Business Topics

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October 2008

Business Topics – October 2008

A: Overview

B: Indicators and Forecasts

C: The commodity crisis – origins and cures

D: UK monetary muddle

E: Housing

Overview

- US financial meltdown- US Fed and government committed to support; but Lehman (losses are current problem)
- Spike in risk-aversion: banks hoarding cash- lending cut back- lending rates rise
- Lack of competition as banks cartelise
- Crisis spread to Europe forcing coordinated EU approach

What can be done?

- commodity prices now falling as money tightens worldwide - incl. at last emerging markets like China
- interest rates can be cut, as commodity inflation recedes, to combat weakness in economy
- taxpayer guarantee deposits/inject capital (without expropriation)/buy ‘toxic’/provide liquidity- global multi-national approach
- encourage new entrants into lending, but enforcing existing Basle regulations

What happened?

- Transfer of wealth ($1000bn or more) from worldwide investors (banks, hedge funds etc) to US home owners. Economy’s capital stock and output capacity undisturbed.
- Depletion of bank capital makes banks unviable/insolvent; hence no depositors will lend without government guarantee.
- Governments have no alternative but to inject capital etc in support: a) if not risk Gt Depression b) modern banking assumes taxpayer support via LOL etc (Faustian ‘pact’)

Issues

- Could governments expropriate bank shareholders? Yes, but violation of ‘pact’ and would prevent new capital going into banking system. Taxpayers should get much back in l/t.
- Mark to market accounting suspended in US and likely elsewhere, as exacerbates ‘firesale’ problem.
- US housing market: Feldstein plan to substitute govt debt for part of mortgages.but would home-owners on no-recourse mortgages accept?

Indicators/OECD

	Stock Mkts[1]	Retail Sales[2]	Indl Prdtn[2]	GDP[3]	Unemp.[4]	Wages Growth[2]
US	-37.5	-0.3	-1.5*Aug*	+2.2	6.1	+3.6*Aug*
Japan	-46.0	+3.0	-6.9*Aug*	+1.0	4.2	-0.7
Germany	-43.7	-3.0*Aug*	+1.7*Aug*	+1.7	7.6	+2.1
France	-43.4	-3.1*Jun*	-2.0	+1.1	8.0	+3.3*Q2*
Italy	-47.2	-6.2*Jun*	-3.2	-0.1	6.8*Q2*	+4.3
€-zone	-45.0	-2.8	-1.7	+1.4	7.5	+2.7*Q2*
UK	-39.1	+3.3*Aug*	-2.3*Aug*	+1.4	5.5	+3.5

[1]% Change on end of **2007 (Oct 10)**

[2]% Change on Month Year Earlier **July 2008**

[3]% Change on Quarter Year Earlier **Q2 2008**

[4]% Unemployment Rate Latest **Jul/Aug 2008**

COMMENT: growth slowing sharply everywhere, wages muted

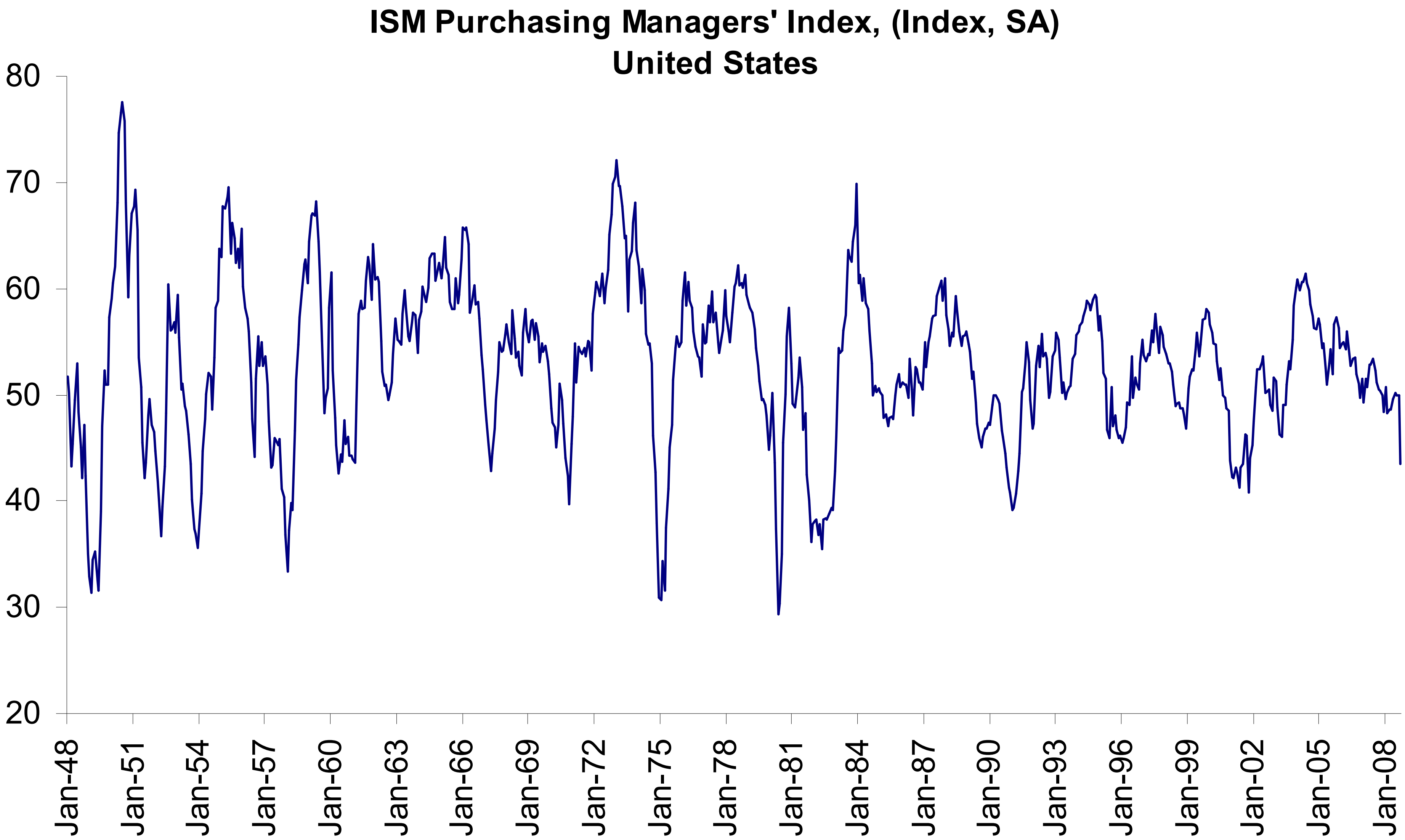
Emerging Markets 1
GDP Growth (%)

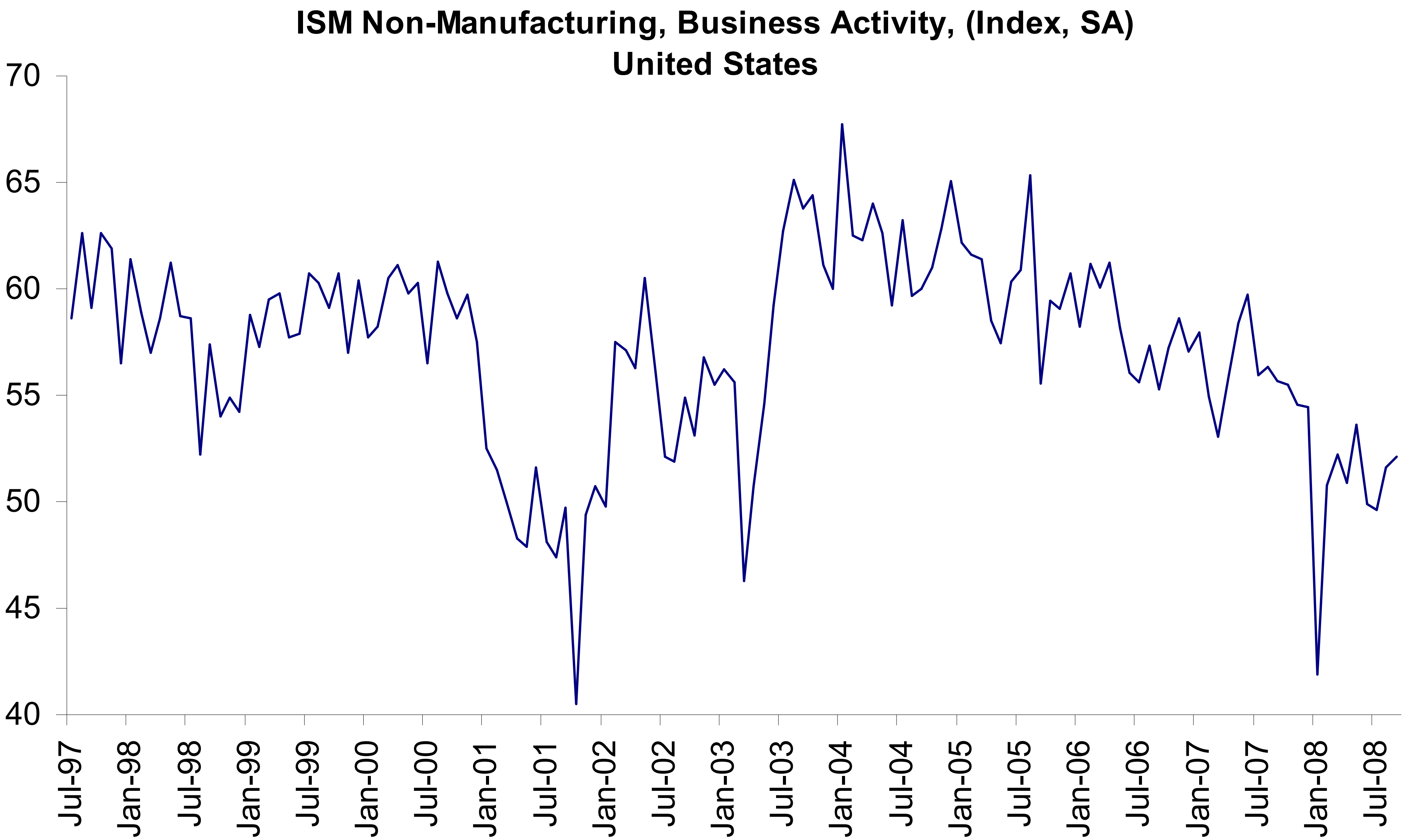
	Latest Q2	2004	2005	2006	2007	2008	2009
China	10.1	10.1	10.2	11.1	11.4	10.0	8.0
India	7.9	6.9	9.0	9.6	7.5	8.0	8.0
S. Korea	4.8	4.6	3.9	5.0	5.0	4.2	4.0
Taiwan	4.3	6.1	4.0	4.6	5.5	4.1	4.2
Hong Kong	4.2	7.9	6.9	6.0	5.6	4.0	4.9
Indonesia	6.5	5.1	5.6	5.1	4.2	4.0	4.4
Malaysia	6.3	7.1	5.3	5.6	5.6	5.0	4.9
Thailand	5.3	6.0	4.5	4.5	4.8	4.6	4.5
Singapore	2.1	8.4	6.4	4.8	4.2	3.5	5.0
Philippines	4.6	6.0	5.1	5.0	4.4	4.4	4.5

Emerging Markets 2

GDP Growth (%)

	Latest Q2	2004	2005	2006	2007	2008	2009
Brazil	6.1	4.9	2.3	3.7	5.3	5.0	5.0
Argentina	7.5	8.8	9.2	6.5	5.5	5.0	4.0
Mexico	2.8	4.4	3.0	3.2	3.4	3.4	3.5
Chile	4.3	5.9	6.3	5.8	5.0	5.0	4.8
Hungary	2.0	4.9	4.2	3.7	2.0	2.0	3.4
Poland	5.8	5.3	3.5	5.3	5.2	5.4	4.3
Czech Rep.	4.6	4.2	6.1	6.0	5.7	4.7	5.4
Turkey	1.9	8.9	7.4	5.2	4.3	3.1	4.0
Russia	7.8	7.1	6.4	6.7	7.5	7.1	6.2


