-Jan-2003	103.48	101.99	102.38	100.55	99.36
24-Jan-2003	103.34	101.60	101.83	100.53	98.83
27-Jan-2003	103.52	101.80	101.71	101.25	98.64
28-Jan-2003	104.28	101.84	101.75	101.27	98.35
29-Jan-2003*	103.44	101.48	101.49	100.81	98.01
30-Jan-2003	103.95	102.36	102.29	101.74	97.86
31-Jan-2003	103.79	102.76	102.64	102.37	98.06
3-Feb-2003	103.25	102.37	102.43	102.81	98.32
4-Feb-2003	102.84	101.34	101.36	102.19	97.87
5-Feb-2003	103.17	101.69	101.67	102.22	98.02
6-Feb-2003	103.29	101.70	101.80	102.35	98.62
7-Feb-2003	103.31	102.02	102.06	102.75	99.05
10-Feb-2003	103.99	102.59	102.64	103.47	99.10
11-Feb-2003	103.90	102.54	102.57	103.42	99.60
12-Feb-2003	103.82	102.89	102.86	103.52	99.84
13-Feb-2003	103.20	101.83	101.74	102.82	99.51
14-Feb-2003	103.14	102.28	102.07	102.76	100.15
17-Feb-2003	ND	ND	ND	ND	ND
18-Feb-2003	102.87	103.23	102.94	101.49	101.31
19-Feb-2003	102.80	102.87	102.60	101.25	101.08
20-Feb-2003	102.17	101.84	101.87	100.85	101.28
21-Feb-2003	102.20	102.28	102.19	101.37	101.67
24-Feb-2003	101.47	102.08	102.23	100.51	101.70
25-Feb-2003	101.36	101.67	102.24	99.97	102.56
26-Feb-2003	101.43	101.76	102.09	100.01	102.04
27-Feb-2003	101.53	102.13	102.42	100.34	102.10
28-Feb-2003	101.03	101.82	102.26	100.89	102.49
3-Mar-2003	100.85	101.15	101.74	100.64	102.37
4-Mar-2003	100.32	100.64	101.29	100.67	101.95
5-Mar-2003	99.99	99.88	100.51	100.12	100.79
6-Mar-2003	99.90	99.99	100.24	100.03	100.50

Date	Canadian Dollar	Swiss Franc	Euro	Yen	Sterling
7-Mar-2003	99.57	100.17	100.08	99.39	100.68
10-Mar-2003	99.53	99.49	99.65	99.46	100.76
11-Mar-2003	99.98	100.01	99.95	99.91	100.57
12-Mar-2003*	100.00	100.00	100.00	100.00	100.00
13-Mar-2003	100.86	101.31	101.41	100.96	100.45
14-Mar-2003	100.64	102.82	102.78	101.20	101.95
17-Mar-2003	100.73	103.98	103.93	101.08	102.85
18-Mar-2003*	100.41	103.97	103.76	101.47	103.23
19-Mar-2003	100.52	104.42	104.09	102.52	103.07
20-Mar-2003	100.41	104.17	103.86	102.45	102.93
21-Mar-2003	101.20	105.14	104.53	103.62	102.99
24-Mar-2003	100.52	104.00	103.56	103.00	102.42
25-Mar-2003	100.29	103.68	103.28	102.43	102.69
26-Mar-2003	99.88	103.85	103.24	102.52	102.46
27-Mar-2003	99.63	103.70	102.94	102.22	102.89
28-Mar-2003	99.67	103.07	102.43	102.56	102.91
31-Mar-2003	99.78	101.67	101.13	100.76	102.15
1-Apr-2003	100.01	101.67	101.09	100.91	102.30
2-Apr-2003	100.23	103.60	102.40	101.70	103.00
3-Apr-2003	100.22	103.71	102.67	102.02	102.61
4-Apr-2003	99.95	104.21	102.91	102.45	103.41
7-Apr-2003	100.78	105.11	103.79	102.76	104.06
8-Apr-2003	99.65	104.43	103.17	102.33	104.01
9-Apr-2003	99.66	104.08	102.81	102.88	103.64
10-Apr-2003	98.93	103.99	102.04	102.05	102.61
11-Apr-2003	98.58	104.64	102.53	102.81	102.65
14-Apr-2003	98.68	104.36	102.32	102.66	102.65
15-Apr-2003	98.55	104.48	102.06	102.58	102.70

\* As shown in the chart, dashed vertical lines mark FOMC meeting dates of January 29 and March 18, 2003, and a solid vertical line marks March 12, 2003. [Return to table](#)

ND No data [Return to table](#)

### Change since 3/12

Canadian dollar	-1.5%
Swiss franc	4.0%
Euro	1.7%
Yen	2.8%
Sterling	2.4%

**Bottom panel****Indexes of Trade-Weighted Value of the Dollar**

Index, March 12, 2003 = 100

Date	Major currencies	Broad	Other Important Trading Partners
1-Jan-2003	ND	ND	ND
2-Jan-2003	105.15	102.05	98.46
3-Jan-2003	104.70	101.78	98.40
6-Jan-2003	104.17	101.44	98.27
7-Jan-2003	104.55	101.53	98.04
8-Jan-2003	104.35	101.50	98.20
9-Jan-2003	104.19	101.44	98.26
10-Jan-2003	103.78	101.26	98.32
13-Jan-2003	103.58	101.23	98.48
14-Jan-2003	103.19	100.98	98.40
15-Jan-2003	103.10	100.92	98.38
16-Jan-2003	103.13	100.93	98.36
17-Jan-2003	102.67	100.82	98.66
20-Jan-2003	ND	ND	ND
21-Jan-2003	102.73	101.06	99.09
22-Jan-2003	102.44	101.08	99.47
23-Jan-2003	102.01	100.76	99.27
24-Jan-2003	101.70	100.69	99.49
27-Jan-2003	101.84	100.86	99.70
28-Jan-2003	102.07	101.01	99.76
29-Jan-2003 <sup>*</sup>	101.57	100.77	99.82
30-Jan-2003	102.21	100.98	99.53
31-Jan-2003	102.47	101.11	99.52
3-Feb-2003	102.33	101.12	99.70
4-Feb-2003	101.60	100.82	99.90
5-Feb-2003	101.85	100.85	99.66
6-Feb-2003	101.99	100.87	99.54
7-Feb-2003	102.22	101.06	99.69
10-Feb-2003	102.80	101.53	100.03
11-Feb-2003	102.78	101.49	99.97
12-Feb-2003	102.90	101.58	100.01
13-Feb-2003	102.09	101.18	100.10
14-Feb-2003	102.27	101.20	99.93
17-Feb-2003	ND	ND	ND
18-Feb-2003	102.40	101.09	99.55
19-Feb-2003	102.16	101.03	99.68



