



## Telephone Conference Meeting of the Federal Open Market Committee

### April 8, 2003 Presentation Materials -- Text Version

[Presentation Materials \(637 KB PDF\)](#)

Pages 14 to 31 of the Transcript

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

##### Exhibit 1

##### Treasury Securities Market

Exhibit 1 includes four panels that provide information on developments in the Treasury securities market.

##### Top panel

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

A line graph shows two- and ten-year Treasury yields from March 13, 2003 to April 8, 2003 at five-minute intervals. The two-year yield rises from about 1.4 to 1.8 percent between March 13 and March 21, declines to about 1.5 percent on April 1, then trends up and reaches about 1.6 percent on April 8. The ten-year yield follows a similar pattern, rising from about 3.6 to 4.1 percent between March 13 and March 21, declining steadily to about 3.8 percent on April 1, then retracing to around 4.0 percent by April 8.

Note. Treasury yield shown is that of the on-the-run issue.

##### Middle-left panel

##### Treasury Yield Curve

A line graph shows the treasury yield curve from before the onset of the Iraqi war (March 19, 2003 at 4:00 p.m.) to the current date (April 8, 2003 11:00 a.m.). The curves are nearly identical, rising steeply from 1 percent at the shortest maturity to 4 percent at the 10 year maturity before flattening out at about 5 percent at the 30 year maturity.

##### Middle-right panel

##### Ten-year TIPS Yield

A line graph shows daily ten-year TIPS yields between January 2003 and April 2003. Yields decreased from about 2.4 percent in early January to a low of about 1.6 percent in early March before rising sharply to 2.2 percent in mid-March and fluctuating only modestly subsequently.

##### Bottom panel

##### Selected Treasury Yields

	<b>Today 4/8/03*</b> (1)	<b>Wednesday 3/19/03</b> (2)	<b>Change (1)-(2)</b>
Nominal			<b>-basis points-</b>
1. Two-year	1.58	1.70	-12
2. Five-year	2.90	2.97	-7
3. Ten-year	3.98	3.98	0
Indexed			<b>-basis points-</b>
4. Ten-year	2.12	2.10	2

\* Quotes taken at approximately 11:00 am. [Return to table](#)

## Exhibit 2

### Equity Market

Exhibit 2 includes 3 panels outlining the equity market reaction to the war.

#### Top panel

##### Major Stock Indexes

The line graph displays movements in the S&P 500 (dotted line), Wilshire 5000 (solid line), and Nasdaq (dashed line) stock market indexes from March 13, 2003 to April 8, 2003 scaled to equal 100 on March 13 at 9:30 a.m. and reported at five-minute intervals. The S&P 500, Wilshire and the Nasdaq all rise from 100 on March 13 to roughly 110. There are subsequent drops on March 24 and March 31 which are partly retraced by a jump on April 2. The S&P 500 and Wilshire 5000 end at roughly 109 and the Nasdaq ends at around 107.

#### Middle panel

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

A line graph displays S&P 100 implied volatility from March 13, 2003 to April 8, 2003 at a frequency of five-minute intervals. The series generally trends down over the period, beginning at about 38 percent and reaching around 30 percent by April 8.

#### Bottom panel

##### Selected Equity Market Quotes

	<b>Today 4/8/03*</b> (1)	<b>Wednesday 3/19/03</b> (2)	<b>Change (1)-(2)</b>
Major Indexes			<b>-percent-</b>
1. Wilshire 5000	8338.08	8258.42	1.0
2. S&P 500	881.67	874.02	0.9
3. Nasdaq	1389.12	1397.08	-0.6
Option-Implied Volatility			<b>-percentage points-</b>
4. S&P 100 (VIX)	30.42	35.74	-5.32

\* Quotes taken at approximately 11:00 am. [Return to table](#)

## Exhibit 3

### Monetary Policy Expectations

Exhibit 3 includes four panels focused on monetary policy expectations.