ISM Purchasing Managers' Index, (Index, SA)
United States
80
70
60
50
40
30
20
Jan-48
Jan-51
Jan-54
Jan-57
Jan-60
Jan-63
Jan-66
Jan-69
Jan-72
Jan-75
Jan-78
Jan-81
Jan-84
Jan-87
Jan-90
Jan-93
Jan-96
Jan-99
Jan-02
Jan-05
Jan-08


ISM Non-Manufacturing, Business Activity, (Index, SA)
United States
70
65
60
55
50
45
40
Jul-97
Jan-98
Jul-98
Jan-99
Jul-99
Jan-00
Jul-00
Jan-01
Jul-01
Jan-02
Jul-02
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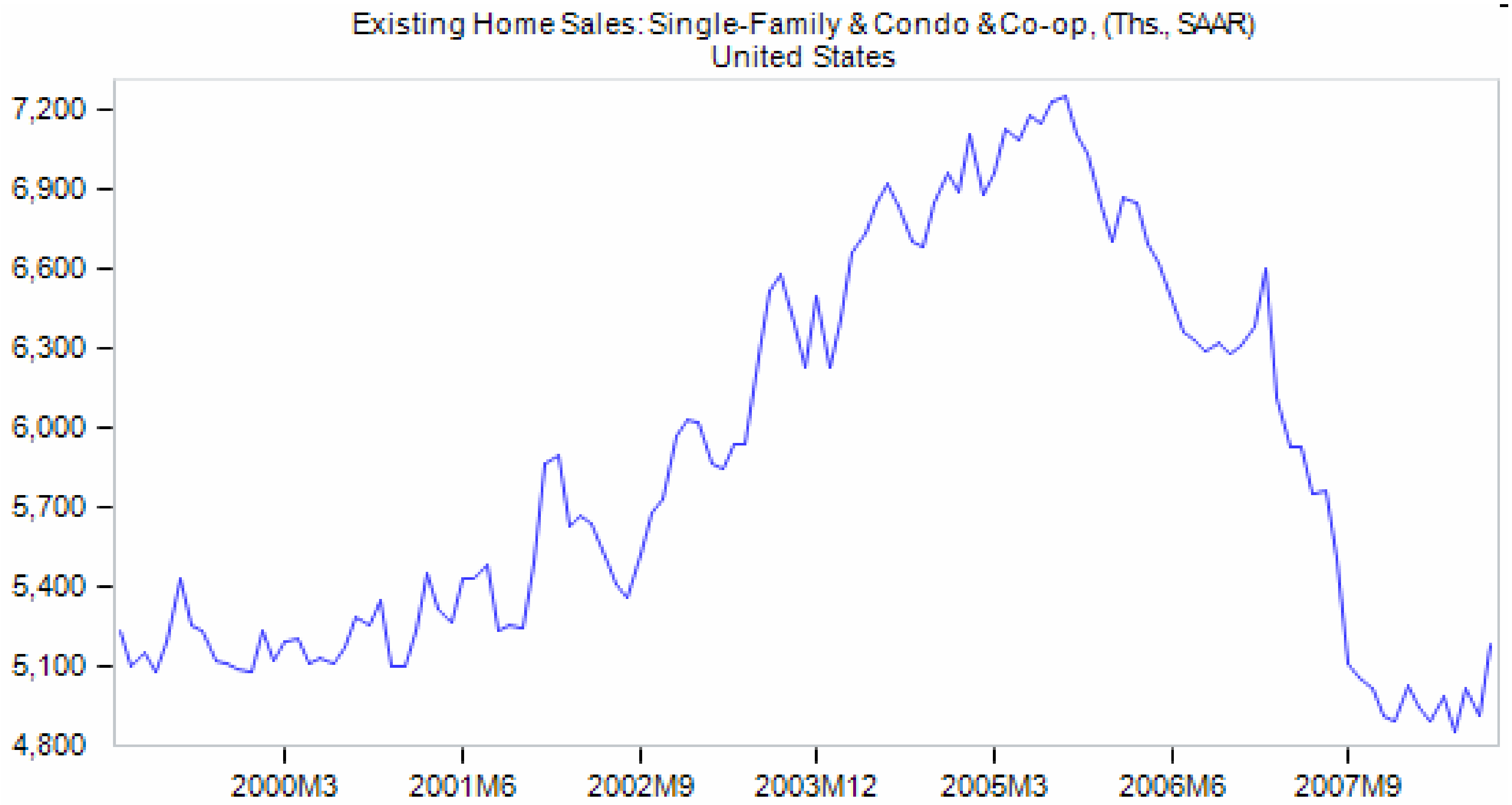
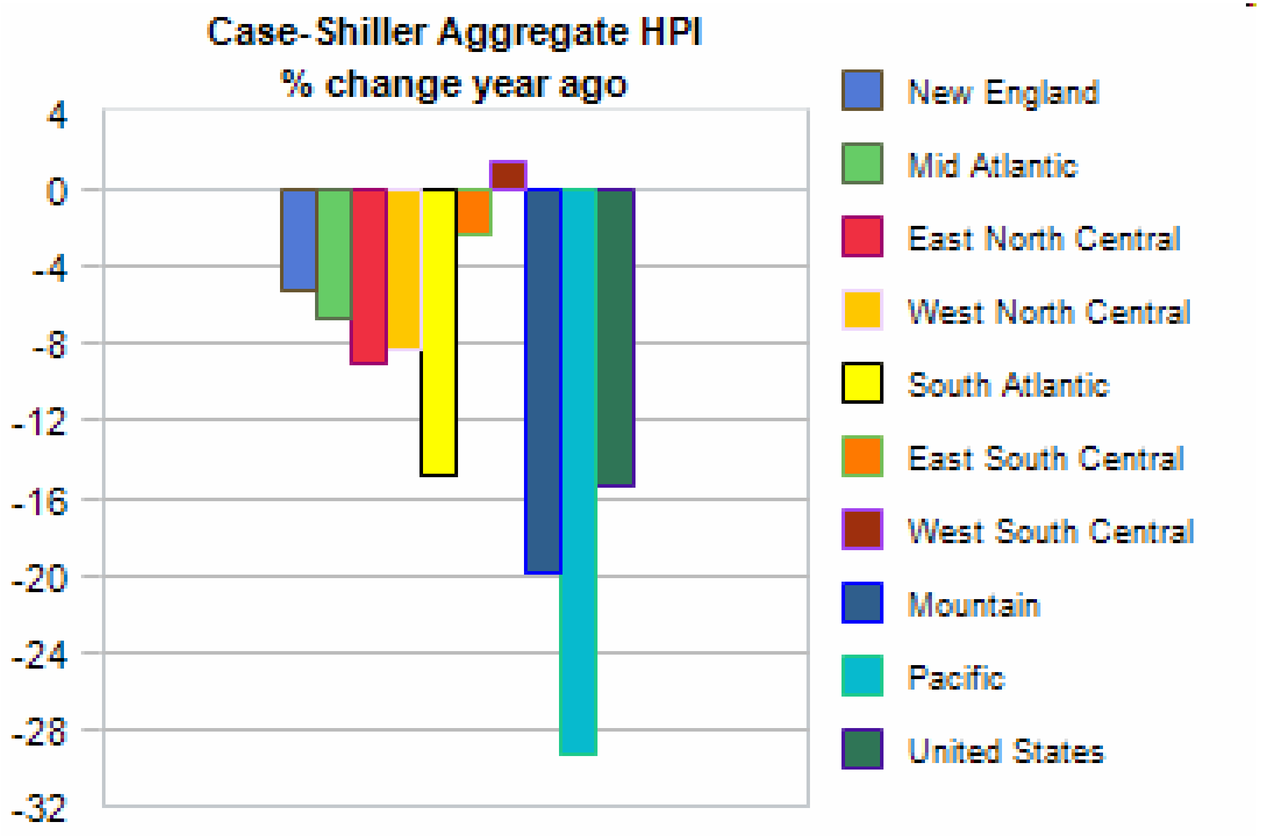
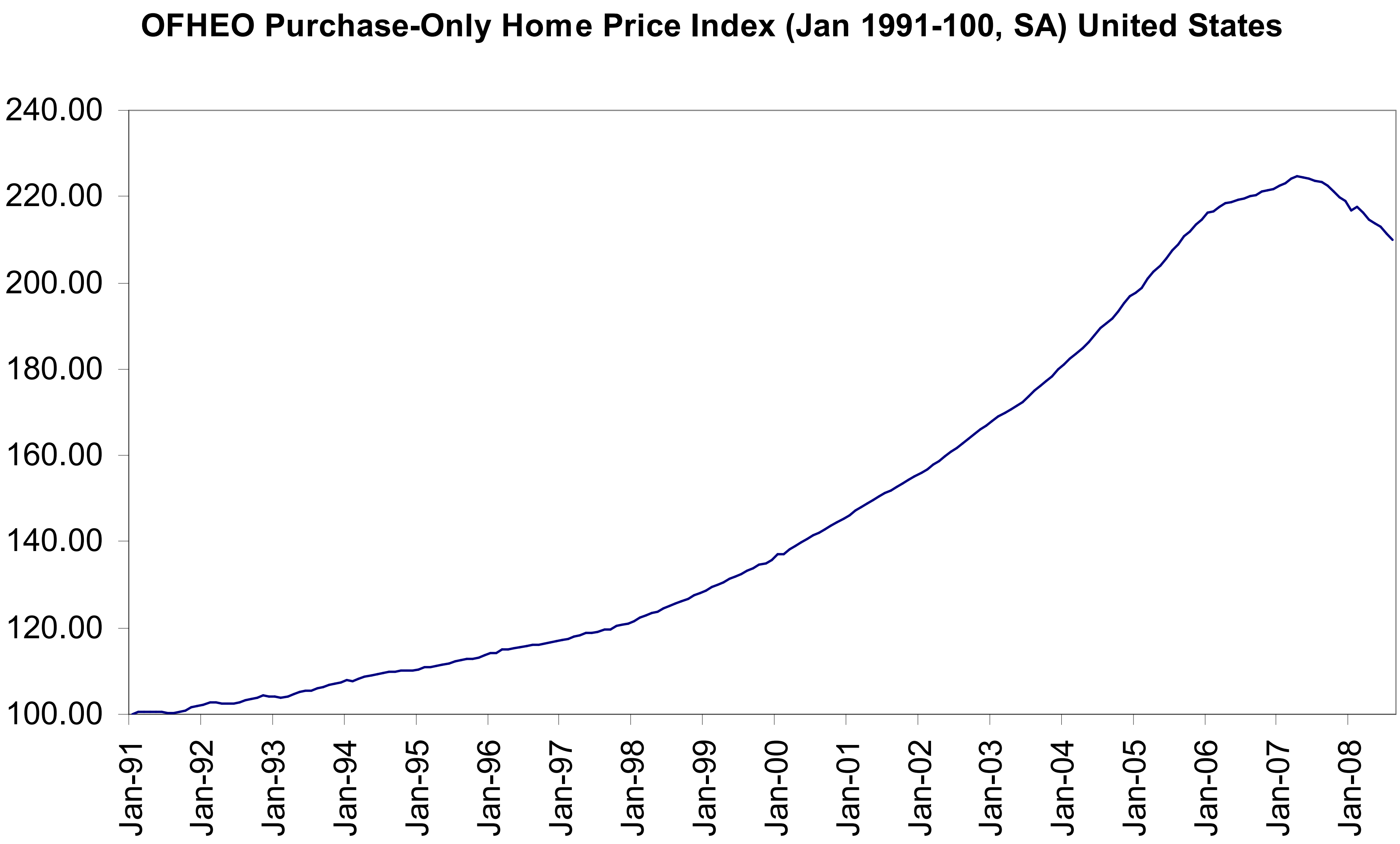
Jul-07
Jan-08
Jul-08



Home sales surprised on the upside in September. The National Association of Realtors reported a 5.5% m/m increase in sales of existing homes. At 5.18 million annualized units, sales are running at their fastest pace since August 2007 and are up year over year for the first time in three years. Moreover, the decline in house prices, while still a substantial 9% y/y, is slightly better than last month's decline. The inventory situation is also improving, with months of supply slipping just below 10 for the first time since January. Before celebrating the end of the housing downturn, however, it is important to note that the improvement in sales comes on the back of a surge in foreclosure sales.