Date	Major currencies	Broad	Other Important Trading Partners
20-Feb-2003	101.61	100.80	99.84
21-Feb-2003	101.89	101.02	99.98
24-Feb-2003	101.49	100.76	99.90
25-Feb-2003	101.42	100.80	100.07
26-Feb-2003	101.34	100.71	99.96
27-Feb-2003	101.58	100.81	99.90
28-Feb-2003	101.51	100.81	99.98
3-Mar-2003	101.17	100.57	99.86
4-Mar-2003	100.79	100.51	100.18
5-Mar-2003	100.18	100.25	100.33
6-Mar-2003	100.02	100.24	100.51
7-Mar-2003	99.77	99.98	100.22
10-Mar-2003	99.60	99.96	100.39
11-Mar-2003	99.99	100.00	100.02
12-Mar-2003*	100.00	100.00	100.00
13-Mar-2003	101.03	100.45	99.75
14-Mar-2003	101.66	100.78	99.73
17-Mar-2003	102.21	101.14	99.88
18-Mar-2003*	102.17	101.10	99.84
19-Mar-2003	102.51	101.38	100.05
20-Mar-2003	102.35	101.24	99.93
21-Mar-2003	103.10	101.54	99.69
24-Mar-2003	102.34	101.14	99.73
25-Mar-2003	102.07	100.87	99.45
26-Mar-2003	101.93	100.81	99.48
27-Mar-2003	101.72	100.69	99.48
28-Mar-2003	101.58	100.58	99.39
31-Mar-2003	100.69	100.14	99.49
1-Apr-2003	100.79	100.17	99.44
2-Apr-2003	101.61	100.50	99.19
3-Apr-2003	101.73	100.54	99.14
4-Apr-2003	101.89	100.65	99.18
7-Apr-2003	102.62	101.01	99.12
8-Apr-2003	101.93	100.67	99.18
9-Apr-2003	101.84	100.62	99.17
10-Apr-2003	101.08	100.15	99.05
11-Apr-2003	101.31	100.24	98.98
14-Apr-2003	101.24	100.07	98.69

Date	Major currencies	Broad	Other Important Trading Partners
15-Apr-2003	101.09	99.96	98.63

\* As shown in the chart, dashed vertical lines mark FOMC meeting dates of January 29 and March 18, 2003, and a solid vertical line marks March 12, 2003. [Return to table](#)

### Change since 3/12

Major currencies	0.9%
Broad	-0.3%
OITP	-1.7%

## Chart 2 Selected Yield Curves

04-16-03

### Left panels 3-Month Eurocurrency Futures Rates

#### Yen

Percent

	April 16, 2003	April 8, 2003	March 17, 2003
Jun 2003	0.08	0.08	0.08
Sep 2003	0.09	0.10	0.09
Dec 2003	0.11	0.11	0.10
Mar 2004	0.14	0.14	0.14
Jun 2004	0.13	0.14	0.13
Sep 2004	0.16	0.17	0.16
Dec 2004	0.19	0.21	0.19
Mar 2005	0.25	0.26	0.25

#### Euro

Percent

	April 16, 2003	April 8, 2003	March 17, 2003
Jun 2003	2.47	2.36	2.41
Sep 2003	2.41	2.31	2.41
Dec 2003	2.46	2.38	2.50
Mar 2004	2.58	2.52	2.63
Jun 2004	2.77	2.74	2.82
Sep 2004	2.97	2.96	3.01
Dec 2004	3.20	3.21	3.22
Mar 2005	3.38	3.40	3.38

**Sterling**

Percent

	April 16, 2003	April 8, 2003	March 17, 2003
Jun 2003	3.56	3.49	3.50
Sep 2003	3.54	3.48	3.48
Dec 2003	3.60	3.58	3.56
Mar 2004	3.74	3.76	3.71
Jun 2004	3.92	3.97	3.87
Sep 2004	4.11	4.18	4.02
Dec 2004	4.27	4.36	4.15
Mar 2005	4.39	4.48	4.27

**Dollar**

Percent

	April 16, 2003	April 8, 2003	March 17, 2003
Jun 2003	1.28	1.18	1.19
Sep 2003	1.32	1.24	1.33
Dec 2003	1.47	1.42	1.59
Mar 2004	1.75	1.70	1.92
Jun 2004	2.09	2.06	2.27
Sep 2004	2.46	2.44	2.63
Dec 2004	2.82	2.83	2.96
Mar 2005	3.12	3.15	3.23

**Right panels**

**1-Year Forward Rates Derived From Swaps**

**Yen**

Percent

	April 16, 2003	April 8, 2003	March 17, 2003
2003	0.06	0.06	0.06
2004	0.14	0.14	0.13
2005	0.23	0.25	0.22
2006	0.35	0.38	0.33
2007	0.50	0.54	0.47
2008	0.66	0.72	0.65
2009	0.83	0.90	0.86
2010	1.00	1.09	1.07

	April 16, 2003	April 8, 2003	March 17, 2003
2011	1.17	1.26	1.27
2012	1.32	1.43	1.48

### Euro

Percent

	April 16, 2003	April 8, 2003	March 17, 2003
2003	2.56	2.47	2.60
2004	3.14	3.12	3.21
2005	3.71	3.74	3.73
2006	4.21	4.29	4.18
2007	4.62	4.74	4.60
2008	4.94	5.09	4.95
2009	5.19	5.36	5.22
2010	5.38	5.56	5.43
2011	5.54	5.71	5.59
2012	5.67	5.83	5.74

### Sterling

Percent

	April 16, 2003	April 8, 2003	March 17, 2003
2003	3.75	3.70	3.61
2004	4.12	4.15	4.03
2005	4.47	4.55	4.41
2006	4.74	4.83	4.72
2007	4.94	5.03	4.95
2008	5.08	5.16	5.12
2009	5.17	5.27	5.25
2010	5.24	5.35	5.34
2011	5.28	5.41	5.41
2012	5.31	5.45	5.48

### Dollar

Percent

	April 16, 2003	April 8, 2003	March 17, 2003
2003	1.54	1.45	1.48
2004	2.58	2.52	2.54
2005	3.55	3.53	3.49
2006	4.36	4.37	4.26

	April 16, 2003	April 8, 2003	March 17, 2003
2007	4.96	4.99	4.84
2008	5.36	5.41	5.25
2009	5.62	5.69	5.54
2010	5.81	5.91	5.76
2011	5.97	6.12	5.93
2012	6.12	6.36	6.07