#### Top panel

##### Interest Rate Futures

A line graph displays rates on the March 2004 Eurodollar futures contract and the May 2003 federal funds futures contract between March 13, 2003 and April 8, 2003 at five-minute intervals. Rates on the federal funds and Eurodollar contracts start at around 1.09 percent and 1.7 percent, respectively, on March 13, rise until March 21, decline until March 31, and rise thereafter and reach about 1.16 percent and 2.1 percent, respectively, on April 8.

#### Middle-left panel

##### Expected Federal Funds Rates<sup>\*</sup>

The line graph displays the expected federal funds rate path inferred from future quotes for March 19, 2003 (dotted line) and for April 8, 2003 (solid line). The April 8 line starts at 1.25 percent, dips slightly for the rest of 2003 but then rises to reach about 3.0 percent in August 2005. On net, the expected path of the funds rate shifted down somewhat over this period.

<sup>\*</sup> Estimates from federal funds and eurodollar futures [Return to text](#)

#### Middle-right panel

##### Short-term Eurodollar Implied Volatility<sup>\*</sup>

A line graph displays short-term Eurodollar implied volatility from January 2003 until April 2003. This measure of implied volatility fluctuates over the period, but trends higher from around 30 percent to about 50 percent, suggesting that uncertainty about the path of policy has increased since early in the year.

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

#### Bottom panel

##### Probability of 1.00% target as opposed to 1.25% target<sup>\*</sup>

A line graph displays the evolution of the probability of a 1.00 percent target following the May FOMC meeting over the period from March 13, 2003 to April 8, 2003 at five-minute intervals. The series declines from 100 percent to about 50 percent between March 13 and March 21, then increases to about 105 percent by March 31, but drops to about 50 percent by April 8.

<sup>\*</sup> Represents the probability that the target funds rate will be 1.00% following the May 6 FOMC meeting. 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 shows the ten-year swap spread between March 13, 2003 and April 8, 2003 at five-minute intervals. The spread widens from about 41 basis points on March 13 to 46 basis points on March 21 then steadily declines to around 39 basis points on April 8.

### Middle panel

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

	Stock Prices			CDS Premia		
	Today 4/8/03* (1)	Wednesday 3/19/03 (2)	Change (1)-(2)	Today 4/8/03* (3)	Wednesday 3/19/03 (4)	Change (3)-(4)
			-percent-			-basis points-
1. Bank of America	69.75	69.50	0.4	25.0	31.0	-6.0
2. Citigroup	37.35	35.46	5.3	22.0	34.0	-12.0
3. Goldman Sachs	72.35	70.27	3.0	42.0	56.8	-14.8
4. Lehman Brothers	61.17	59.69	2.5	42.0	54.2	-12.2
5. Merrill Lynch	38.41	36.74	4.5	47.0	56.8	-9.8

\* Quotes taken at approximately 11:00 am. [Return to table](#)

### Bottom panel

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

A line graph displays swaption implied volatility for the ten-year swap rate, three-months ahead and one-year ahead between January 1, 2003 and April 8, 2003 at a daily frequency. The swaption implied volatility for three-months ahead, solid line, begins at approximately 32 percent and generally drops to around 28 percent in early February after which it remains fairly stable. The swaption implied volatility for one-year ahead, dotted line, begins around 29 percent, declines until mid-January, rises to almost 29 percent in early March, and then falls to around 26 percent on April 8.

## Exhibit 5

### Other Indicators of Market Stress

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

### Top panel

#### Foreign Exchange Rates

	Today 4/8/03* (1)	Wednesday 3/19/03 (2)	Change (1)-(2)
			-percent-
Dollar/Euro	1.07	1.06	1.0

	<b>Today 4/8/03* (1)</b>	<b>Wednesday 3/19/03 (2)</b>	<b>Change (1)-(2)</b>
Yen/Dollar	120.05	120.52	-0.4
Dollar/Pound	1.55	1.56	-0.9
Swiss Franc/Dollar	1.39	1.39	-0.2

\* Quotes taken at approximately 11:00 am. [Return to table](#)

### **Middle-left panel**

#### **West Texas Intermediate Crude Oil Spot Price**

A line graph displays the spot price for West Texas Intermediate Crude Oil which starts at \$32 per barrel in January 2003, rises to almost \$38 in the beginning of March, then rapidly declines to around \$28 in early April.