Regional housing markets remain very weak, according to the second quarter Case-Shiller house price indices. A slower pace of decline, however, provides a faint glimmer of hope. The metropolitan areas that have been hardest hit during this correction—California, Arizona, Nevada and Florida—continue to lead the downward charge. Prices in the industrial Midwest firmed a bit, and the Southwest was a haven of stability. Only a handful of metro areas that Fiserv covers are enjoying price increases. Nationally, house prices are down an annualized 12% from the first quarter.


OFHEO Purchase-Only Home Price Index (Jan 1991-100, SA) United States
240.00
220.00
200.00
180.00
160.00
140.00
120.00
100.00
Jan-91
Jan-92
Jan-93
Jan-94
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
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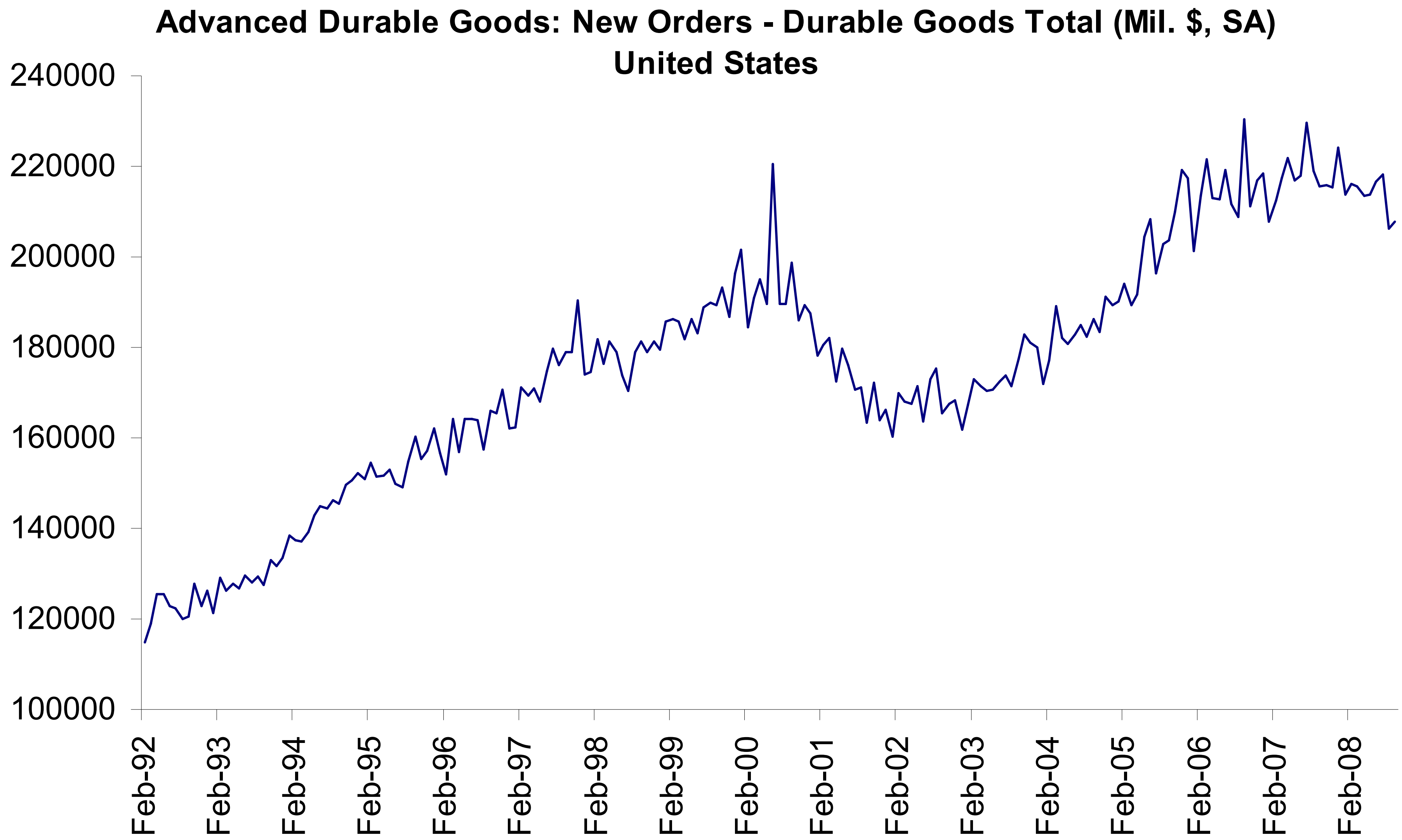
Jan-06
Jan-07
Jan-08


Advanced Durable Goods: New Orders - Durable Goods Total (Mil. $, SA)
United States
240000
220000
200000
180000
160000
140000
120000
100000
Feb-92
Feb-93
Feb-94
Feb-95
Feb-96
Feb-97
Feb-98
Feb-99
Feb-00
Feb-01
Feb-02
Feb-03
Feb-04
Feb-05
Feb-06
Feb-07
Feb-08

World Forecast Detail
Growth of Real GNP

							Consensus	
	2005	**2006**	**2007**	**2008**	**2009**		**2008**	**2009**
USA	3.1	3.3	2.9	1.6	0.7		1.4	0.0
UK	1.8	2.8	3.1	0.9	0.2		1.1	-0.2
Japan	1.9	2.2	2.4	0.8	0.7		0.7	0.5
Germany	0.8	2.9	2.6	1.9	1.0		1.7	0.3
France	1.7	2.2	2.0	1.8	1.1		0.9	0.5
Italy	0.2	1.9	1.8	0.5	0.4		0.0	0.0

World Forecast Detail
Growth of Consumer Prices

							Consensus	
	2005	**2006**	**2007**	**2008**	**2009**		**2008**	**2009**
USA	3.4	3.2	2.5	4.0	2.4		4.4	2.3
UK	2.4	2.4	2.4	3.7	2.6		3.7	2.9
Japan	-0.3	0.2	0.1	1.5	0.6		1.7	1.1
Germany	2.0	1.7	1.9	2.8	1.8		2.9	2.0
France	1.7	1.7	1.5	3.2	1.8		3.1	2.0
Italy	2.0	2.1	1.9	3.4	2.0		3.5	2.4

World Forecast Detail

Nominal Short-term Interest Rates

	2005	2006	2007	2008	2009		Latest (Oct 28)
USA	4.0	5.0	4.9	2.4	2.4		3.5
UK	4.7	4.9	5.9	5.7	4.4		6.0
Japan	0.1	0.5	0.6	0.8	0.7		1.0
Euro	2.5	2.9	4.0	4.8	3.0		4.9

World Forecast Detail

Nominal Exchange Rate (Number of Units of Local Currency to $1)

	2005	2006	2007	2008	2009		Latest (Oct 28)
USA	93.15	91.78	89.22	85.00	89.10		93.1
UK	1.82	1.84	1.96	1.85	1.70		1.56
Japan	110.2	116.2	119.7	104.0	106.3		96.5
Euro	0.80	0.80	0.75	0.64	0.75		0.80
Note: The series for the USA is a trade weighted index (1990=100); the series for the UK is $ per £							

Summary of Forecast for UK							
		2005	**2006**	**2007**	**2008**	**2009**	**2010**
GDP Growth[1]		1.8	2.9	3.1	0.9	0.2	2.2
Inflation	CPI	2.4	2.4	2.4	3.7	2.6	1.7
	RPI	2.8	3.2	4.2	4.2	3.0	2.2
Unemployment							
	Annual Average[2]	0.9	0.9	0.9	0.9	1.1	1.1
	4th Quarter	0.9	0.1	0.8	1.0	1.1	1.1
Exchange Rate (1990=100)[3]		100.9	101.4	103.5	91.1	89.8	92.4
3 Month Interest Rate		4.7	4.9	5.9	5.7	4.4	4.1
5 Year Interest Rate		4.2	4.7	5.0	4.4	4.5	4.9
Current Balance (£ Billions)		-31.0	-50.7	-59.7	-45.3	-42.6	-48.7
PSBR (£ Billions)		37.8	30.4	35.8	52.0	52.0	49.7

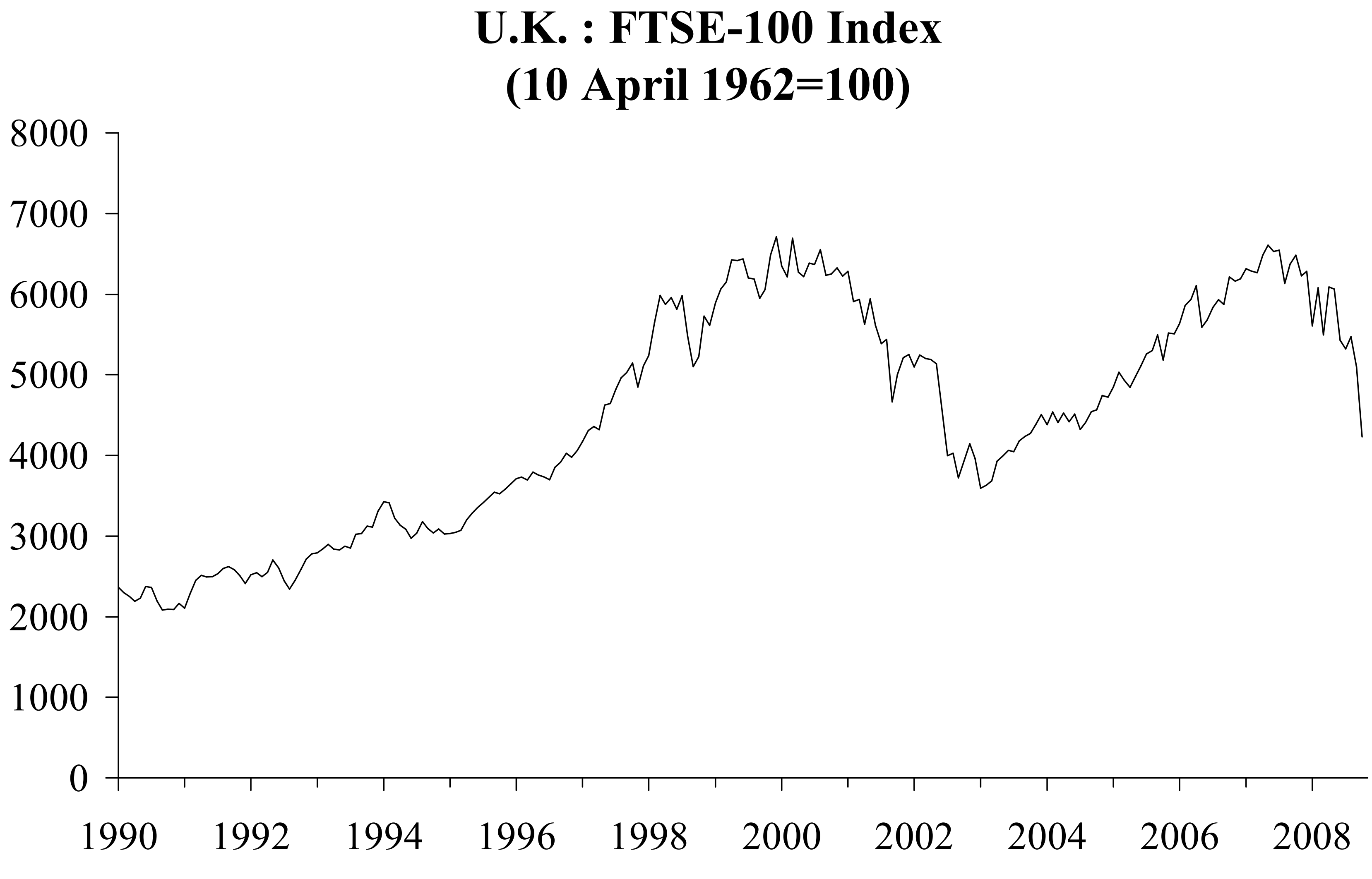
[1]Expenditure estimate at factor cost

[2]U.K. Wholly unemployed excluding school leavers (new basis)