### Chart 3

#### Stock Market Indexes

04-16-03

#### Top-left panel

#### Euro Area

(Ratio scale, Index, March 12, 2003 = 100, daily data)

Date	DJ Euro	DJ Euro Tech	DJ Euro Bank
2-Jan-2003	130.73	127.42	126.22
3-Jan-2003	130.39	128.21	125.58
6-Jan-2003	131.46	130.50	126.02
7-Jan-2003	130.41	129.24	125.64
8-Jan-2003	127.88	122.97	124.15
9-Jan-2003	129.67	127.33	125.11
10-Jan-2003	129.65	128.52	125.55
13-Jan-2003	130.14	128.25	127.02
14-Jan-2003	130.76	131.23	127.23
15-Jan-2003	129.29	128.85	126.02
16-Jan-2003	129.32	125.11	125.97
17-Jan-2003	125.54	118.88	121.31
20-Jan-2003	124.09	117.53	120.07
21-Jan-2003	122.83	ND	118.04
22-Jan-2003	120.62	117.38	115.67
23-Jan-2003	120.16	117.05	116.08
24-Jan-2003	118.71	114.21	114.23
27-Jan-2003	114.97	110.38	111.20
28-Jan-2003	114.99	110.16	110.41
29-Jan-2003*	115.80	111.99	110.40
30-Jan-2003	117.97	115.51	112.91
31-Jan-2003	118.50	113.09	113.07
3-Feb-2003	119.66	114.48	114.50

Date	DJ Euro	DJ Euro Tech	DJ Euro Bank
4-Feb-2003	115.78	110.06	110.62
5-Feb-2003	117.54	112.14	113.18
6-Feb-2003	115.26	109.52	111.49
7-Feb-2003	113.58	108.15	110.37
10-Feb-2003	113.00	107.57	109.17
11-Feb-2003	115.75	112.10	112.10
12-Feb-2003	113.30	109.17	109.73
13-Feb-2003	112.66	106.91	110.50
14-Feb-2003	115.71	110.19	114.31
17-Feb-2003	117.61	113.16	ND
18-Feb-2003	119.32	116.20	117.19
19-Feb-2003	116.30	113.66	114.53
20-Feb-2003	114.93	110.48	113.18
21-Feb-2003	116.09	110.60	114.25
24-Feb-2003	114.05	110.56	111.57
25-Feb-2003	110.39	105.57	108.36
26-Feb-2003	109.26	104.64	107.67
27-Feb-2003	111.22	105.10	109.74
28-Feb-2003	113.06	107.78	112.44
3-Mar-2003	113.08	108.12	112.54
4-Mar-2003	110.57	105.22	109.71
5-Mar-2003	109.83	104.44	109.33
6-Mar-2003	108.30	104.12	107.20
7-Mar-2003	106.15	101.00	105.51
10-Mar-2003	103.68	99.31	103.20
11-Mar-2003	103.35	99.31	102.68
12-Mar-2003*	100.00	100.00	100.00
13-Mar-2003	105.57	105.59	104.63
14-Mar-2003	110.49	111.99	110.85
17-Mar-2003	113.80	116.73	113.30
18-Mar-2003*	114.02	117.97	ND
19-Mar-2003	115.56	119.04	115.15
20-Mar-2003	114.22	118.47	113.55
21-Mar-2003	118.32	119.13	118.92
24-Mar-2003	112.60	115.92	113.25
25-Mar-2003	115.02	117.72	114.94
26-Mar-2003	114.57	117.21	114.85
27-Mar-2003	112.84	115.97	112.65
28-Mar-2003	112.62	114.09	112.58

Date	DJ Euro	DJ Euro Tech	DJ Euro Bank
31-Mar-2003	108.40	107.66	108.80
1-Apr-2003	109.76	109.69	110.41
2-Apr-2003	114.03	116.45	114.25
3-Apr-2003	115.07	117.02	115.90
4-Apr-2003	116.69	117.13	118.14
7-Apr-2003	121.02	123.44	121.73
8-Apr-2003	119.40	119.85	120.53
9-Apr-2003	119.20	119.22	120.47
10-Apr-2003	116.80	114.79	118.72
11-Apr-2003	117.97	116.49	119.94
14-Apr-2003	119.05	118.03	121.14
15-Apr-2003	121.18	121.00	123.36
16-Apr-2003	120.49	121.17	122.74

\* As shown in the chart, dashed vertical lines mark FOMC meeting dates of January 29 and March 18, 2003, and a solid vertical line marks March 12, 2003. [Return to table](#)

### Change since 3/12

DJ Euro	22.2%
DJ Euro Tech	22.9%
DJ Euro Bank	24.3%

### Top-right panel United Kingdom

(Ratio scale, Index, March 12, 2003 = 100, daily data)

Date	FTSE-350	FTSE-techMark	FTSE-Bank
2-Jan-2003	121.02	118.48	121.73
3-Jan-2003	121.01	119.15	121.91
6-Jan-2003	120.86	119.36	120.54
7-Jan-2003	119.66	117.96	118.53
8-Jan-2003	118.72	117.47	118.27
9-Jan-2003	119.01	118.27	118.85
10-Jan-2003	120.20	120.14	120.53
13-Jan-2003	119.52	121.17	119.86
14-Jan-2003	119.42	122.18	119.71
15-Jan-2003	117.77	120.83	117.84
16-Jan-2003	117.64	120.45	116.92
17-Jan-2003	115.92	117.72	114.92
20-Jan-2003	114.77	116.58	113.14
21-Jan-2003	113.64	116.53	111.63