### **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 for the period from January 2003 to April 2003. The three different contracts follow a similar pattern, steadily rising by about \$5 to peak in early March 2003 after which they drop to levels seen in the beginning of the year.

### **Bottom panel**

#### **Gold Spot Price**

A line graph plots the gold spot price between January 2003 and April 2003. The price initially rises from around \$350 in early January to about \$380 in early February, but then trends lower to around \$320 in early April.

## **Exhibit 6**

Exhibit 6 presents four panels on the behavior of the money and credit aggregates updated through March 2003.

### **Top-left panel**

#### **Growth of M2**

A bar chart shows the growth of M2, seasonally adjusted at an annual rate. After climbing at almost a 12 percent pace in February 2003, M2 growth drops to about 3 percent in March.

### **Top-right panel**

#### **Selected Components of M2**

A line graph shows selected components of M2 (liquid deposits, small time, retail MMMFs, and money stock currency) between January 2001 and March 2003. Liquid deposits trend steadily upward and increase by about \$1 trillion over the period, and reach approximately \$3500 billion in March 2003. The other components stay relatively stable over the same time period.

### **Bottom-left panel**

Growth of Bank Credit

A bar chart of the growth of bank credit, seasonally adjusted at an annual rate. The estimated growth rate in March 2003 was 6½ percent which was a bit below the pace of the first quarter as a whole.

Bottom-right panel  
Growth of Components of Nonfinancial Business Debt

Growth of components of nonfinancial business debt at a monthly rate is presented in a bar and line chart. As indicated by the shaded bars, growth of C&I loans and commercial paper was negative in March 2003 while bond issuance was positive at the same pace as in the previous month. Overall the total growth of nonfinancial business debt was slightly lower in March at around 7 percent than had been the case in February.

Appendix 2: Material used by Ms. Johnson

*Recent Developments in International Financial Markets*  
*April 8, 2003*  
Note: Today's data are as of 9:30 am EST.

STRICTLY CONFIDENTIAL (FR) CLASS II-FOMC

Chart 1

04-08-03

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
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

Date	Canadian Dollar	Swiss Franc	Euro	Yen	Sterling
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
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

Date	Canadian Dollar	Swiss Franc	Euro	Yen	Sterling
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

\* 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	0.1%
Swiss franc	4.5%
Euro	3.2%
Yen	2.4%
Sterling	3.9%

### 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



Date	Major currencies	Broad	Other Important Trading Partners
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
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

Date	Major currencies	Broad	Other Important Trading Partners
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

\* 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	2.1%
Broad	0.7%
OITP	-1.0%

## Chart 2 Selected Yield Curves

04-08-03

Left panels

3-Month Eurocurrency Futures Rates

Yen

Percent

	April 8, 2003	April 1, 2003	March 17, 2003
Jun 2003	0.08	0.08	0.08
Sep 2003	0.10	0.09	0.09
Dec 2003	0.11	0.11	0.10
Mar 2004	0.14	0.14	0.14
Jun 2004	0.14	0.14	0.13
Sep 2004	0.17	0.17	0.16
Dec 2004	0.21	0.21	0.19
Mar 2005	0.26	0.26	0.25

Euro

Percent

	April 8, 2003	April 1, 2003	March 17, 2003
Jun 2003	2.36	2.31	2.41
Sep 2003	2.31	2.22	2.41
Dec 2003	2.38	2.27	2.50
Mar 2004	2.52	2.37	2.63
Jun 2004	2.74	2.57	2.82
Sep 2004	2.96	2.78	3.01
Dec 2004	3.21	3.02	3.22
Mar 2005	3.40	3.20	3.38

Sterling

Percent

	April 8, 2003	April 1, 2003	March 17, 2003
Jun 2003	3.49	3.44	3.50
Sep 2003	3.48	3.35	3.48
Dec 2003	3.58	3.37	3.56
Mar 2004	3.76	3.50	3.71
Jun 2004	3.97	3.69	3.87
Sep 2004	4.18	3.90	4.02
Dec 2004	4.36	4.09	4.15
Mar 2005	4.48	4.23	4.27