[3]Sterling effective exchange rate, Bank of England Index

Stock Market Indices

Stock Market Indices



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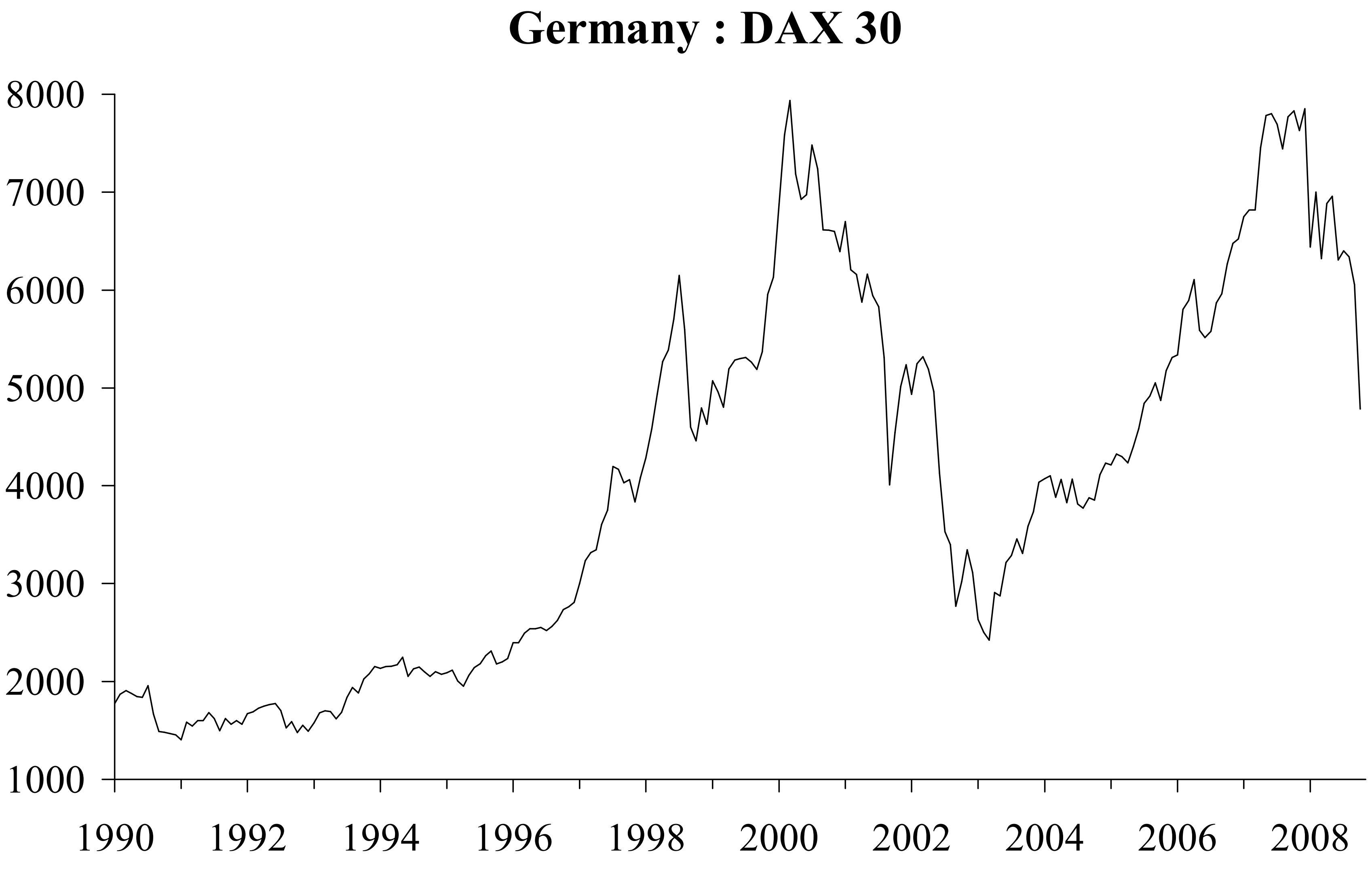

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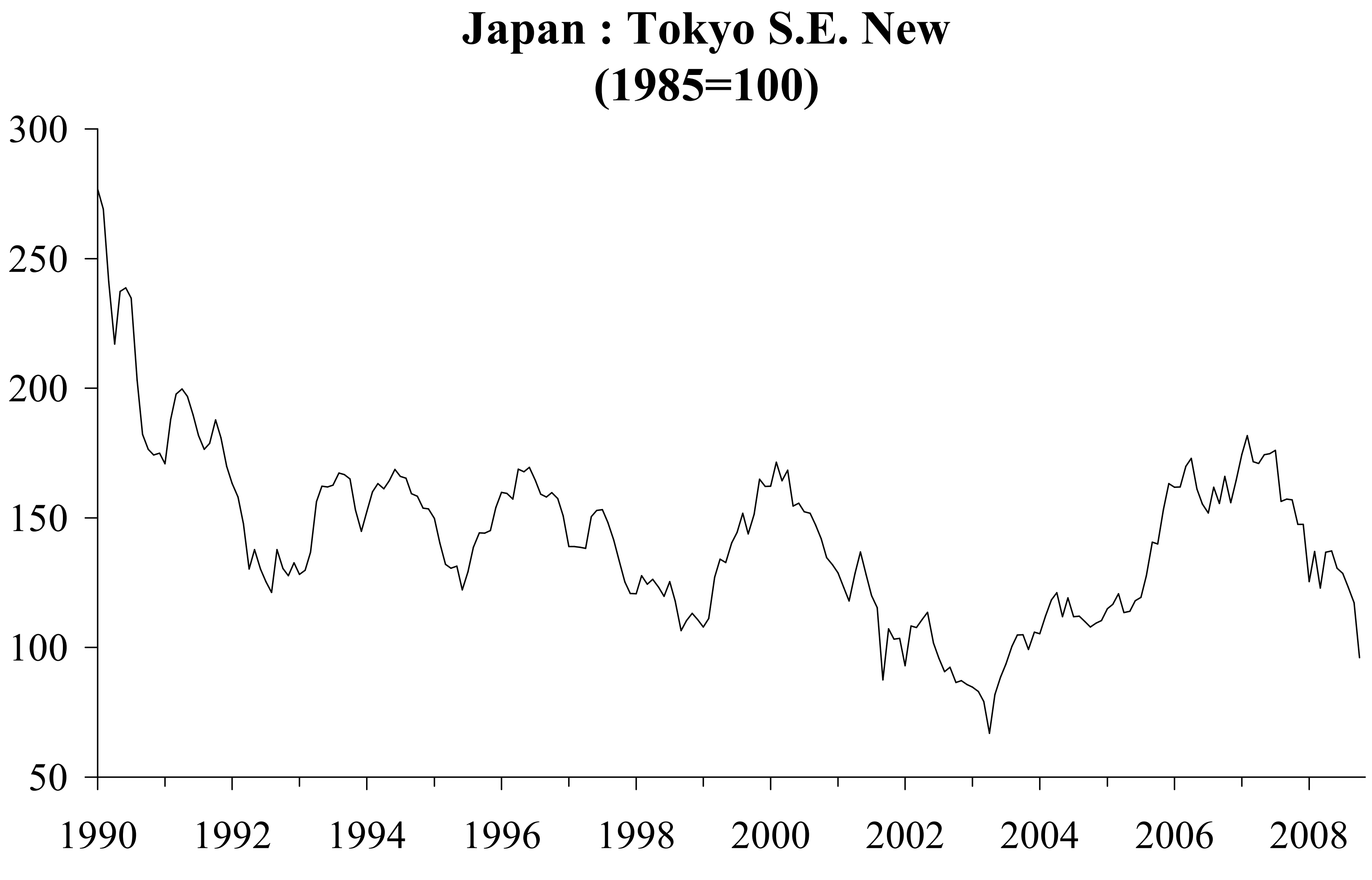
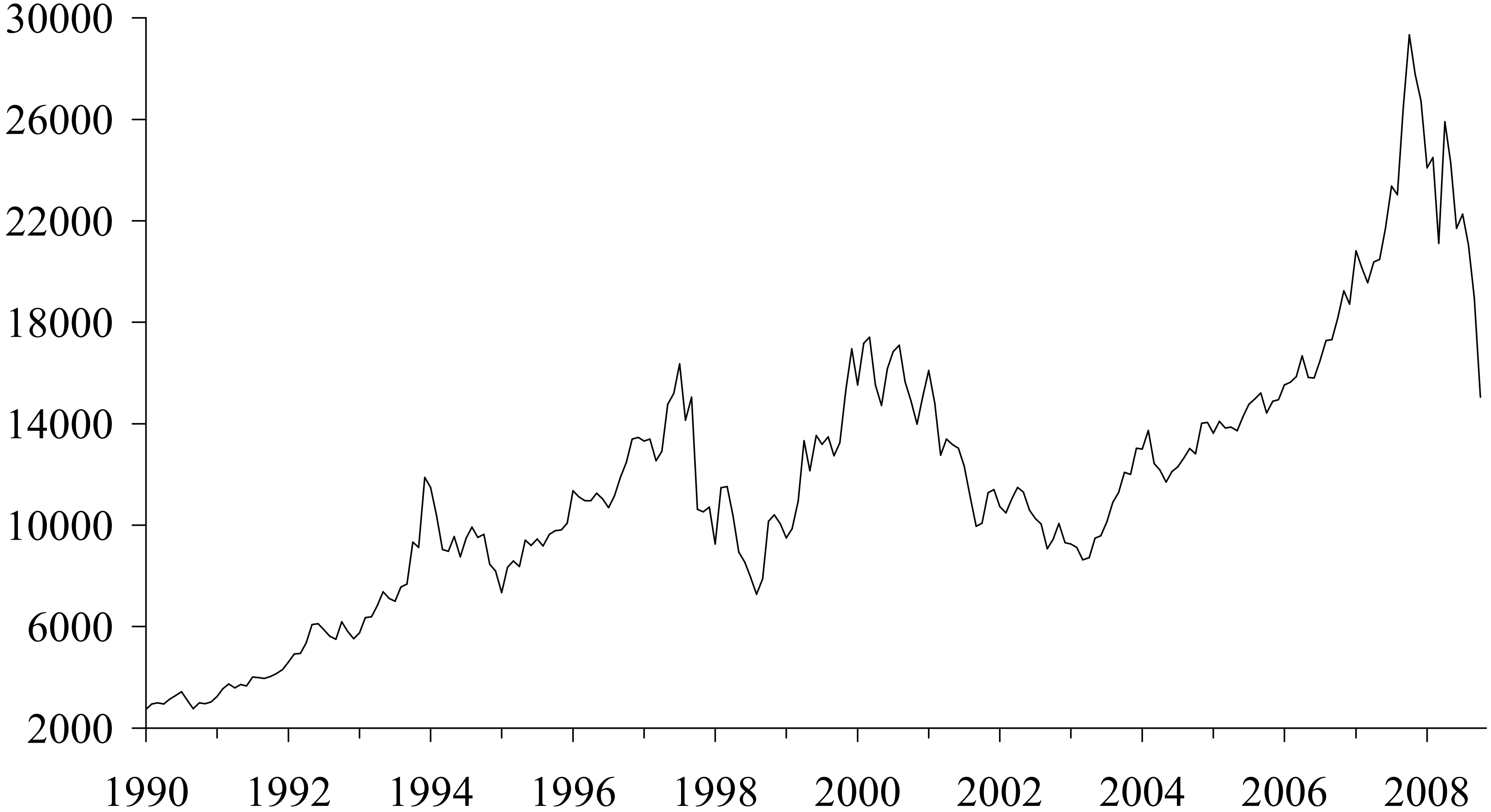


