Appendix 1: Materials used by Messrs. Wilcox, Elmendorf, and Reinhart

RESTRICTED CONTROLLED (FR) CLASS I (FOMC)

Material for Board Staff Presentation on:

Considerations Pertaining to the Establishment of a Specific, Numerical, Price-Related Objective for Monetary Policy

Divisions of Research & Statistics and Monetary Affairs

February 1, 2005

Exhibit 1

A Specific, Numerical, Price-Related Objective for Monetary Policy?



A premise of the paper:

- A price objective should be chosen to minimize the costs of deviations from price stability.
- The premise suggests that the objective should be defined with respect to the price index most closely related to such costs.

2-1-05

Potential Benefits and Costs of Adopting a Specific Price-Related Objective

Potential Benefits:

- Could help preserve the present commitment to price stability.
- Could better anchor long-run inflation expectations and thereby reduce the volatility of both inflation and real activity.
- Could improve public understanding of monetary policy.
- Could help focus policy debates within the FOMC.

Potential Costs:

- Could mislead the public into believing that emphasis had shifted toward the price objective.
- Could cause the FOMC inadvertently to place more emphasis on the price objective.
- Could diminish the FOMC's credibility when inflation differed from the stated objective.
- Could constrain future actions of the FOMC in an unhelpful manner.

Empirical Evidence:

- Little to no evidence regarding the likely influence on FOMC decision-making or the quality of communications with the public.
- Some hints from foreign experience that specific price objectives have helped anchor long-term inflation expectations.
- Disputed evidence that the reduced volatility of inflation and real output owes to improved conduct of U.S. monetary policy.
- Simulation-based evidence that better-anchored inflation expectations would reduce the volatility of inflation and real output.

Exhibit 3

Operational Issues Related to Specifying a Numerical Price-Related Objective

A checklist for policymakers:

- Which price index?
- The inflation rate or the price level?
- What average rate?
- Point objective or range?

For index, we favor consumer prices on the grounds of:

- Familiarity.
- Quality of measurement.
- Empirical result that inflation rates move together in the long run.

If an inflation objective, at what rate?

- Measurement bias: Nearly 1 percentage point for CPI; about ½ percentage point for PCE prices.
- Rationales for aiming for zero true inflation: Traditional costs of inflation.
- Rationales for aiming for positive true inflation: Downward nominal wage rigidity; zero lower bound on nominal interest rates.

	Tabias-a	arget PCE inflat (measured rate djusted rate in p	ion rate , with parentheses)
	1⁄2 (0)	1 ½ (1)	2 ½ (2)
Fraction of time with funds rate at zero	.16	.10	.06
Standard deviation of output gap*	2.53	2.31	2.21
Standard deviation of unemployment rate*	1.40	1.27	1.22

Accuracy in Achieving an Inflation Objective

Imperfect controllability:

- Inflation is volatile, and monetary policy influences it only indirectly and with a lag.
- The FOMC could not hit a point objective precisely or guarantee a narrow range.

Percent of time that PCE inflation averaged over four quarters could be held within ± 1 percentage point of desired rate:

	Total	Core
Volatility of economic shocks matters:		
1. Drawn from 1968 to 2004 experience	59	64
2. Drawn from 1984 to 2004 experience	68	73
<i>Expectations formation matters:</i>3. VAR-based expectations with imperfect credibility4. VAR-based expectations with perfect credibility	68 80	73 89

Summary:

• The FOMC could likely keep four-quarter total PCE inflation within a \pm 1-percentage-point band about $\frac{2}{3}$ to $\frac{3}{4}$ of the time.

2-1-05

Exhibit 5



Exhibit 6

Key Questions for Today's Discussion



What role should the price objective play in the Committee's policy process?

- Alternative I: Maintain the status quo
 - Perhaps provide more information to the public over time as to your attitudes toward prevailing and prospective inflation
- Alternative II: Vote formally on a numerical inflation goal
- Alternative III: Survey participants as to the appropriate inflation objective