Dollar

Percent

	April 8, 2003	April 1, 2003	March 17, 2003
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	<b>April 8, 2003</b>	<b>April 1, 2003</b>	<b>March 17, 2003</b>
Jun 2003	1.18	1.13	1.19
Sep 2003	1.24	1.18	1.33
Dec 2003	1.42	1.36	1.59
Mar 2004	1.70	1.65	1.92
Jun 2004	2.06	2.00	2.27
Sep 2004	2.44	2.37	2.63
Dec 2004	2.83	2.74	2.96
Mar 2005	3.15	3.04	3.23

## Right panels

### 1-Year Forward Rates Derived From Swaps

#### Yen

Percent

	<b>April 8, 2003</b>	<b>April 1, 2003</b>	<b>March 17, 2003</b>
2003	0.06	0.06	0.06
2004	0.14	0.14	0.13
2005	0.25	0.24	0.22
2006	0.38	0.36	0.33
2007	0.54	0.49	0.47
2008	0.72	0.66	0.65
2009	0.90	0.84	0.86
2010	1.09	1.03	1.07
2011	1.26	1.21	1.27
2012	1.43	1.38	1.48

#### Euro

Percent

	<b>April 8, 2003</b>	<b>April 1, 2003</b>	<b>March 17, 2003</b>
2003	2.47	2.34	2.60
2004	3.12	2.92	3.21
2005	3.74	3.49	3.73
2006	4.29	4.02	4.18
2007	4.74	4.46	4.60
2008	5.09	4.83	4.95
2009	5.36	5.12	5.22
2010	5.56	5.35	5.43
2011	5.71	5.53	5.59

	April 8, 2003	April 1, 2003	March 17, 2003
2012	5.83	5.68	5.74

**Sterling**  
Percent

	April 8, 2003	April 1, 2003	March 17, 2003
2003	3.70	3.53	3.61
2004	4.15	3.91	4.03
2005	4.55	4.27	4.41
2006	4.83	4.57	4.72
2007	5.03	4.80	4.95
2008	5.16	4.97	5.12
2009	5.27	5.10	5.25
2010	5.35	5.20	5.34
2011	5.41	5.28	5.41
2012	5.45	5.35	5.48

**Dollar**  
Percent

	April 8, 2003	April 1, 2003	March 17, 2003
2003	1.45	1.35	1.48
2004	2.52	2.40	2.54
2005	3.53	3.39	3.49
2006	4.37	4.24	4.26
2007	4.99	4.87	4.84
2008	5.41	5.30	5.25
2009	5.69	5.61	5.54
2010	5.91	5.84	5.76
2011	6.12	6.05	5.93
2012	6.36	6.26	6.07

**Chart 3**  
**Stock Market Indexes**

04-08-03

**Top-left panel**  
**Euro Area**

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

Date	DJ Euro	DJ Euro Tech	DJ Euro Bank
------	---------	--------------	--------------

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
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

Date	DJ Euro	DJ Euro Tech	DJ Euro Bank
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
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

\* 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	19.9%
DJ Euro Tech	21.1%
DJ Euro Bank	20.9%

### 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
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*	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



Date	FTSE-350	FTSE-techMark	FTSE-Bank
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*	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
18-Mar-2003*	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

\* 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	17.1%
FTSE-Tech	12.9%
FTSE-Bank	20.0%

## 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
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*	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

Date	TOPIX	TOPIX-EM	TOPIX-Bank
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
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

\* 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	2.6%
TOPIX-EM	2.7%

TOPIX-Bank	-5.3%
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## 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

Date	S&P 500	NASDAQ	S&P Banks
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
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

\* 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	9.2%
NASDAQ	8.6%
S&P Bank	16.3%