Stock Market Indices

Hong Kong: FT-Actuaries



Stock Market Indices

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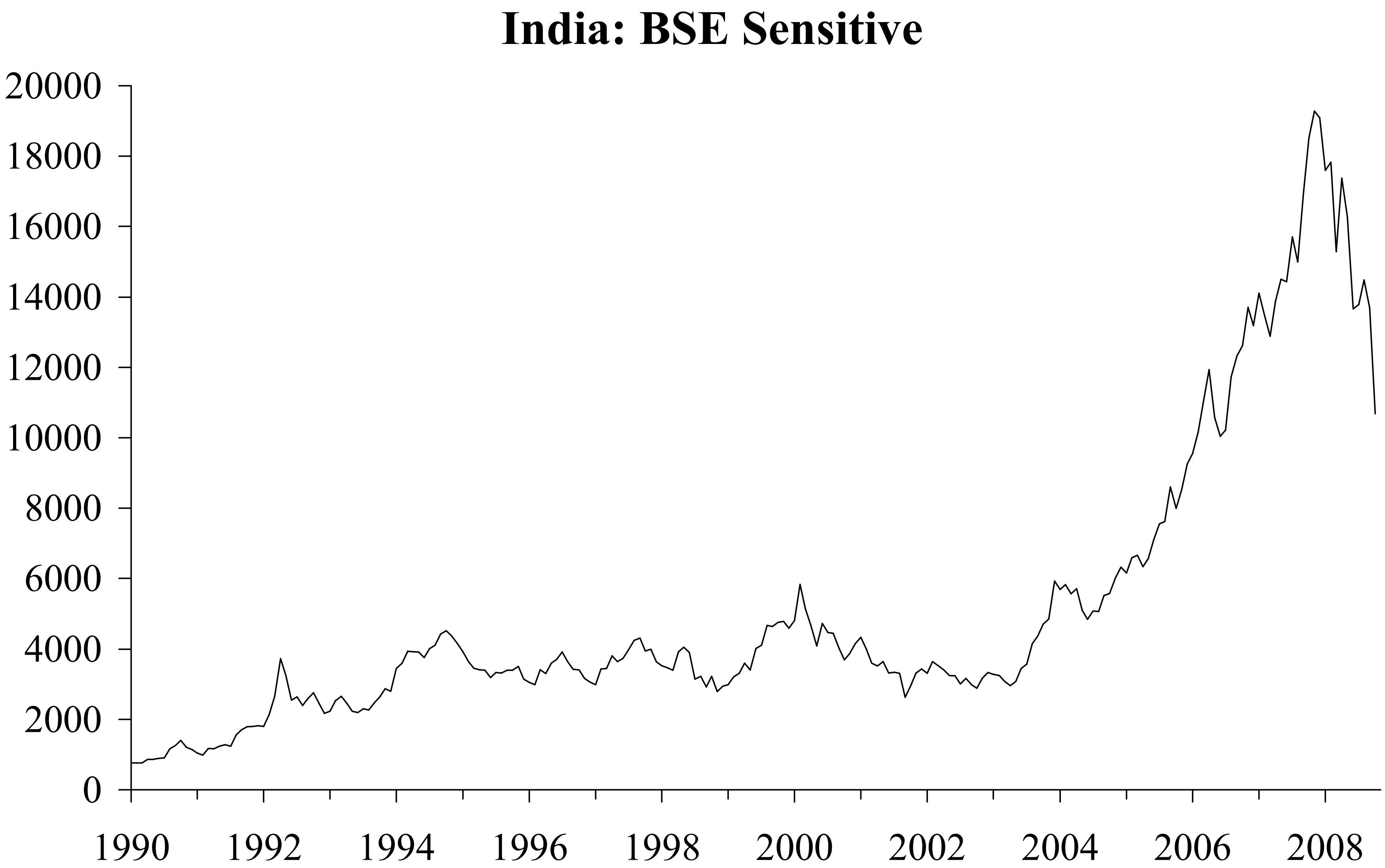

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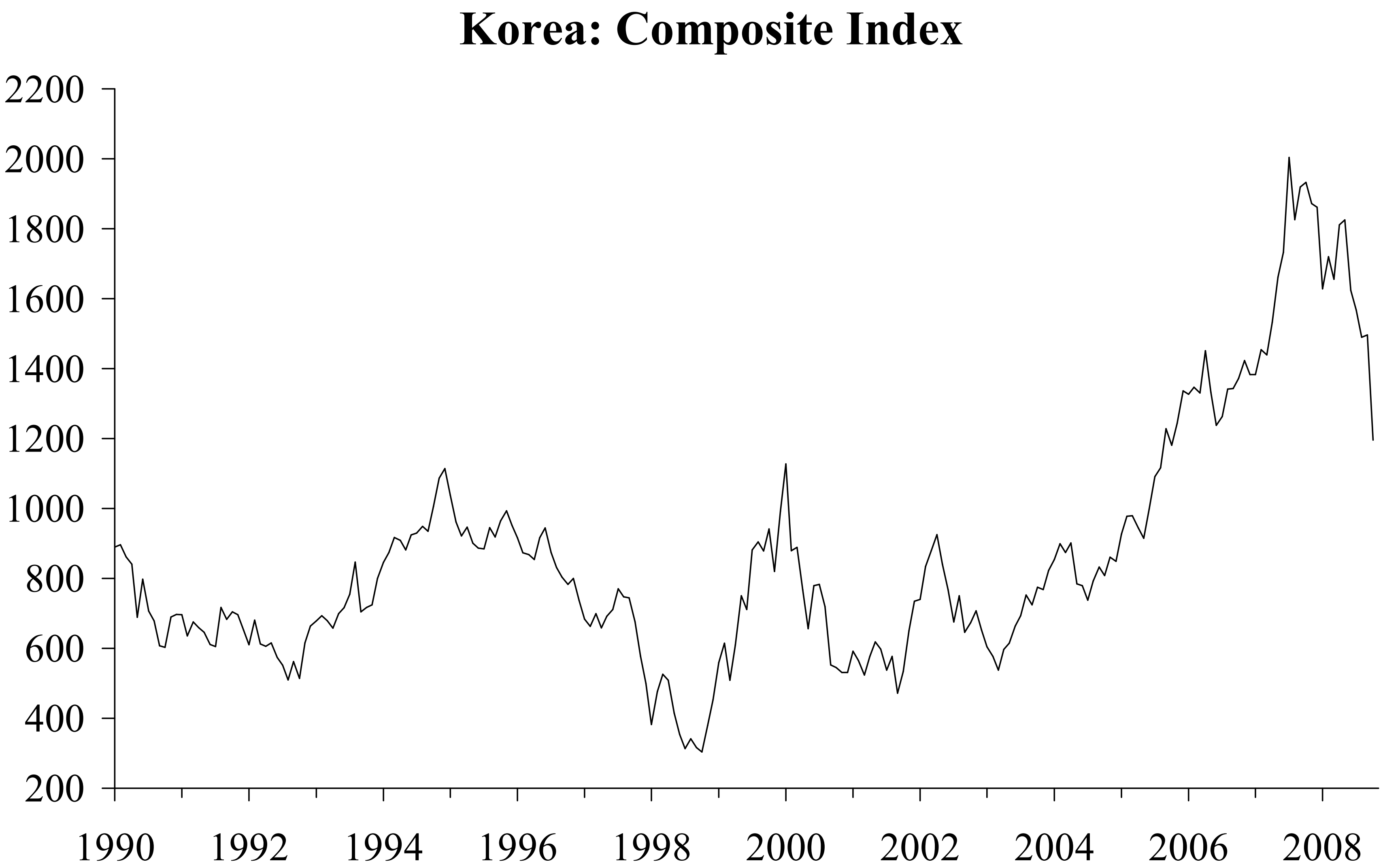

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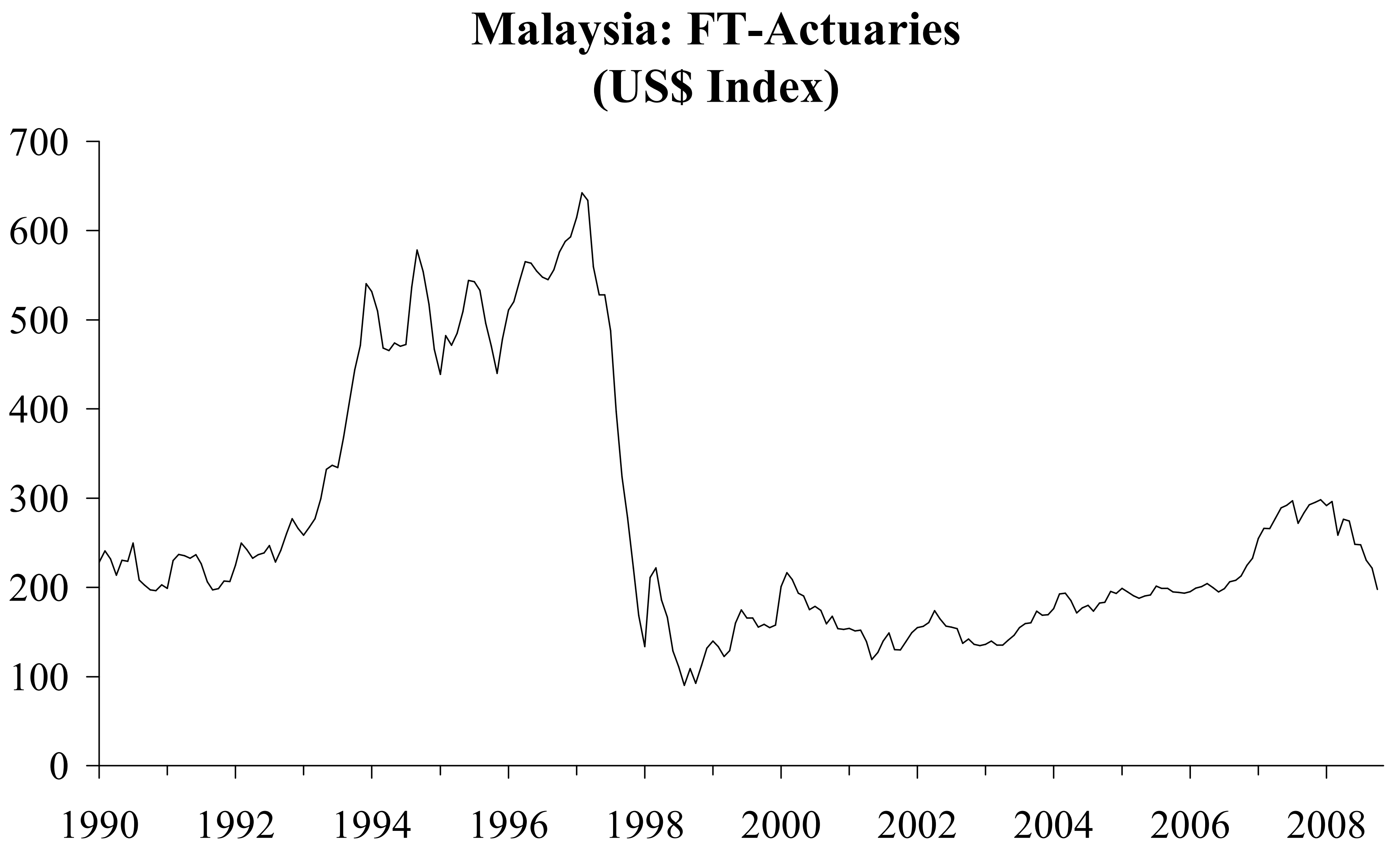