Date	FTSE-350	FTSE-techMark	FTSE-Bank
22-Jan-2003	111.95	116.25	109.85
23-Jan-2003	110.39	115.88	108.35
24-Jan-2003	109.81	115.24	108.69
27-Jan-2003	106.14	111.00	105.72
28-Jan-2003	106.24	110.82	104.60
29-Jan-2003 <sup>*</sup>	105.84	109.19	103.30
30-Jan-2003	108.49	111.04	106.67
31-Jan-2003	108.17	109.71	105.65
3-Feb-2003	111.60	113.19	110.87
4-Feb-2003	108.88	110.71	108.41
5-Feb-2003	111.32	111.39	111.15
6-Feb-2003	109.09	109.74	108.69
7-Feb-2003	109.17	110.92	110.04
10-Feb-2003	108.65	110.50	107.99
11-Feb-2003	111.12	112.13	111.04
12-Feb-2003	109.56	110.61	110.82
13-Feb-2003	109.37	109.52	113.86
14-Feb-2003	109.38	109.72	111.65
17-Feb-2003	ND	111.80	ND
18-Feb-2003	112.69	111.72	115.58
19-Feb-2003	110.80	111.54	114.34
20-Feb-2003	111.55	111.51	113.92
21-Feb-2003	112.59	111.23	113.23
24-Feb-2003	111.99	110.24	112.86
25-Feb-2003	109.62	107.34	111.72
26-Feb-2003	108.81	106.63	110.51
27-Feb-2003	108.18	104.68	109.72
28-Feb-2003	110.59	107.84	113.53
3-Mar-2003	111.49	109.22	113.96
4-Mar-2003	109.84	107.70	111.32
5-Mar-2003	108.02	106.25	109.48
6-Mar-2003	107.76	106.15	109.23
7-Mar-2003	105.85	104.97	107.14
10-Mar-2003	104.29	103.01	104.65
11-Mar-2003	104.57	103.59	105.48
12-Mar-2003 <sup>*</sup>	100.00	100.00	100.00
13-Mar-2003	105.39	103.45	105.52
14-Mar-2003	108.68	106.99	109.32
17-Mar-2003	112.03	109.34	113.09



Date	FTSE-350	FTSE-techMark	FTSE-Bank
18-Mar-2003 <sup>*</sup>	ND	110.63	ND
19-Mar-2003	113.51	110.00	114.26
20-Mar-2003	113.57	108.67	114.29
21-Mar-2003	116.26	109.78	117.54
24-Mar-2003	112.92	107.67	113.99
25-Mar-2003	113.38	108.90	113.36
26-Mar-2003	114.27	109.04	114.60
27-Mar-2003	112.48	108.10	112.53
28-Mar-2003	111.93	108.14	111.57
31-Mar-2003	109.21	105.73	109.05
1-Apr-2003	111.14	107.18	111.01
2-Apr-2003	113.16	110.38	114.02
3-Apr-2003	113.68	111.51	115.18
4-Apr-2003	114.90	111.97	116.69
7-Apr-2003	118.47	114.96	121.06
8-Apr-2003	116.59	112.41	119.31
9-Apr-2003	116.36	112.51	118.89
10-Apr-2003	114.83	111.73	117.40
11-Apr-2003	115.03	112.47	117.47
14-Apr-2003	116.21	114.36	118.88
15-Apr-2003	118.17	115.77	122.29
16-Apr-2003	116.62	115.98	119.94

\* As shown in the chart, dashed vertical lines mark FOMC meeting dates of January 29 and March 18, 2003, and a solid vertical line marks March 12, 2003. [Return to table](#)

### Change since 3/12

FTSE-350	17.4%
FTSE-Tech	16.0%
FTSE-Bank	20.6%

### Bottom-left panel

#### Japan

(Ratio scale, Index, March 12, 2003 = 100, daily data)

Date	TOPIX	TOPIX-EM	TOPIX-Bank
2-Jan-2003	ND	ND	ND
3-Jan-2003	ND	ND	ND
6-Jan-2003	109.93	111.44	116.30
7-Jan-2003	109.15	111.68	113.70
8-Jan-2003	107.31	109.79	111.00

Date	TOPIX	TOPIX-EM	TOPIX-Bank
9-Jan-2003	107.28	109.37	110.77
10-Jan-2003	107.07	109.73	111.11
13-Jan-2003	ND	ND	ND
14-Jan-2003	108.12	111.11	113.06
15-Jan-2003	109.37	111.70	116.58
16-Jan-2003	109.45	111.67	118.21
17-Jan-2003	109.83	112.88	119.28
20-Jan-2003	109.14	111.09	119.46
21-Jan-2003	110.39	112.61	120.86
22-Jan-2003	109.16	112.02	119.14
23-Jan-2003	110.62	114.56	121.24
24-Jan-2003	110.10	113.32	120.99
27-Jan-2003	108.65	110.57	118.39
28-Jan-2003	107.51	109.35	116.54
29-Jan-2003 <sup>*</sup>	105.54	106.66	113.07
30-Jan-2003	105.47	107.15	112.12
31-Jan-2003	104.96	106.59	111.13
3-Feb-2003	107.07	109.13	115.74
4-Feb-2003	107.91	109.09	116.97
5-Feb-2003	108.04	109.30	115.93
6-Feb-2003	107.36	107.92	114.92
7-Feb-2003	107.25	107.13	114.51
10-Feb-2003	107.71	107.71	114.74
11-Feb-2003	ND	ND	ND
12-Feb-2003	109.57	109.72	118.13
13-Feb-2003	109.03	108.55	119.55
14-Feb-2003	109.67	109.76	119.44
17-Feb-2003	110.14	111.02	118.79
18-Feb-2003	109.50	110.01	116.18
19-Feb-2003	109.10	110.08	113.67
20-Feb-2003	108.56	109.94	110.08
21-Feb-2003	107.38	108.69	109.23
24-Feb-2003	107.23	109.02	108.94
25-Feb-2003	104.71	106.69	105.17
26-Feb-2003	104.60	106.51	104.23
27-Feb-2003	104.71	105.93	105.20
28-Feb-2003	104.65	105.91	104.06
3-Mar-2003	105.53	107.52	101.72
4-Mar-2003	105.84	107.64	103.85

Date	TOPIX	TOPIX-EM	TOPIX-Bank
5-Mar-2003	105.17	106.90	103.34
6-Mar-2003	104.33	105.64	103.99
7-Mar-2003	101.77	103.27	101.54
10-Mar-2003	100.28	101.08	99.39
11-Mar-2003	98.50	98.37	98.36
12-Mar-2003*	100.00	100.00	100.00
13-Mar-2003	99.51	99.51	100.43
14-Mar-2003	100.47	102.40	99.46
17-Mar-2003	99.34	100.71	96.62
18-Mar-2003*	100.15	102.76	97.43
19-Mar-2003	100.86	103.65	98.10
20-Mar-2003	103.21	105.36	99.76
21-Mar-2003	ND	ND	ND
24-Mar-2003	106.27	108.83	102.37
25-Mar-2003	103.83	105.53	100.80
26-Mar-2003	104.99	106.47	101.53
27-Mar-2003	105.25	106.63	102.51
28-Mar-2003	104.55	104.73	101.20
31-Mar-2003	100.72	100.93	97.72
1-Apr-2003	100.84	100.66	96.43
2-Apr-2003	101.94	101.81	95.87
3-Apr-2003	101.45	101.75	93.51
4-Apr-2003	101.69	102.09	94.61
7-Apr-2003	103.61	104.47	97.09
8-Apr-2003	102.59	102.67	94.66
9-Apr-2003	102.40	101.01	94.97
10-Apr-2003	101.29	99.39	93.79
11-Apr-2003	99.99	96.84	94.37
14-Apr-2003	99.14	ND	93.42
15-Apr-2003	100.75	98.31	95.41
16-Apr-2003	100.84	99.79	94.57