\*Last observation, Monday, Apr. 7

Chart 4

04-08-03

Top panel  
Crude Oil Futures Prices

\$/barrel

Date	WTI May	Brent May
2-Jan-2003	28.84	27.03
3-Jan-2003	29.62	27.79
6-Jan-2003	28.99	27.10
7-Jan-2003	28.73	26.90
8-Jan-2003	28.52	26.75
9-Jan-2003	29.38	27.59
10-Jan-2003	29.04	27.29
13-Jan-2003	29.64	27.87
14-Jan-2003	29.97	28.22
15-Jan-2003	30.48	28.64
16-Jan-2003	30.82	28.98
17-Jan-2003	30.95	29.05
20-Jan-2003	ND	29.07
21-Jan-2003	30.96	29.15
22-Jan-2003	30.77	28.94
23-Jan-2003	30.46	28.66
24-Jan-2003	31.12	29.29
27-Jan-2003	30.49	28.81
28-Jan-2003	30.94	29.26
29-Jan-2003*	31.72	30.02
30-Jan-2003	31.95	30.15
31-Jan-2003	31.80	30.03
3-Feb-2003	31.34	29.47
4-Feb-2003	32.04	30.18
5-Feb-2003	32.37	30.54
6-Feb-2003	32.40	30.51

Date	WTI May	Brent May
7-Feb-2003	33.13	31.29
10-Feb-2003	32.60	30.68
11-Feb-2003	33.27	31.30
12-Feb-2003	33.35	31.29
13-Feb-2003	33.92	31.67
14-Feb-2003	34.04	31.67
17-Feb-2003	ND	31.06
18-Feb-2003	34.12	31.57
19-Feb-2003	34.21	31.56
20-Feb-2003	33.46	30.93
21-Feb-2003	34.33	31.65
24-Feb-2003	35.04	32.49
25-Feb-2003	34.42	31.55
26-Feb-2003	35.34	32.18
27-Feb-2003	35.19	32.07
28-Feb-2003	34.83	31.82
3-Mar-2003	34.24	31.63
4-Mar-2003	34.91	32.11
5-Mar-2003	34.96	32.00
6-Mar-2003	35.54	32.52
7-Mar-2003	36.35	33.14
10-Mar-2003	36.28	32.92
11-Mar-2003	35.74	32.65
12-Mar-2003 <sup>*</sup>	36.35	33.21
13-Mar-2003	34.67	31.77
14-Mar-2003	33.36	30.13
17-Mar-2003	32.54	29.48
18-Mar-2003 <sup>*</sup>	30.05	27.25
19-Mar-2003	29.36	26.75
20-Mar-2003	28.12	25.50
21-Mar-2003	26.91	24.35
24-Mar-2003	28.66	26.09
25-Mar-2003	27.97	24.81
26-Mar-2003	28.63	25.29
27-Mar-2003	30.37	26.82
28-Mar-2003	30.16	26.35
31-Mar-2003	31.04	27.18
1-Apr-2003	29.78	26.36
2-Apr-2003	28.56	25.21

Date	WTI May	Brent May
3-Apr-2003	28.97	25.50
4-Apr-2003	28.62	24.68
7-Apr-2003	27.96	24.58
8-Apr-2003	28.00	24.60

\* 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 May	-\$8.21
Brent May	-\$8.58

### Bottom panel

#### Implied Distributions from Oil Futures Options

The bottom panel represents implied distributions from December 2003 and May 2003 West Texas Intermediate oil futures options on April 7, 2003. The May 2003 WTI distribution has a range from approximately 14 to 41 dollars per barrel, and is roughly symmetric with noticeable peak at 28 dollars per barrel. The December 2003 WTI distribution has a range from approximately 5 to 50 dollars per barrel, with a peak at 25 dollars per barrel. The December 2003 WTI distribution is asymmetric, with greater weight placed on the likelihood of a price below 20 dollars per barrel than on the likelihood of a price greater than 30 dollars per barrel.

	Futures	Implied Volatility	2/3 Bounds	Skew1	Skew2
May 2003 Contract	28.0	57.24	[25.92,29.93]	+0.09	-0.03
Dec 2003 Contract	25.0	29.87	[19.37,29.72]	-0.51	-0.15

### Appendix 3: Materials used by Mr. Stockton

April 8, 2003  
**NONFINANCIAL DEVELOPMENTS**

### Chart 1

#### Labor Market

4-8-03

### Top panel

(Thousands of employees; based on seasonally adjusted data)

	2002		2003	2003		
	Q3	Q4	Q1	Jan.	Feb.	Mar.