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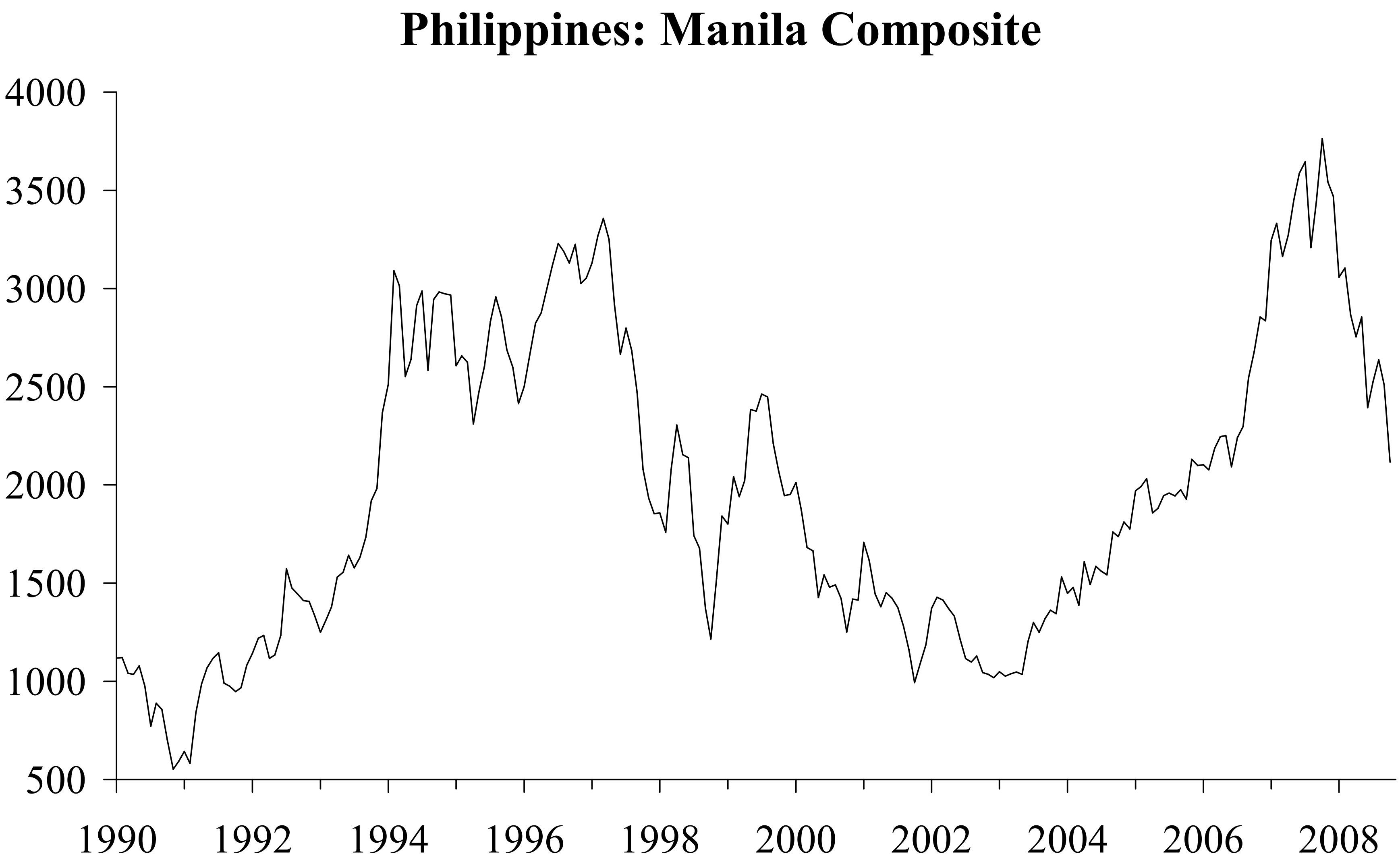

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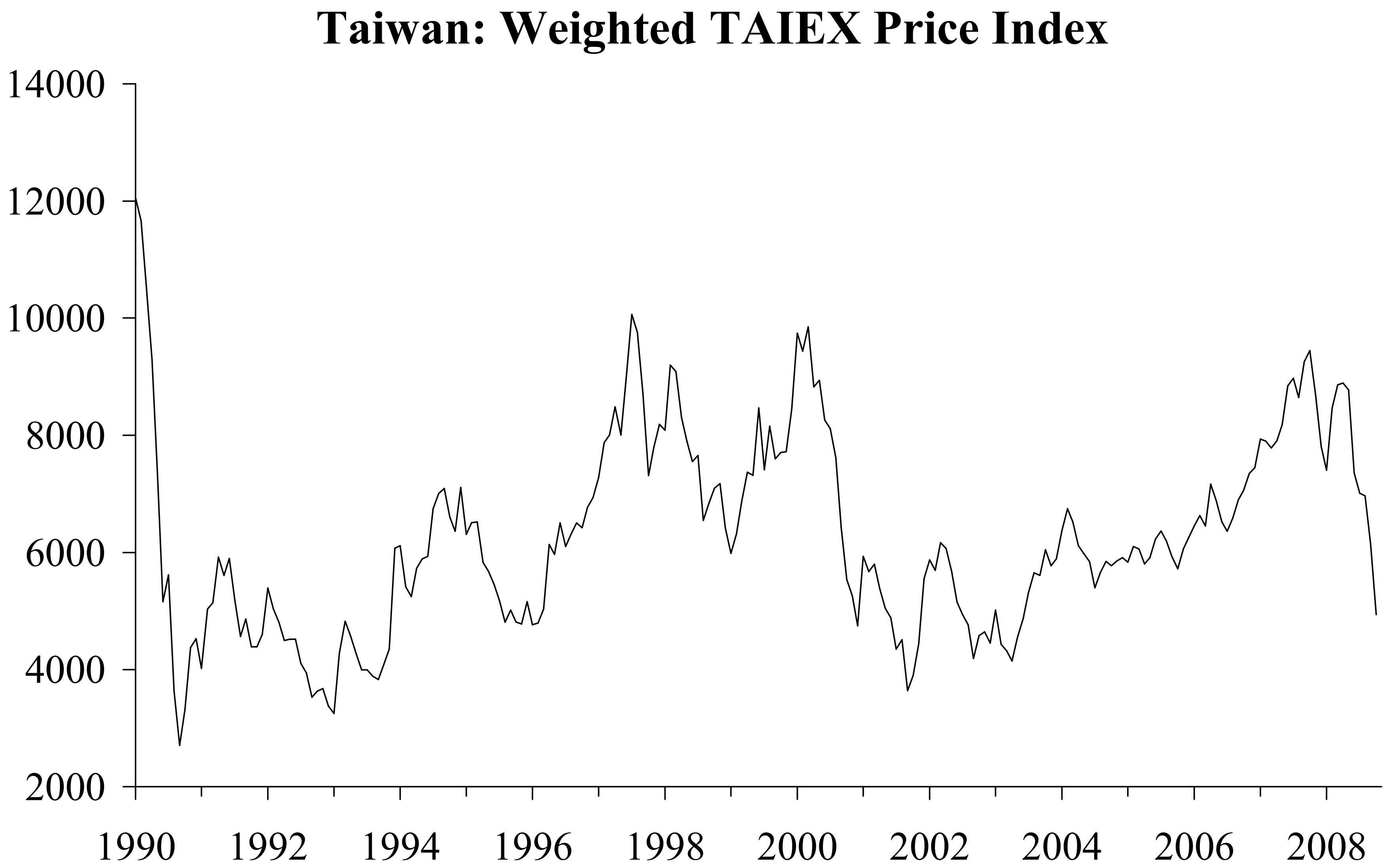

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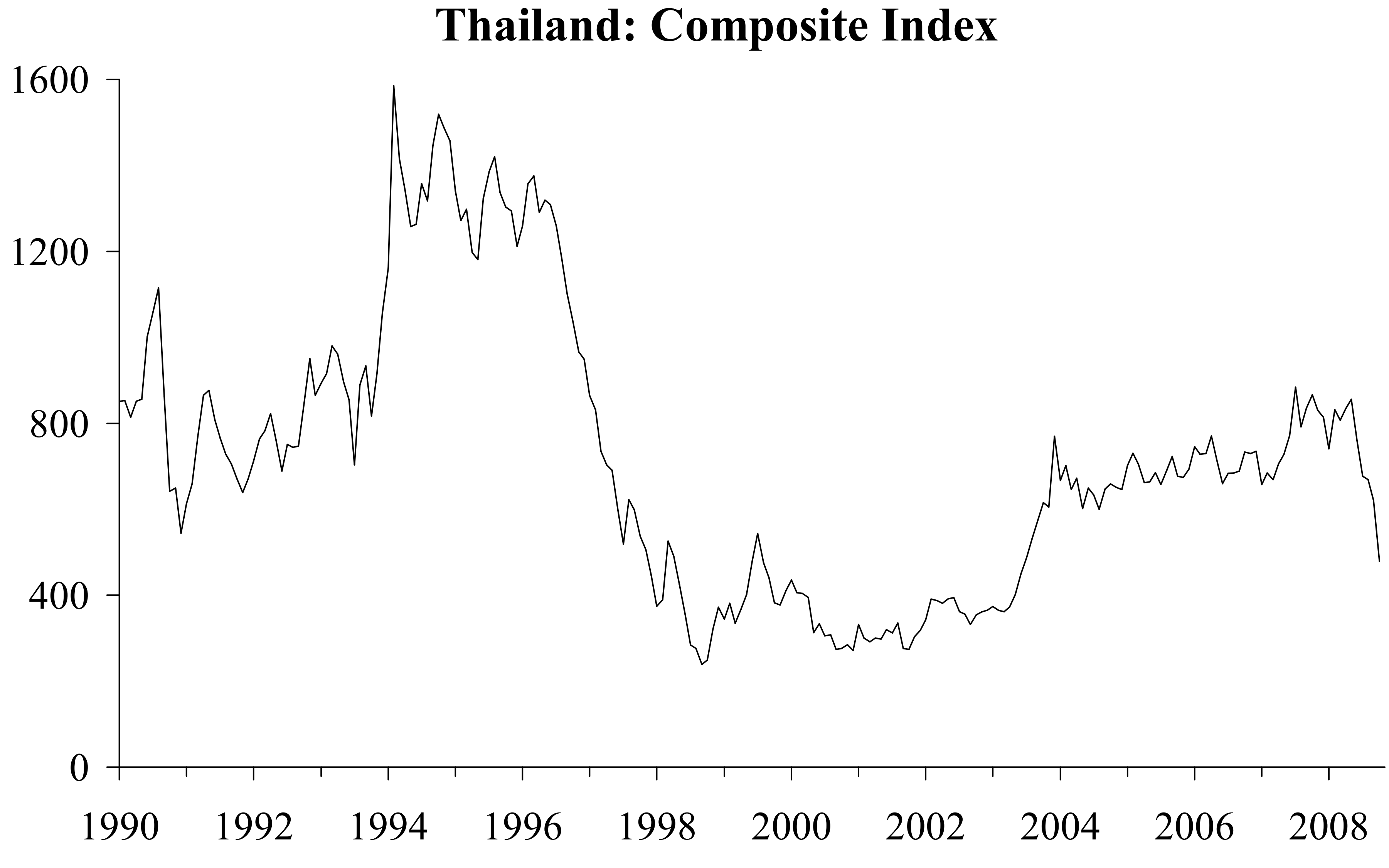