Appendix 2: Materials used by Mr. Kos





Page 2

Page 3 **Euro-Area 3-Month Deposit Rates and Rates Implied by Traded Forward Rate Agreements** December 1, 2004 - January 31, 2005 6M Forward Percent LIBOR Fixing 3M Forward 9M Forward Percent 2.60 2.60 12/3 NFP 1/7 NFP 12/14 FOMC 1/4 Minutes +112K +157K +25 bps Release 2.50 2.50 2.40 2.40 2.30 2.30 2.20 2.20 1 2.10 -2.10 12/112/13 12/25 1/181/61/30**Euro-Dollar Currency Pair Dollar-Yen Currency Pair** December 1, 2004 - January 31, 2005 December 1, 2004 - January 31, 2005 **S per Euro** S per Euro Yen per S Yen per \$ 1.38 1.38 106 106 12/14 FOMC 1/4 Minutes 12/14 FOMC 1/4 Minutes +25 bps Release Release -25 bps 1.36 1.36 105 105 1.34 104 1.34 104 1.32 1.32 103 103 1.30 1.30 102 102 1.28 1.28 101 101 1 12/1 1/18 12/13 12/251/6 12/112/13 12/25 1/181/30 1/61/30Dollar-Yuan Exchange Value Implied by the Foreign Exchange Reserves of China & Japan NDF Market December 31, 2003 - December 31, 2004 July 1, 2004 - January 31, 2005 Yuan per Dollar Yuan per Dollar **USD Billions USD Billions** 8.4 8.4 900 900 10/14 PBOC Tightens Monetary Policy Spot Price Japan 8.3 8.3 800 800 8.2 8.2 1-Month NDF 700 700 8.1 8.1 8.0 8.0 600 600 6-Month NDF China 7.9 7.9 500 500 7.8 7.8 12-Month NDF 7.7 7.7 400 400 Jul-04 Sep-04 Nov-04 Dec-03 Mar-04 Jan-05 Jun-04 Sep-04 Dec-04

30

25

20

15

10

5

0



Page 4 Japanese Call Market **Uncollateralized Amount Outstanding** January 4, 1999 - January 28, 2005 Yen, trillions Yen, trillions 30 25 20 15

10

5

500

400

300

200

100

0

Oct-04

Bid-to-Cover

(RHS)

Apr-04





Tegata Bills from financial institutions incl. bills utilizing corp debt obligations * Japanese Government Securities (JGS): amount outstanding of JGBs, TBs, and FBs purchased from financial institutions

Changes in the Japanese Government Bill **Curve Since the Start of Quantitative Easing**



Bid-to-Cover on BoJ Outright Purchases of FB/TBs

Oct-03

April 8, 2004 – January 13, 2005 **Bid-to-Cover Ratio Bid-to-Cover Ratio** 7 7 6 6 5 5 4 4 3 3 2 2 1 Source: BoJ 0 0 Jun-04 Apr-04 Aug-04 Oct-04 Dec-04

Current Account Balances (CAB) at the

5

4

3

2

1

0

Apr-02

Oct-02

Apr-03



Daily Intra-Day Standard Deviations of the Federal Funds Rate 1987 - 2004

Average Intraday Standard Deviation of Federal Funds Rates (Maintenance Period Averages)





150 of 177

Appendix 3: Materials used by Messrs. Slifman and Struckmeyer, and Ms. Johnson

Material for

Staff Presentation on the Economic Outlook

February 2, 2005

*Downgraded to Class II upon release of the February 2005 Monetary Policy Report.

Recent Indicators



Real PCE exc. Motor Vehicles*



Orders and Shipments of Nondefense Capital Goods*



Manufacturing Industrial Production



Sales of Light Vehicles



Real GDP



Overview

Key Background Factors

•	Monetary policy: We assume a continuing withdrawal of monetary accommodation over
	the next two years. The federal funds rate reaches 3 percent in the fourth quarter of this
	year and 3-1/2 percent in the latter part of 2006 – a path quite similar to that implied by
	futures quotes.

- **Fiscal policy:** FI is expected to be neutral in 2005 and provide only a small positive impetus to GDP growth in 2006.
- **Oil prices:** We continue to be guided in our forecast by futures markets, which expect prices to drift down over the next two years.
- **Dollar:** The foreign exchange value of the dollar is expected to drift down.
- **Stock market:** Prices are assumed to rise 6-1/2 per cent per year, which would roughly maintain risk-adjusted parity with the yield on long-term bonds.
- **House prices:** The rate of increase is expected to slow from last year's torrid pace.

_				Percent change, Q4/Q4
		2004	2005	2006
1.	GDP	3.8	3.9	3.6
	Contribution from:		Percentage points	
2.	Private consumption and fixed investment	4.1	3.4	3.5
3.	Imports	-1.4	8	-1.2
4.	Exports	.5	.9	.7
5.	Government	.2	.6	.5
6.	Inventory investment	.4	2	.1

Real Gross Domestic Product

What Keeps Growth Above Potential Through 2006?