\* As shown in the chart, dashed vertical lines mark FOMC meeting dates of January 29 and March 18, 2003, and a solid vertical line marks March 12, 2003. [Return to table](#)

### Change since 3/12

TOPIX	0.8%
TOPIX-EM	-0.2%
TOPIX-Bank	-5.4%

**Bottom-right panel****United States**

(Ratio scale, Index, March 12, 2003 = 100, daily data)

Date	S&P 500	NASDAQ	S&P Banks
2-Jan-2003	113.04	108.26	117.39
3-Jan-2003	112.98	108.43	117.79
6-Jan-2003	115.52	111.11	121.69
7-Jan-2003	114.77	111.91	120.66
8-Jan-2003	113.15	109.52	119.29
9-Jan-2003	115.34	112.45	121.26
10-Jan-2003	115.34	113.17	121.94
13-Jan-2003	115.18	113.04	121.97
14-Jan-2003	115.85	114.21	123.31
15-Jan-2003	114.18	112.47	121.41
16-Jan-2003	113.73	111.15	120.52
17-Jan-2003	112.14	107.58	119.69
20-Jan-2003	ND	ND	119.69
21-Jan-2003	110.37	106.65	116.92
22-Jan-2003	109.22	106.27	114.63
23-Jan-2003	110.34	108.52	116.27
24-Jan-2003	107.11	104.92	111.99
27-Jan-2003	105.38	103.60	109.94
28-Jan-2003	106.76	104.92	111.70
29-Jan-2003*	107.48	106.16	112.02
30-Jan-2003	105.03	103.37	108.86
31-Jan-2003	106.41	103.26	110.17
3-Feb-2003	106.98	103.48	111.00
4-Feb-2003	105.47	102.10	108.44
5-Feb-2003	104.90	101.74	108.07
6-Feb-2003	104.22	101.76	106.32
7-Feb-2003	103.17	100.25	105.45
10-Feb-2003	103.95	101.36	105.97
11-Feb-2003	103.11	101.27	104.29
12-Feb-2003	101.80	99.98	102.81
13-Feb-2003	101.64	99.86	103.09
14-Feb-2003	103.82	102.42	105.63
17-Feb-2003	ND	ND	105.63
18-Feb-2003	105.84	105.26	107.74
19-Feb-2003	105.09	104.31	107.43
20-Feb-2003	104.09	104.06	106.17

Date	S&P 500	NASDAQ	S&P Banks
21-Feb-2003	105.47	105.45	107.18
24-Feb-2003	103.53	103.37	104.56
25-Feb-2003	104.28	103.89	105.42
26-Feb-2003	102.90	101.91	104.17
27-Feb-2003	104.11	103.49	105.83
28-Feb-2003	104.60	104.56	106.89
3-Mar-2003	103.81	103.21	106.16
4-Mar-2003	102.21	102.23	104.08
5-Mar-2003	103.19	102.75	105.40
6-Mar-2003	102.23	101.85	103.85
7-Mar-2003	103.07	102.04	105.16
10-Mar-2003	100.41	99.93	101.06
11-Mar-2003	99.57	99.39	99.44
12-Mar-2003*	100.00	100.00	100.00
13-Mar-2003	103.45	104.81	105.00
14-Mar-2003	103.62	104.78	105.18
17-Mar-2003	107.29	108.84	109.19
18-Mar-2003*	107.74	109.48	110.55
19-Mar-2003	108.68	109.21	112.21
20-Mar-2003	108.89	109.66	112.49
21-Mar-2003	111.39	111.15	115.94
24-Mar-2003	107.47	107.08	111.94
25-Mar-2003	108.77	108.74	112.28
26-Mar-2003	108.18	108.46	112.55
27-Mar-2003	108.00	108.21	112.35
28-Mar-2003	107.38	107.06	111.67
31-Mar-2003	105.47	104.84	108.71
1-Apr-2003	106.75	105.40	111.69
2-Apr-2003	109.54	109.18	115.14
3-Apr-2003	108.99	109.17	114.79
4-Apr-2003	109.28	108.15	116.17
7-Apr-2003	109.42	108.62	116.27
8-Apr-2003	109.21	108.11	116.76
9-Apr-2003	107.68	106.06	115.06
10-Apr-2003	108.38	106.75	115.54
11-Apr-2003	107.97	106.22	115.90
14-Apr-2003	110.08	108.26	119.31
15-Apr-2003	110.77	108.74	122.16
16-Apr-2003	109.42	109.03	120.17

\* As shown in the chart, dashed vertical lines mark FOMC meeting dates of January 29 and March 18, 2003, and a solid vertical line marks March 12, 2003. [Return to table](#)

Change since 3/12

S&P 500	11.4%
NASDAQ	10.5%
S&P Bank	23.1%

Chart 4

04-16-03

Top panel  
Crude Oil Futures Prices

\$/barrel

Date	NYMEX WTI June	IPE Brent June
2-Jan-2003	27.81	26.34
3-Jan-2003	28.47	26.98
6-Jan-2003	27.91	26.34
7-Jan-2003	27.83	26.30
8-Jan-2003	27.76	26.20
9-Jan-2003	28.45	26.94
10-Jan-2003	28.16	26.59
13-Jan-2003	28.72	27.15
14-Jan-2003	29.04	27.54
15-Jan-2003	29.45	27.89
16-Jan-2003	29.79	28.19
17-Jan-2003	29.94	28.31
20-Jan-2003	ND	28.30
21-Jan-2003	29.91	28.33
22-Jan-2003	29.78	28.19
23-Jan-2003	29.55	28.00
24-Jan-2003	30.13	28.56
27-Jan-2003	29.60	28.11
28-Jan-2003	30.07	28.58
29-Jan-2003*	30.75	29.28
30-Jan-2003	30.96	29.35
31-Jan-2003	30.86	29.23
3-Feb-2003	30.52	28.77
4-Feb-2003	31.15	29.42
5-Feb-2003	31.45	29.77