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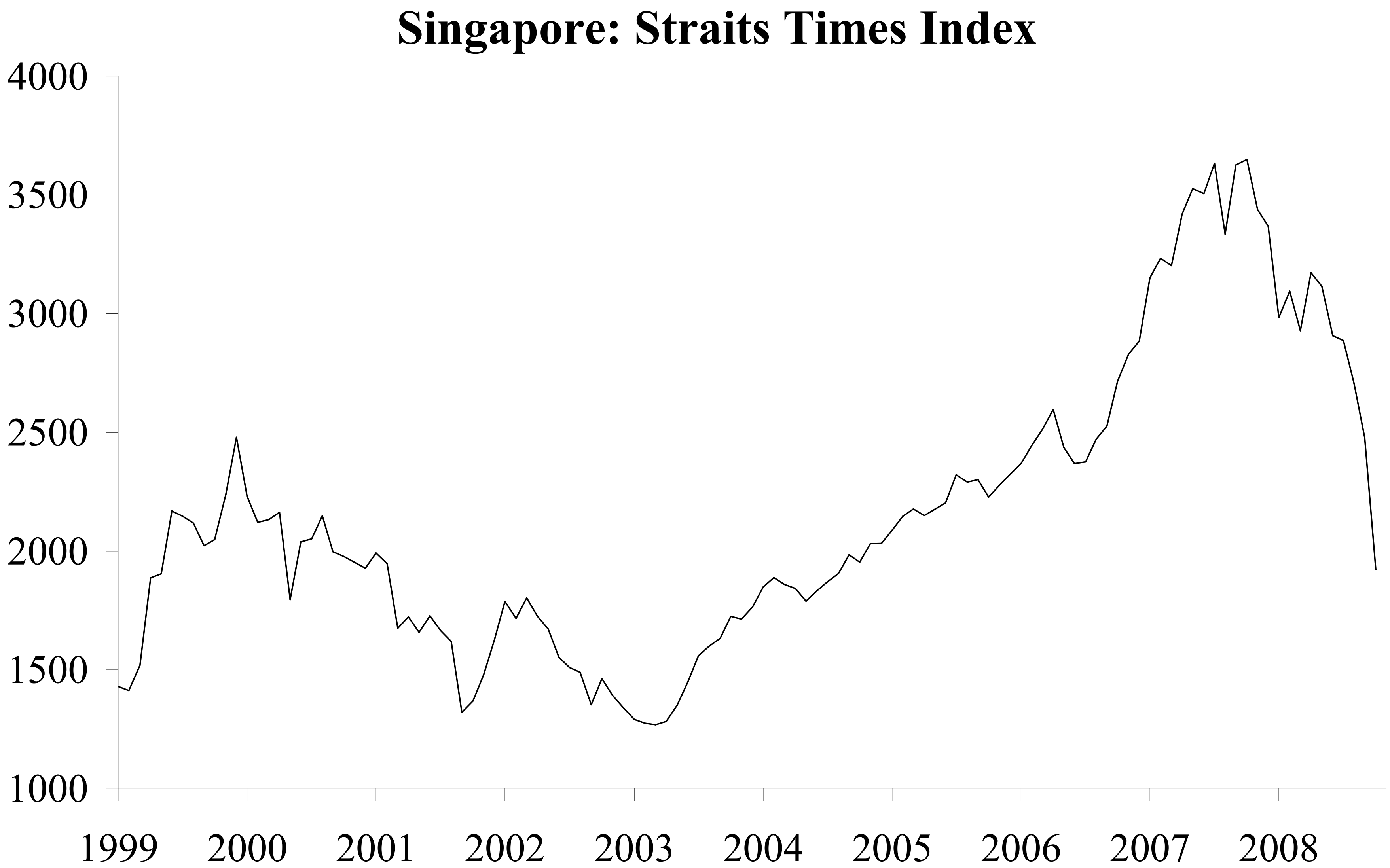
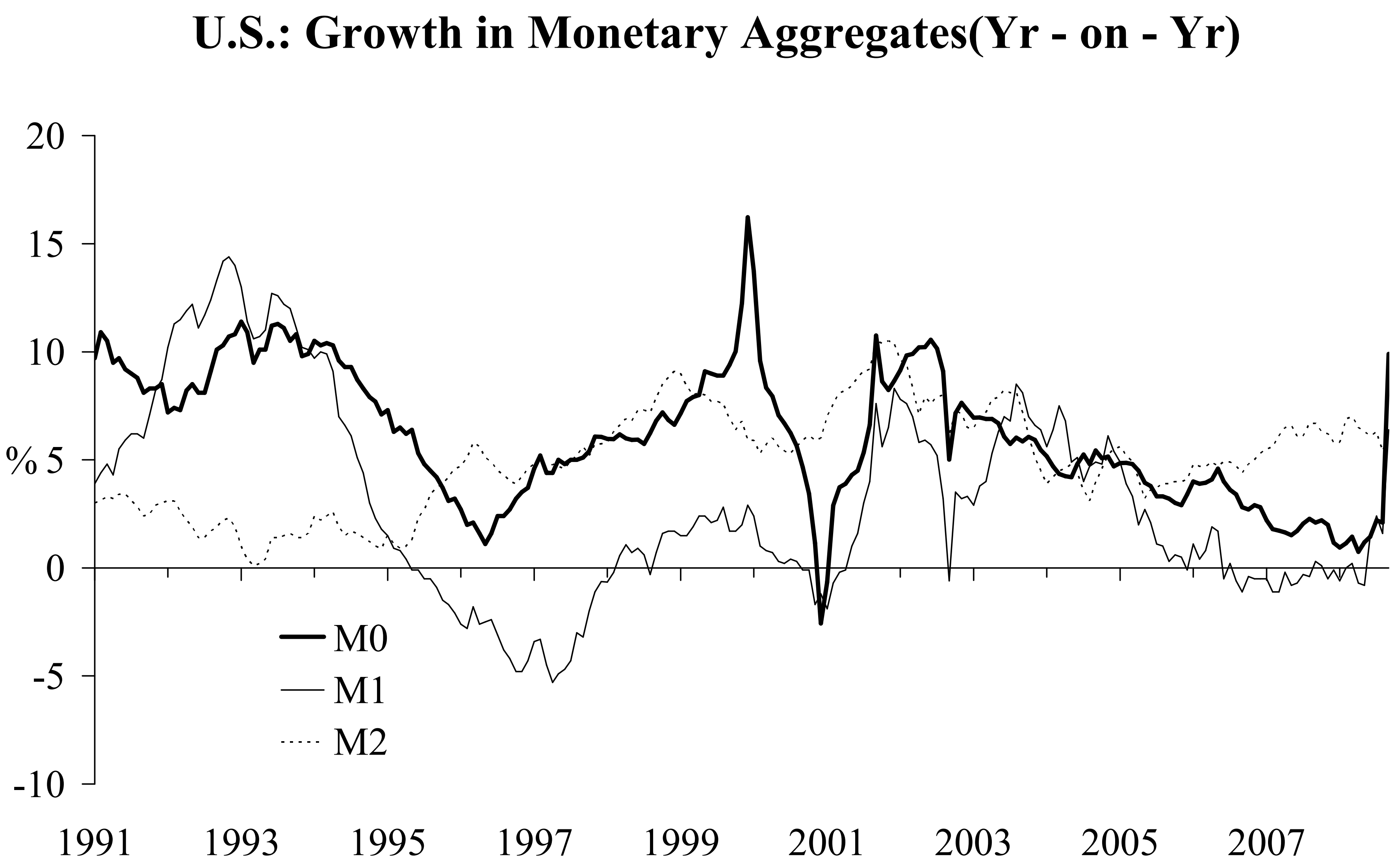


Money Policy



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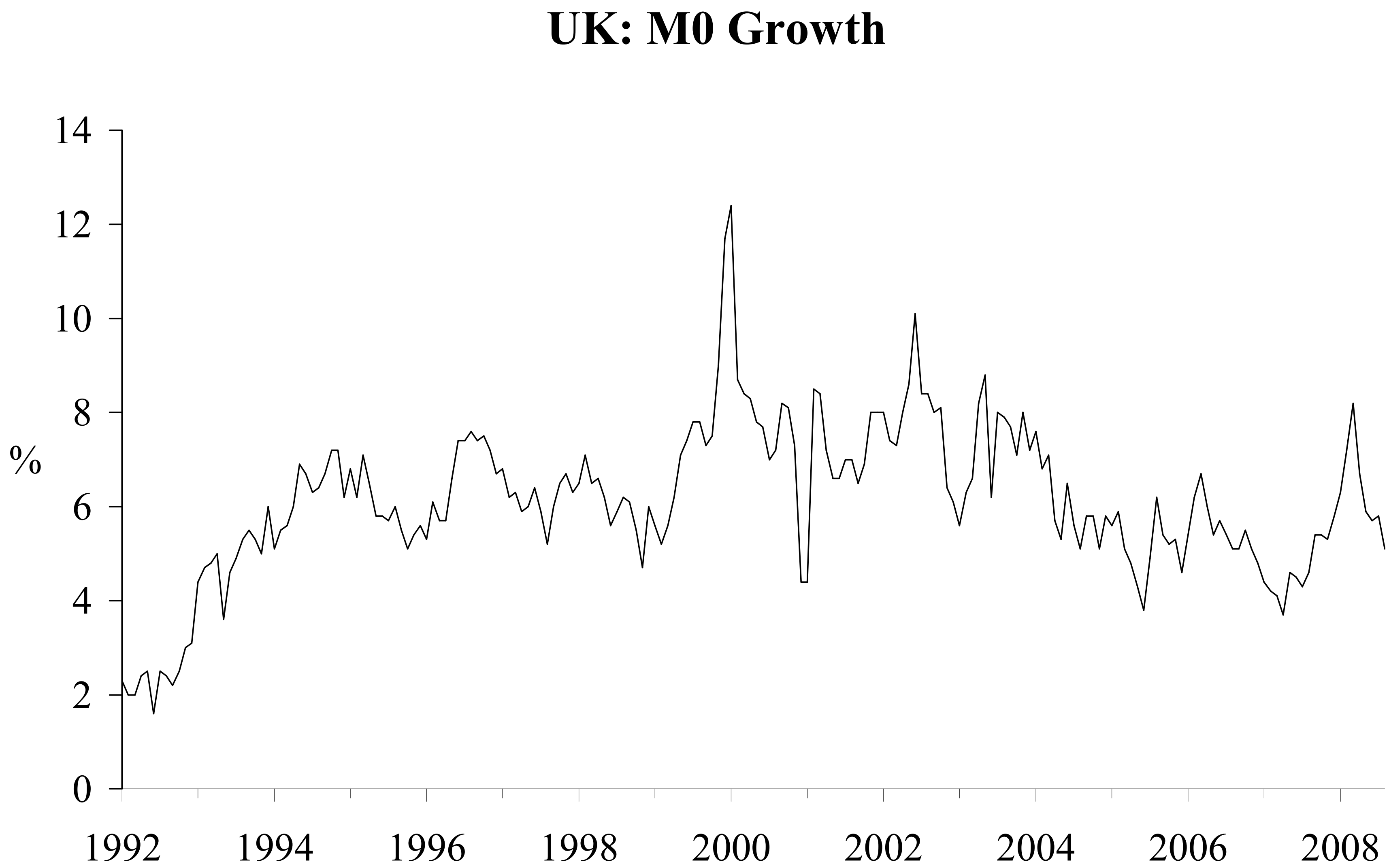