	2002		2003	2003		
	Q3	Q4	Q1	Jan.	Feb.	Mar.
1. Payroll employment	31	-53	-87	203	-357	-108
2. Private	4	-75	-81	195	-370	-68
3. (Previous)				(174)	(-321)	
4. Manufacturing	-39	-62	-34	-7	-59	-36
5. Construction	2	-4	-0	20	-42	21
6. Retail trade	-6	-46	-14	119	-117	-43
7. Trans., comm., & util.	-22	-13	-15	8	-41	-13
8. Services	61	44	-26	53	-121	-10
9. Help supply services	-11	-1	-14	5	0	-48
<i>Memo:</i>						
10. Average workweek <sup>1</sup>	34.1	34.2	34.2	34.3	34.1	34.3
11. Aggregate hours <sup>2</sup>	-.7	.1	-.4	.5	-.9	.3
12. Average hourly earnings <sup>2</sup>	3.2	3.5	3.2	.1	.6	.1

Note. Quarterly data are average monthly changes from final month of preceding period to final month of period indicated.

1. Private nonfarm production or nonsupervisory workers, measured in hours. [Return to table](#)

2. Quarterly data are percent change at an annual rate. Monthly data are percent change from the preceding month. [Return to table](#)

### Middle-left panel

#### Change in Private Payroll Employment

This panel displays the monthly change in private payroll employment in thousands, as measured by the Current Employment Statistics survey. The period covered is from 1999 to March 2003.

The data are plotted on two curves: One curve is the monthly change, and the other is the three-month moving average of the monthly change.

The monthly curve is more volatile. It starts at about 110 thousand in January 1999, moves up and down around that value for the rest of 1999, declines to about negative 400 thousand by the end of 2001, increases to about 50 thousand by the middle of 2002, declines somewhat, then spikes up briefly to 200 thousand in January 2003, drops sharply to almost negative 400 thousand in February and ends at about negative 75 thousand in March 2003.

The three-month moving average curve starts just above 200 thousand in January 1999, remains near there until it begins to decline in January 2000, declines steadily to about negative 400 thousand by the end of 2001, increases to just above zero by the middle of 2002, and then declines gradually to about negative 75 thousand in March 2003.

### Middle-right panel

#### Unemployment Rate

This panel displays the unemployment rate in percent. The period covered is from 1999 to March 2003.

The data are plotted on one curve. The curve starts at about 4.4 percent in the beginning of 1999 and

declines gradually to about 3.9 percent by the end of 2000. It rises sharply to about 5.7 percent by the end of 2001, and remains near that level until March 2003.

### **Bottom-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 March 29, 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 just above 400 thousand at the beginning of 2002, moves down slightly, increases sharply to about 470 thousand by March, decreases sharply to about 360 thousand by July, increases sharply to about 440 thousand by September, swings erratically between 375 thousand and 440 thousand until declining to 360 thousand in January 2003, and finally rises steadily to about 440 thousand by March 29, 2003.

The four-week moving average curve is smoother than the weekly curve. It starts at just above 400 thousand at the beginning of 2002, declines briefly, increases sharply to about 440 thousand by March, decreases sharply to about 370 thousand by July, increases sharply to about 430 thousand by October, declines to about 380 thousand in January 2003, and then increases sharply to about 420 thousand by March 29, 2003.

Note. Seasonally adjusted using FRB seasonals.

### **Bottom-right panel**

#### **Net Hiring Plans**

Net hiring plans is the percent of firms planning to increase employment minus the percent of firms planning to decrease employment. The period covered is from 1999 to March 2003.

The curve is very volatile. It starts at about 17 percent in the beginning of 1999, moves up slightly, on net, then declines gradually, on net, over the next several years, ending 2002 at about 11 percent. It declines sharply in the beginning of 2003, ending at about 1 percent by March 2003.

Source. NFIB (National Federation of Independent Business) Survey.