Date	NYMEX WTI June	IPE Brent June
6-Feb-2003	31.45	29.69
7-Feb-2003	32.03	30.37
10-Feb-2003	31.54	29.84
11-Feb-2003	32.07	30.40
12-Feb-2003	32.15	30.40
13-Feb-2003	32.64	30.72
14-Feb-2003	32.72	30.73
17-Feb-2003	ND	30.17
18-Feb-2003	32.74	30.71
19-Feb-2003	32.76	30.73
20-Feb-2003	32.11	30.17
21-Feb-2003	32.92	30.80
24-Feb-2003	33.54	31.53
25-Feb-2003	32.97	30.60
26-Feb-2003	33.56	31.11
27-Feb-2003	33.51	31.11
28-Feb-2003	33.28	30.84
3-Mar-2003	32.85	30.76
4-Mar-2003	33.29	31.18
5-Mar-2003	33.36	31.05
6-Mar-2003	33.76	31.48
7-Mar-2003	34.43	32.09
10-Mar-2003	34.32	32.08
11-Mar-2003	34.06	31.79
12-Mar-2003 <sup>*</sup>	34.67	32.40
13-Mar-2003	33.17	31.15
14-Mar-2003	31.96	29.51
17-Mar-2003	31.09	28.96
18-Mar-2003 <sup>*</sup>	28.97	26.88
19-Mar-2003	28.54	26.54
20-Mar-2003	27.27	25.30
21-Mar-2003	26.18	24.27
24-Mar-2003	27.54	25.71
25-Mar-2003	26.46	24.57
26-Mar-2003	26.83	24.81
27-Mar-2003	28.45	26.03
28-Mar-2003	28.36	25.85
31-Mar-2003	29.19	26.56
1-Apr-2003	28.23	25.73

Date	NYMEX WTI June	IPE Brent June
2-Apr-2003	27.21	24.68
3-Apr-2003	27.26	24.98
4-Apr-2003	26.86	24.41
7-Apr-2003	26.51	24.34
8-Apr-2003	26.73	24.53
9-Apr-2003	27.73	25.32
10-Apr-2003	26.74	24.48
11-Apr-2003	27.11	24.77
14-Apr-2003	27.06	24.85
15-Apr-2003	27.53	25.16
16-Apr-2003	27.53	25.02

\* As shown in the chart, dashed vertical lines mark FOMC meeting dates of January 29 and March 18, 2003, and a solid vertical line marks March 12, 2003. [Return to table](#)

### Change since 3/12

WTI June	-\$7.05
Brent June	-\$7.22

### Bottom panel

#### Implied Distributions from Oil Futures Options

The bottom panel represents implied distributions from June 2003 and December 2003 NYMEX West Texas Intermediate oil futures options on April 15, 2003. The June 2003 NYMEX WTI distribution has a range from approximately 17 to 42 dollars per barrel, and is roughly symmetric with noticeable peak at 27.53 dollars per barrel. The December 2003 NYMEX WTI distribution has a range from approximately 6 to 50 dollars per barrel, with a peak at 25.69 dollars per barrel. The December 2003 WTI distribution is asymmetric, with greater weight placed on the likelihood of a price below 25 dollars per barrel than on the likelihood of a price greater than 30 dollars per barrel.

	Futures	Median	Implied Volatility	2/3 Bounds	Excess Skewness
June 2003 Contract	27.53	27.41	40.03	[24.90,30.13]	-0.02
Dec 2003 Contract	25.69	25.81	28.37	[20.32,30.12]	-0.15

## Appendix 3: Materials used by Mr. Wilcox

April 16, 2003

### NONFINANCIAL DEVELOPMENTS

#### Chart 1



## Industrial Production

4-16-03

### Top panel

(Percent change from previous period; seasonally adjusted)

	2002	2003	2003		
	Q4	Q1	Jan.	Feb.	Mar.
	---annual rate---		-----monthly rate-----		
1. Total	-3.4	.4	.8	-.1	-.5
2. (Previous)	(-3.1)		(.8)	(.1)	
3. Manufacturing	-3.7	-.7	.6	-.3	-.2
4. Motor vehicles and parts	-5.6	1.0	4.4	-2.4	-1.8
5. High-tech industries <sup>1</sup>	6.7	6.9	.8	.8	1.6
6. Other	-4.3	-1.5	.2	-.1	-.1
7. Mining	1.0	2.2	-1.5	.4	.6
8. Utilities	-3.3	10.3	4.0	1.3	-4.1

1. Computers, semiconductors, and communications equipment. [Return to table](#)

### Middle-left panel

#### Industrial Production: High-Tech Industries

The figure covers the time period from 1999 through March 2003. The High-Tech Industries represented in the figure are computers, semiconductors and communications equipment. The data are plotted on a curve showing the percent 3-month change at an annual rate.

The curve starts slightly above 40 percent at the beginning of 1999. The curve then increases to 50, drops back to about 40, then peaks near 50 again around 1999:Q3 before falling to faintly above 20 percent during 1999:Q4. The curve then reaches the maximum of the charted time at about 60 percent during 2000:Q2. The curve then falls steadily to slightly below -20 percent in 2001:Q2 with the exception of small increases at the end of 2000. After reaching the minimum of the charted period in 2001:Q2 the curve increases to slightly below 20 percent in 2002:Q2 followed by a decline through most of 2003:Q1 to about 5 percent. The curve turns up for March, which is plotted at a little above 10 percent.

### Middle-right panel

#### Industrial Production: Other Manufacturing

The figure covers the period from 1999 through March 2003. The manufacturing industries represented in the figure exclude motor vehicles and parts and high-tech industries. The data are plotted on a curve showing the percent 3-month change at an annual rate.

The curve begins just above negative 2 percent at the start of 1999. The curve increases to about 1 during 1999:Q1, then falls to zero during Q3. The curve then rises to near 6 percent at the end of 1999 before dropping to about 1 percent during 2000:Q1. In 2000:Q2, the curve rises to over 4 percent before falling steadily, with a small peak rising from near negative 5 percent to above negative 4 percent at the end of 2000, reaching about negative 8 percent in 2001:Q1. The curve then increases, reaching about -4 percent in 2001:Q3, then falls to the minimum of the charted period at

below negative 8 percent at the end of 2001. The curve has a sharp increase to about 4 percent during 2002:Q1 followed by a decrease to 1 percent and an increase to just above 2 at about mid-2002. The curve then jumps down to near negative 6 percent during 2002:Q4. During 2003:Q1, the curve begins to increase again with a March value at about 0 percent.

**Bottom panel**  
**Manufacturing Capacity Utilization**

The period of the figure is from 1979 through March 2003. The data is represented as a curve and measured in percent of manufacturing capacity utilization. There is a horizontal line drawn across the figure at 81.2 percent, which represents the average manufacturing capacity utilization from 1959 through 2002. Three shaded areas are shown on the chart that represent recessions; one goes from the beginning through about mid-1980, the second one starts in mid-1981 and goes through almost the end of 1982, and the third one goes from mid-1990 through about the first quarter of 1991.