- **Monetary policy:** The real fed funds rate is projected to still be below its long-run average over the projection period and on the stimulative side of the short-run measures of r-star shown in the Bluebook.
 - Other financial market conditions:
 - Nominal long-term rates are projected to be little changed, despite the assumed rise in short-term rates.
 - Corporate balance sheets are quite strong: Cash is abundant and interest expenses relative to cash flow are at low levels.
 - Defaults, delinquencies and risk spreads are quite low.
 - Banks continue to ease lending standards.
- **Oil prices**: Higher oil prices reduced GDP growth ³/₄ percentage point in 2004. The negative effects wane to -¹/₄ percentage point in 2005 as oil prices begin to recede; the projected decline in prices boosts GDP growth slightly in 2006.



Bank Lending Standards for C&I Loans



*Percentage of banks reporting tighter standards less percentage of banks reporting easier standards. Source: Sr. Loan Officer Survey.

Interest Expense to Cash Flow











Household Net Worth to DPI









House Prices*



Weighted Average Mortgage Rate*



Business Sector



Rate of Return on Capital for Nonfinancial Corporate Business*



Equipment and Software



Capacity Utilization Rate



Reserve Bank Queries on Capital Spending Plans (Percent)

	Jan 2004	Jan 2005
Plan to increase spending over next 6 to 12 months	51.7	47.3
Reasons cited for increase:*		
Expected sales growth	53.6	47.7
Replace IT equip.	41.1	39.9
Replace other equip.	42.3	41.5

*Percent of respondents planning to increase spending.

Price Index for Desktop Computers



Labor Markets



Structural Labor Productivity



Labor Productivity



Unemployment Rate



Labor Force Participation Rate



Employment-Population Ratio



Compensation



Inflation Expectations



ECI Wages and Salaries



Unemployment Gap





Recent Price Developments



PCE Food Prices



Core PCE Components

-	12-month percent change			
	2002	2003	2004	
Core PCE	1.7	1.1	1.5	
Market based	1.4	1.0	1.7	
Goods	-1.6	-2.3	0.0	
Services	3.0	2.9	2.6	
Nonmarket based	3.6	1.3	0.5	



Core PCE Prices





PPI-Intermediate Materials less Food and Energy

Inflation Outlook



Core PCE Prices



Price Markup over Trend Unit Labor Costs





Core Non-fuel Import Prices



Alternative Projections of Core PCE Prices



Financial Developments

(Monthly data)



Term Structure of Three-Month Euro Futures













Foreign Outlook

Foreign Real GDP*

Percent change, a.r.**

		20	2004 2005		2005		<u>2006</u>
		Q3	Q4	Q1	Q2	H2	
1. ⁻	Total Foreign	2.6	3.1	3.0	3.3	3.4	3.3
2.	Industrial Countries of which:	1.9	2.0	2.1	2.4	2.5	2.4
3.	Japan	0.2	1.0	1.2	1.4	1.6	1.8
4.	Euro Area	1.1	1.4	1.4	1.5	1.6	1.0
5.	United Kingdom	1.8	3.0	2.1	2.6	2.6	2.2
6.	Canada	3.2	2.2	2.6	2.9	3.2	3.0
7.	Emerging Economies of which:	3.8	4.8	4.4	4.6	4.6	4.
8.	China	10.1	11.2	7.1	7.1	7.1	7.
9.	Emerging Asia exc. China	3.2	3.9	4.2	4.6	4.4	4.2
0.	Mexico	2.6	4.0	4.0	4.1	4.2	4.3
1.	South America	4.1	3.8	3.8	3.8	3.7	3.0

* Aggregates weighted by shares of U.S. exports.
 ** Year is Q4/Q4; half year is Q4/Q2; quarters are percent change from previous quarter.



Emerging Market Economies



Global Thailand sub-index, and the Indonesian Yankee Bond Spread.

Industrial Production













Trade in Goods and Services

Chart 13

Trade Developments

		Billions of d	ollars, a.r.
	03	O-N**	Change
	QU	υn	onango
	004	000	
1. Balance	-621	-698	-//
Imports:			
2. G & S	1780	1858	78
3. Cons. Gds.	365	386	21
4. Machinery	180	182	2
5. Ind. Sup.*	241	244	3
6. Oil	180	220	40
7. Other	814	826	12
Exports:			
8. G & S	1158	1160	2
9. Machinery	169	165	-4
10. Ind. Sup.	190	195	5
11. Other	799	800	1



* Excludes oil.