## **Chart 2**

### **Current Indicators**

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### **Top-left panel**

#### **Sales of Light Vehicles**

The period covered is from the start of 2002 to March of 2003. Data for the sales of light vehicles are plotted on a curve and measured in millions of units. The curve starts just below 16 and increases to slightly above 17 in April, then drops to about 15.5 in May. The curve then increases steadily to near 18.5 in August followed by a drop to about 15.25 in October. The curve then increases to slightly above 18 in December, drops back near 15.25 in February 2003, then increases to about 16 in March.

### **Top-right panel**

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

The period is from the start of 2002 through mid-2003. The data are plotted on a curve, with filled-in circles marking quarterly averages in 2002 and open circles marking schedules for the first two quarters 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 and stays 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, is 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 circles) is just above 12 for 2002:Q1, Q2 is slightly higher, Q3 is near 13, and Q4 lies slightly below 12.5. The schedule (open circles) for 2003:Q1 is set at about 12.25, and the schedule for 2003:Q2 falls near 11.75.

Note. April through June are schedules.

### **Middle-left panel**

#### **IP Weekly Production Index**

The period covered is from the start of 2002 to March 2003 for monthly data and January 1, 2002, through March 29, 2003, for weekly data. The "monthly aggregate of weekly index" is represented by bars and the "weekly index--total IP points of 16 components" is plotted as an overlaid curve.

The monthly bars start slightly above 19 at the beginning of 2002 and increase fairly steadily through June to near 20. In July the bar jumps to about 20.25, and the following months alternate above and below 20, hovering within around .25 index points, with January and February 2003 both above 20 and March near 19.75.

The weekly curve starts a bit below 19 index points, then follows the monthly data up to a peak of near 20.5 around July. The curve generally follows the monthly data but with a peak near the July high in November and a drop below to near 18.75 at the end of 2002. The data for the week of March 29 comes in around 19.5, which is below the March bar.

### **Middle-right panel**

#### **Manufacturing Production Worker Hours**

This panel displays the millions of hours worked in a given month in manufacturing excluding motor vehicles production. The data are FRB seasonals (seasonally adjusted by FRB staff). The period covered is from 2002 to March 2003.

The curve begins at just over 430 million hours at the beginning of 2002 and maintains that level through mid-2002. The series decreases steadily to just under 420 million hours in March 2003.

### **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 2002 to April 5, 2003.

The curve begins at about 397 at the beginning of 2002 and then sharply increases to just under 415

in early 2002. The series decreases to just above 400 and maintains that level through the first half of 2002. Then the series increases to over 415 in mid-2002 before slowly decreasing to under 395 at the end of 2002. The series increases sharply at the start of 2003 to about 412 before falling to about 403 by April 5, 2003.

Source. Bank of Tokyo-Mitsubishi.

### **Bottom-right panel**

#### **Consumer Sentiment**

This figure displays an index (1966 = 100) of consumer sentiment from the surveys of consumers by Reuters and the University of Michigan. The period covered is from 2002 to April 4, 2003, and the data are bimonthly.

The data are plotted on a single curve. The curve begins at just under 95 in the beginning of 2002 before jumping to the low 90s in the first half of 2002. The series then falls throughout the second half of 2002 to a low of about 80 around the beginning of the fourth quarter of 2002. The series jumps within the low 80s, then takes a slight dip in the end of 2002. The series steadily increases in 2003. The curve ends at April 4, 2003, when the reading of consumer sentiment was about 83.

Source. Michigan SRC. Confidential.

## **Chart 3**

### **Domestic Energy Markets**

4-8-03

### **Top-left panel**

#### **Gasoline and Crude Oil Prices**

The period covered is from 2002 to April 7, 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 7, 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 7, 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 200 million barrels on March 28, 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 the one for 2002.

### **Bottom-left panel**

#### **Natural Gas Spot Price**

The period covered is from 2002 to April 4, 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 4, 2003.

### **Bottom-right panel**

#### **Natural Gas Inventories**

The period covered is from January 1997 to March 28, 2003, and the data represent the end-of-month U.S. domestic Natural Gas Inventories, defined as working gas in storage.

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 March 28, 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, which stood at approximately 700 billion cubic feet on March 28, 2003.