The curve begins at just above 85 percent and falls to about 75 in mid-1980. The curve increases to about 79 at the end of 1980 before it starts declining until the end of 1982, where it reaches below 70. The curve then increases through mid-1984 when it reaches about 80 percent. The curve dips slightly, then starts to increase in mid-1986 until the end of 1988, when the curve is at about 85 percent. The curve decreases until around 77 at the beginning of 1991 when it begins a slow increase to slightly below 85 percent at the end of 1994. The curve then hovers at and slightly above the average of 81.2 through mid-2000 when the curve decreases from slightly above the average to about 73 at the end of 2001. Following a slight bump in the curve during 2002, the March 2003 data point is marked as 72.9.

**Chart 2**  
**Consumer Price Index**

4-16-03

**Top panel**

(Percent change from preceding period)

	Relative Importance Feb. 2003	Twelve-month changes, March to March		Monthly changes 2003		
		2002	2003	Jan.	Feb.	Mar.
1. All items	100.0	1.5	3.0	.3	.6	.3
2. Energy	7.3	-10.7	23.4	4.0	5.9	4.6
3. Food	14.5	2.6	1.4	-.2	.7	.2
4. Less food and energy	78.2	2.4	1.7	.1	.1	.0
5. Commodities	22.7	-1.1	-1.4	-.3	-.1	-.1
6. Services	55.5	3.9	3.0	.3	.1	.0
Memo:						
7. Core PCE price index		1.5	1.4 <sup>e</sup>	.0	.1	.0 <sup>e</sup>

Note. Monthly changes are seasonally adjusted.

e. Staff estimates. [Return to table](#)

Middle panel

Core Consumer Price Inflation

The core consumer price inflation is total consumer price inflation less energy and food and beverages. The period covered is from 1996 to March 2003, and the data represent the 12-month percent changes.

The data are plotted on two curves. One curve represents core consumer price inflation (CPI) using current methods, and the other represents core Personal Consumption Expenditure (PCE) price index with the March 2003 value being a Federal Reserve Board staff forecast.

The curve for core CPI using current methods starts at about 2.5 percent at the beginning of 1996 and decreases to about 2 percent in mid-1999. It rises to about 3 percent by the end of 2001, and then decreases to 1.7 percent by March 2003.

The curve for core PCE price index starts at just above 2 percent at the beginning of 1996, and then decreases to about 1.9 percent in mid-1996. The curve increases to 2 percent in 1997, then decreases to around 1.5 percent in 1999. The curve then steadily increases to about 1.9 percent in 2001. The curve decreases through 2002 and ends at about 1.4 percent in March 2003.

Bottom-left panel

Housing Starts and Permits

(Seasonally adjusted)

	2003		
	Jan.	Feb.	Mar.
	millions of units, annual rate		
<i>Housing Starts</i>			
1. Total	1.83	1.64	1.78
2. Single-family	1.51	1.31	1.41
3. Multifamily	.32	.33	.37
<i>Adjusted Permits</i> <sup>1</sup>			
4. Single-family	1.45	1.37	1.37
5. Multifamily	.37	.49	.38

1. Adjusted permits equal permits issued plus total starts outside of permit-issuing areas. [Return to table](#)

Bottom-right panel

Single Family Starts and Adjusted Permits

"Starts" means the number of new single-family homes with construction started, usually counted when ground is broken. "Adjusted permits" are the number of building authorizations from a local government, and they are adjusted by FRB staff to correct for the absence of full coverage of reported permits. The period covered is from 1996 to March 2003, and the data represent millions of units.

The data are plotted on two curves. One curve represents starts, and the other represents adjusted permits.

The curve for starts begins at about 1.15 million units at the beginning of 1996 and increases to about

1.2 million units in mid-1996. It falls to below 1.1 million units in 1997 and slowly rises to a peak of about 1.4 million units in late 1998. Starts then fall to around 1.15 million units in 2000; after the drop, starts rise erratically to a level of about 1.4 million units in March 2003.

The curve for adjusted permits begins at just above 1.1 million units in 1996, and then follows much of the same pattern as starts throughout the time period shown. Adjusted permits increase to about 1.35 million units in March 2003.

Source: Census Bureau.

### **Chart 3**

#### **Current Indicators**

4-16-03

#### **Top-left panel**

##### **UI--Initial Claims**

UI stands for Unemployment Insurance, and initial claims means weekly initial claims for unemployment insurance. The period covered is from 2002 to April 5, 2003, and the data represent thousands of claims.

The data are plotted on two curves. One curve shows weekly claims; the other shows the four-week moving average of weekly claims.

The weekly curve is more volatile. It starts at about 410 thousand at the beginning of 2002 and decreases to about 385 thousand in February. It rises steeply to about 480 thousand in March, and then falls steeply to about 370 thousand by July 2002. It increases to about 415 thousand by September, then decreases again to about 365 thousand by January 2003. From there, it continues its volatile week-to-week movements, but increases steadily, on net, through April 5, 2003, where its value is about 410 thousand.

The four-week moving average follows the same contour, but smoothes through some of the volatility of the weekly series. It starts in January 2002 at about 410 thousand, then decreases to about 390 thousand in February. It rises steeply to about 445 thousand in March, and then decreases to 380 thousand by July. It rises to about 415 thousand by September, and then decreases to about 410 thousand by January 2003. From there, it rises to about 420 thousand by April 5, 2003.

#### **Top-right panel**

##### **UI--Insured Unemployment**

UI stands for Unemployment Insurance, and insured unemployment is continuing claims for unemployment insurance. The period covered is from 2002 to March 29, 2003. The data represent millions of people collecting unemployment insurance.

The data are plotted on two curves. One curve shows weekly insured unemployment; the other shows the four-week moving average of weekly insured unemployment.

The weekly curve is more volatile. It starts at about 3.5 million at the beginning of 2002, moves up to about 3.75 million by May, falls to about 3.45 million by June, rises to about 3.65 million by September, falls to about 3.3 million in January 2003, and then rises to about 3.5 million by March 29, 2003.

The four-week moving average is smoother. It starts at about 3.5 million at the beginning of 2002, moves up to about 3.7 million by May, falls to about 3.5 million by July, rises to about 3.6 million by September, falls to about 3.35 million by January 2003, and then rises to about 3.5 million by March 29, 2003.

### **Middle-left panel**

#### **Total Motor Vehicle Sales**

The time period covered is from the start of 2002 to March of 2003. The total motor vehicle sales data are represented as a curve and measured in millions of units.