** Average of October and November data.

Oil Prices



Trade Prices



Percent, Q4/Q4

Chart 14

External Sector

Real Export Growt	h		Perc	ent, Q4/ <u>Q</u> 4
	2003	2004	2005	2006
1. Goods and services	6.1	4.9	8.7	7.2
Percentage po	int con	tributio	n:	
2. Services	1.2	1.4	2.0	1.8
3. Goods of which	4.9	3.5	6.6	5.4
4. Core*	3.0	3.5	5.1	3.9

*Excludes computers and semiconductors.

Contributions to U.S. GDP Growth



Broad Real Dollar



Real Import Growth

_				
	2003	2004	2005	2006
1. Goods and services	4.9	9.3	5.2	7.6
Percentage po	int con	tributio	n:	
2. Services	0.6	0.3	0.6	0.7
3. Goods of which	4.2	9.0	4.6	6.9
4. Core*	3.3	6.7	4.5	5.6

*Excludes computers, semiconductors, and oil.

External Balances



Simulation Results

		Billion	s of dollars
	2004Q4	2006Q4	Change
Trade balance baseline weaker dollar	-689 -689	-720 -689	-31 0
Current account b baseline weaker dollar	alance -774 -774	-881 -863	-107 -89

ECONOMIC PROJECTIONS FOR 2005

	F				
	Range	Central Tendency	Staff		
	Per	centage change, (Q4 to Q4		
Nominal GDP	5 to 6	5½ to 5¾	5.4		
July 2004	(4¾ to 6½)	(5¼ to 6)	(5.0)		
Real GDP	3½ to 4	3¾ to 4	3.9		
July 2004	(3½ to 4)	(3½ to 4)	(3.6)		
Core PCE Prices	1½ to 2	1½ to 1¾	1.6		
July 2004	(1½ to 2½)	(1½ to 2)	(1.6)		
Average level, Q4, percent					
Unemployment rate	5 to 5½	5¼	5.3		
July 2004	(5 to 5½)	(5 to 5¼)	(5.3)		

Central tendencies calculated by dropping high and low three from ranges.

ECONOMIC PROJECTIONS FOR 2006

	FC					
	Range	Central Tendency	Staff			
	Percentage change, Q4 to Q4					
Nominal GDP	5 to 5¾	5 to 5½	5.3			
Real GDP	3¼ to 3¾	31⁄2	3.6			
Core PCE Prices	1½ to 2	1½ to 1¾	1.4			
	Average level, Q4, percent					
Unemployment rate	5 to 5¼	5 to 5¼	5.1			

February 1-2, 2005

Appendix 4: Materials used by Mr. Olson







Sources: Call Report/BS&R, BEA

1/31/2005



Net Chargeoffs Banks LT \$1 billion



Loan Loss Provision Banks LT \$1 billion



Seasonal Factors (Out of 100 percent)									
All Insured Commercial Banks				Banks LT \$1 billion					
	1Q	2Q	3Q	4Q		1Q	2Q	3Q	4Q
NPA Ratio	101.3	100.2	100.6	97.9	NPA Ratio	101.7	99.9	100.5	97.8
Net Charge-off Ratio	90.2	96.6	96.3	116.7	Net Charge-off Ratio	76.0	92.4	91.7	139.7
Prov to Avg Loans	91.9	94.6	98.9	114.3	Prov to Avg Loans	85.3	92.5	97.7	124.4
	Other Key Statistics								
	Total	Mean	S.D.			Total	Mean	S.D.	
NPA Ratio	105.94	1.80	1.32		NPA Ratio	80.55	1.37	0.74	
Net Charge-off Ratio	51.75	0.88	0.35		Net Charge-off Ratio	26.54	0.45	0.18	
Prov to Avg Loans	54.21	0.92	0.38		Prov to Avg Loans	34.19	0.58	0.22	

February 1-2, 2005

Appendix 5: Materials used by Mr. Reinhart

Restricted Controlled (FR) Class I (FOMC)

Material for FOMC Briefing on Monetary Policy Alternatives

Vincent R. Reinhart February 2, 2005

Exhibit 1 The Case for Tightening 25 Basis Points



Corporate and Sovereign Bond Spreads*





Asset Prices and Monetary Policy

- Asset price misalignments are hard to identify with confidence.
- Appropriate monetary policy is not clear.
- Other instruments may be better suited to dealing with such problems.