The curve starts at about 16.25, increases slightly to near 17.5 in April, then goes down near 16 in May. The curve then increases steadily to slightly above 19 in August followed by a drop to slightly below 16 in October. The curve increases to near 18.5 in December and then drops back to slightly below 16 in February of 2003. It increases in March to about 16.25.

The range of April forecasts is between about 16 and approximately 18.25.

### **Middle-right panel**

#### **Production of Domestic Motor Vehicles**

The period of the figure is from the start of 2002 through mid-2003. The data are plotted on a curve. Filled-in circles mark quarterly averages in 2002 and the first quarter of 2003, and an open circle marks the schedule for the second quarter of 2003, with Federal Reserve Board Seasonals. The data is presented in millions of units at an annual rate.

The curve starts slightly above 12, staying relatively flat through May 2002 when it starts to increase to slightly above 13 around July. The production curve decreases to near 12 in October, spikes up to 13 in November, back near 12 in December, then increases again near 13 in January 2003. A smooth decrease follows the January point nearing 11.25 in April 2003 and increasing to 12 in June.

The quarterly average (filled-in circle) for 2002:Q1 is just above 12, Q2 is slightly higher, Q3 is near 13, and Q4 is slightly below 12.5; the quarterly average for 2003:Q1 is even with 2002:Q4 at just below 12.5. 2003:Q2's schedule (open circle) is near 11.75.

Note: April through June are schedules.

### **Bottom-left panel**

#### **Chain Store Sales**

This figure displays an index of chain stores sales. An increase in the index indicates an increase in merchandise sold at selected chain stores, and a decrease indicates a decrease in merchandise sold from one month to the next. The period covered is from January 2002 to April 12, 2003.

The curve starts at about 397 at the beginning of 2002, spikes to about 415 by February, falls to about 399 by April, rises steeply to about 416 by June, falls to about 393 by December, rises steeply to about 412 by January 2003, and moves down, on net, to about 407 by April 12, 2003.

Source: Bank of Tokyo-Mitsubishi.

### **Bottom-right panel**

#### **Consumer Sentiment**

This figure displays an index (1966=100) of consumer sentiment as measured bimonthly in the Michigan SRC surveys of consumers. The period covered is from January 2002 to the first half of

April 2003.

The curve starts at about 94 in January 2002, moves up (with some volatility) to about 100 by June, and then declines steadily to about 75 in March 2003. It rebounds somewhat to about 84 by the first half of April 2003.

Source: Michigan SRC.

## Domestic Energy Markets

4-16-03

### Top-left panel

#### Gasoline and Crude Oil Prices

The period covered is from 2002 to April 15, 2003, and the data represent the weekly retail price of gasoline and daily spot price of West Texas intermediate crude oil. The data are plotted on two curves. One curve represents retail price of gasoline, and the other curve represents the price of West Texas intermediate crude oil. The data are not seasonally adjusted.

The curve for retail gasoline starts at about 110 cents per gallon at the beginning of 2002 and increases to about 140 cents per gallon by the end of March 2002. It remains steady through 2002, increases to a peak of about 175 cents per gallon in the first three months of 2003, then drops down to about 160 cents per gallon by April 14, 2003.

The curve for West Texas intermediate crude oil starts around 50 cents per gallon, holds between 60 to 70 cents per gallon during the last 10 months of 2002, peaks at about 90 cents per gallon in March 2003, then ends at about 70 cents per gallon on April 15, 2003.

### Top-right panel

#### Gasoline Inventories

The period covered is from 2002 to July 2003, and the data represent the weekly U.S. domestic gasoline inventories and the 5-year monthly average of U.S. domestic gasoline inventories. The 5-year monthly average of gasoline inventories is defined to be the monthly mean over the five most recent years for which we have data.

The data are plotted on two curves. One curve represents the gasoline inventories, and the other curve represents the repeated 5-year monthly average of gasoline inventories. The data are not seasonally adjusted.

The curve for gasoline inventories starts at about 210 million barrels at the beginning of 2002, hits a minimum at about 192 million barrels by November 2002, retraces back to 215 million barrels by January 2003, then ends at approximately 202 million barrels on April 4, 2003.

The curve for the 5-year monthly average of gasoline inventories starts at about 218 million barrels in 2002, decreases to about 209 million barrels in March 2002, increases to 215 million barrels by May 2002, declines to its minimum at about 199 million barrels in August 2002, then ends 2002 at 205 million barrels. In 2003, the curve follows the same path as 2002.

### Bottom-left panel

#### Natural Gas Spot Price

The period covered is from 2002 to April 14, 2003, and the data represent the daily Henry Hub Natural Gas Spot Price. The data are plotted on one curve.

The curve for natural gas starts at about 2 dollars per million British Thermal Units (MMBtU) at the beginning of 2002, climbs steadily to about 6 dollars per MMBtU in February 2003, then spikes to about 19 dollars per MMBtU in late February 2003, then retracing back to about 5 dollars per MMBtU by the end of March 2003, finally the curve ends at approximately 5 dollars per MMBtU on April 14, 2003.

### **Bottom-right panel**

#### **Natural Gas Inventories**

The period covered is from January 1997 to April 4, 2003. The data represent the end-of-month U.S. domestic Natural Gas Inventories, defined as working gas in storage. The data are measured in billions of cubic feet.

The data are plotted on four curves and an open circle. One curve represents the 1997-2000 average of U.S. domestic natural gas inventories. The second curve represents the 2001 U.S. domestic natural gas inventories. The third curve represents the 2002 U.S. domestic natural gas inventories. The fourth and final curve represents the 2003 U.S. domestic natural gas inventories. The open circle represents U.S. domestic natural gas inventories on April 4, 2003.

The curve for 1997-2000 average U.S. domestic natural gas inventories starts at around 1750 billion cubic feet in January, decreases to about 1250 billion cubic feet in March, increases to about 3000 billion cubic feet in October, and ends at about 2250 billion cubic feet in December.

The curve for 2001 U.S. domestic natural gas inventories starts at around 1250 billion cubic feet in January, decreases to about 750 billion cubic feet in March, increases to about 3200 billion cubic feet in November, and ends at about 2900 billion cubic feet in December.

The curve for 2002 U.S. domestic natural gas inventories starts at around 2400 billion cubic feet in January, decreases to about 1500 billion cubic feet in March, increases to about 3100 billion cubic feet in October, and ends at about 2400 billion cubic feet in December.

The curve for 2003 U.S. domestic natural gas inventories starts at around 1500 billion cubic feet in January and ends at about 700 billion cubic feet in March.

The open circle represents natural gas inventories that were at approximately 700 billion cubic feet on April 4, 2003.

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