Exhibit 2 When Will You Stop Tightening?

Market Participants Assume:

- Policy will be tightened 25 bps at every . meeting.
- Until this tightening cycle ends. 0
- They are uncertain as to when tightening will . end.



Without Tightening Probability 1.00 0.75 0.50 0.25 0.0 Feb May Aug Nov Feb May Aug Nov 2007+ 2005 2006

Cumulative Probability of First FOMC Meeting

First FOMC meeting without tightening

Range of Estimated Equilibrium Real Rates



An explanatory note is provided in Chart 8 of the Bluebook.

Exhibit 3

Assessing the Risk Assessment

From the FOMC Statement released December 14th

The Committee perceives the upside and downside risks to the attainment of both sustainable growth and price stability for the next few quarters to be roughly equal. With underlying inflation expected to be relatively low, the Committee believes that policy accommodation can be removed at a pace that is likely to be measured. Nonetheless, the Committee will respond to changes in economic prospects as needed to fulfill its obligation to maintain price stability.

Three alternatives

- 1. Get out of the business of hinting—either obliquely or directly—about future actions by dropping the entire paragraph.
- 2. Revive the first sentence assessing risks by basing it on the assumption of an unchanged stance of policy for the next few quarters and couching it in terms of probabilities, not risks.
- 3. Rely on the gradual evolution of the latter part of the paragraph to convey a sense of the future path of interest rates.

.....

	Tab	ble 1: Alternative Language for the Januar	y FOMC Announcement		
	December FOMC	Alternative A	Alternative B	Alternative C	
Policy Decision	 The Federal Open Market Committee decided today to raise its target for the federal funds rate by 25 basis points to 2¹/₄ percent. 	The Federal Open Market Committee decided today to keep its target for the federal funds rate at 2 ¹ / ₄ percent. The Committee's policy actions since mid- 2004 have materially reduced the degree of monetary policy accommodation.	The Federal Open Market Committee decided today to raise its target for the federal funds rate by 25 basis points to 2 ¹ / ₂ percent.	The Federal Open Market Committee decided today to raise its target for the federal funds rate by 50 basis points to 2 ³ / ₄ percent.	
	2. The Committee believes that, even after this action, the stance of monetary policy remains accommodative and, coupled with robust underlying growth in productivity, is providing ongoing support to economic activity.	The Committee believes that the stance of monetary policy remains somewhat accommodative and, coupled with robust underlying growth in productivity, is providing ongoing support to economic activity.	[Unchanged from December statement]	The Committee believes that the stance of monetary policy remains accommodative and, coupled with robust the underlying growth in productivity, is providing ongoing support to economic activity.	
Rationale	3. Output appears to be growing at a moderate pace despite the earlier rise in energy prices, and labor market conditions continue to improve gradually.	Output appears to be growing at a moderate pace despite the earlier rise in energy prices, and labor market conditions seem to be improving gradually.	Output appears to be growing at a moderate pace despite the earlier rise in energy prices, and labor market conditions continue to improve gradually.	Output appears to be growing at a moderate pace despite the earlier rise in energy prices, and labor market conditions continue to improve gradually.	
	4. Inflation and longer-term inflation expectations remain well contained.	[Unchanged from December statement]	[Unchanged from December statement]	Inflation and longer-term inflation expectations remain well contained, but rising business costs have the potential to put upward pressure on prices.	
	5. The Committee perceives the upside and downside risks to the attainment of both sustainable growth and price stability for the next few quarters to be roughly equal.	[Unchanged from December statement]	[Unchanged from December statement]	[Unchanged from December statement]	
Assessment of Risk	6. With underlying inflation expected to be relatively low, the Committee believes that policy accommodation can be removed at a pace that is likely to be measured. Nonetheless, the Committee will respond to changes in economic prospects as needed to fulfill its obligation to maintain price stability.	With underlying inflation expected to be relatively low, the Committee believes that policy accommodation can be removed at a pace that is likely to be measured. Nonetheless, the Committee will respond to changes in economic prospects as needed to fulfill its obligation to promote price stability and sustainable growth.	[Unchanged from December statement]	[None]	