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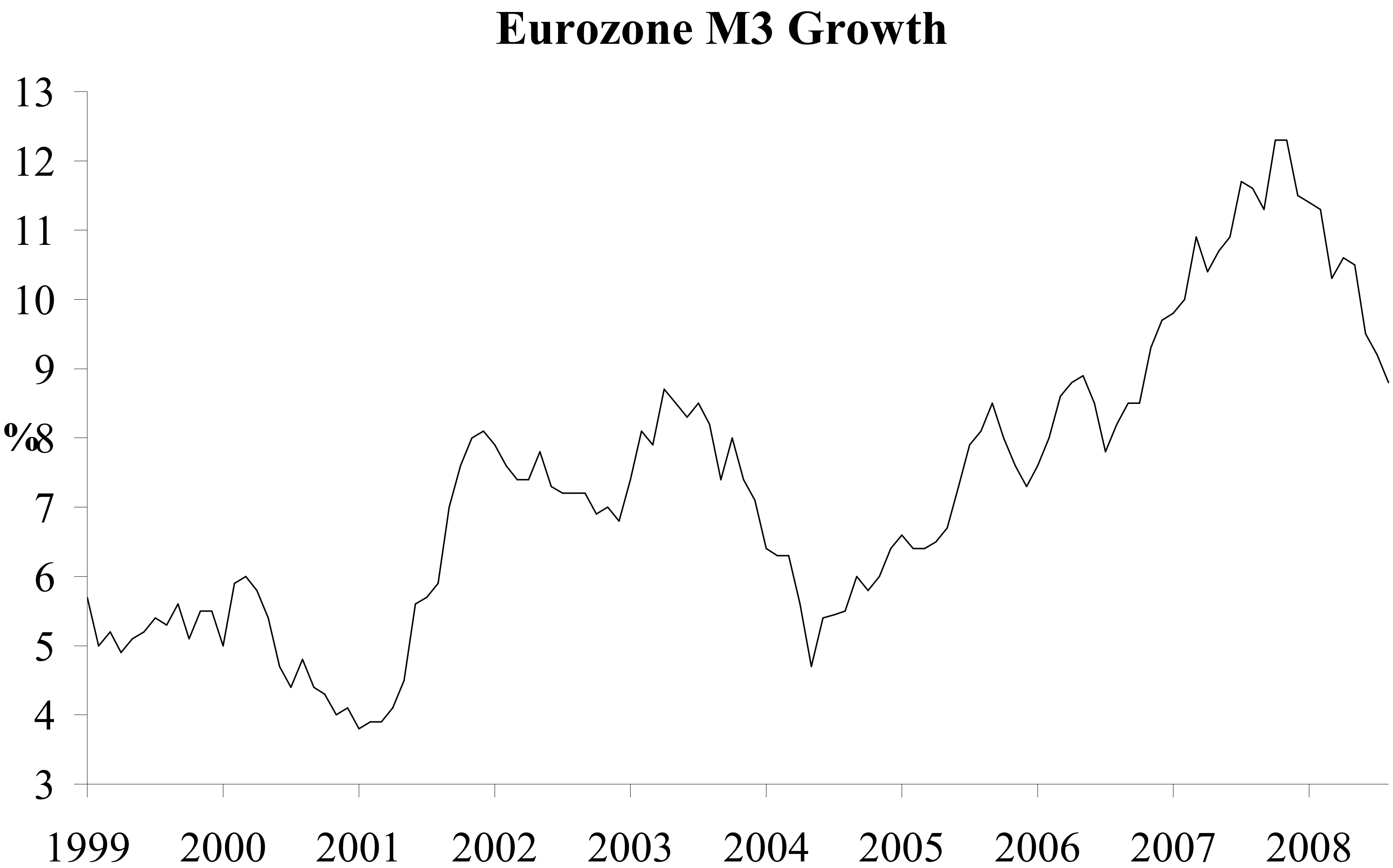
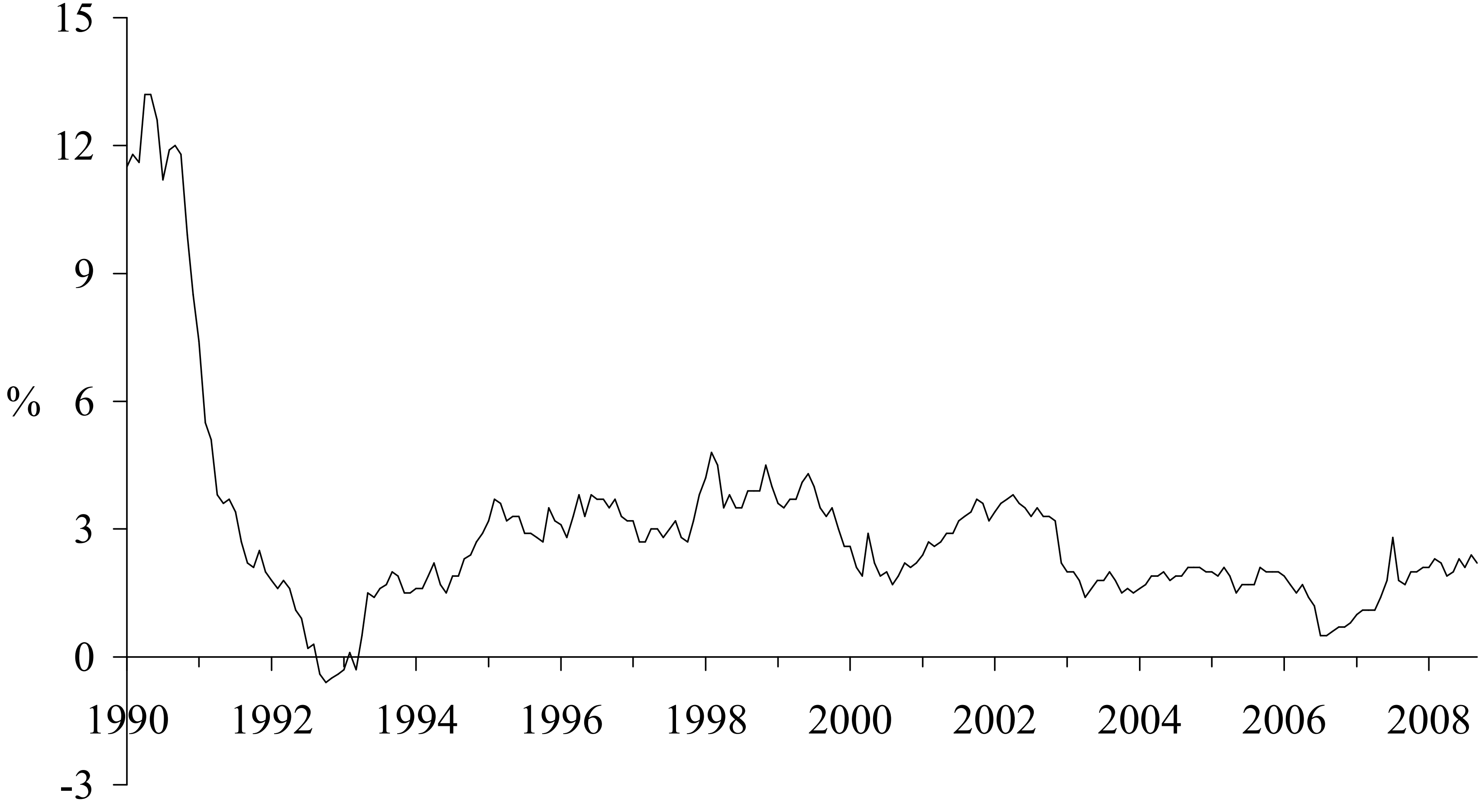
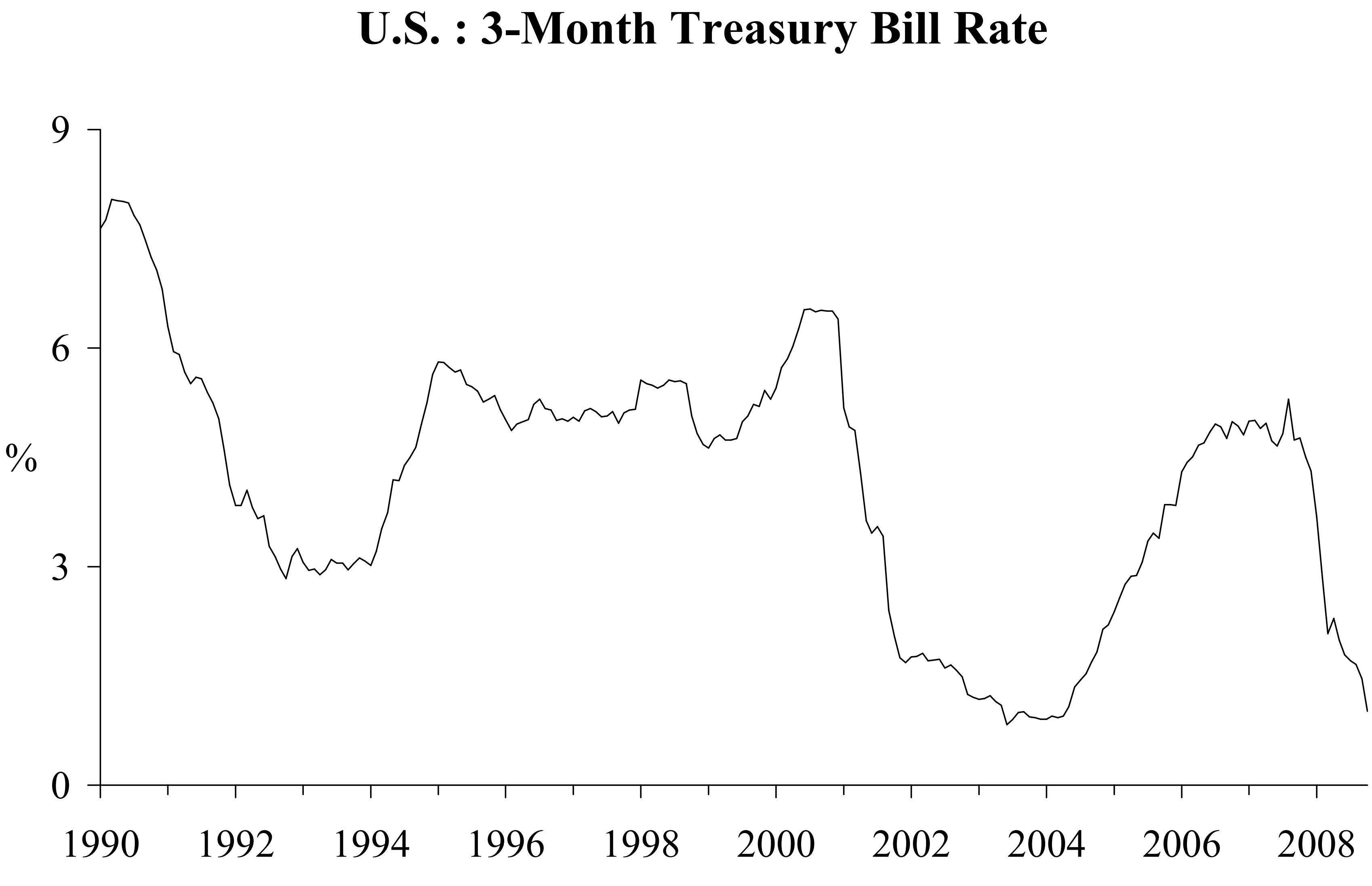


Money Policy

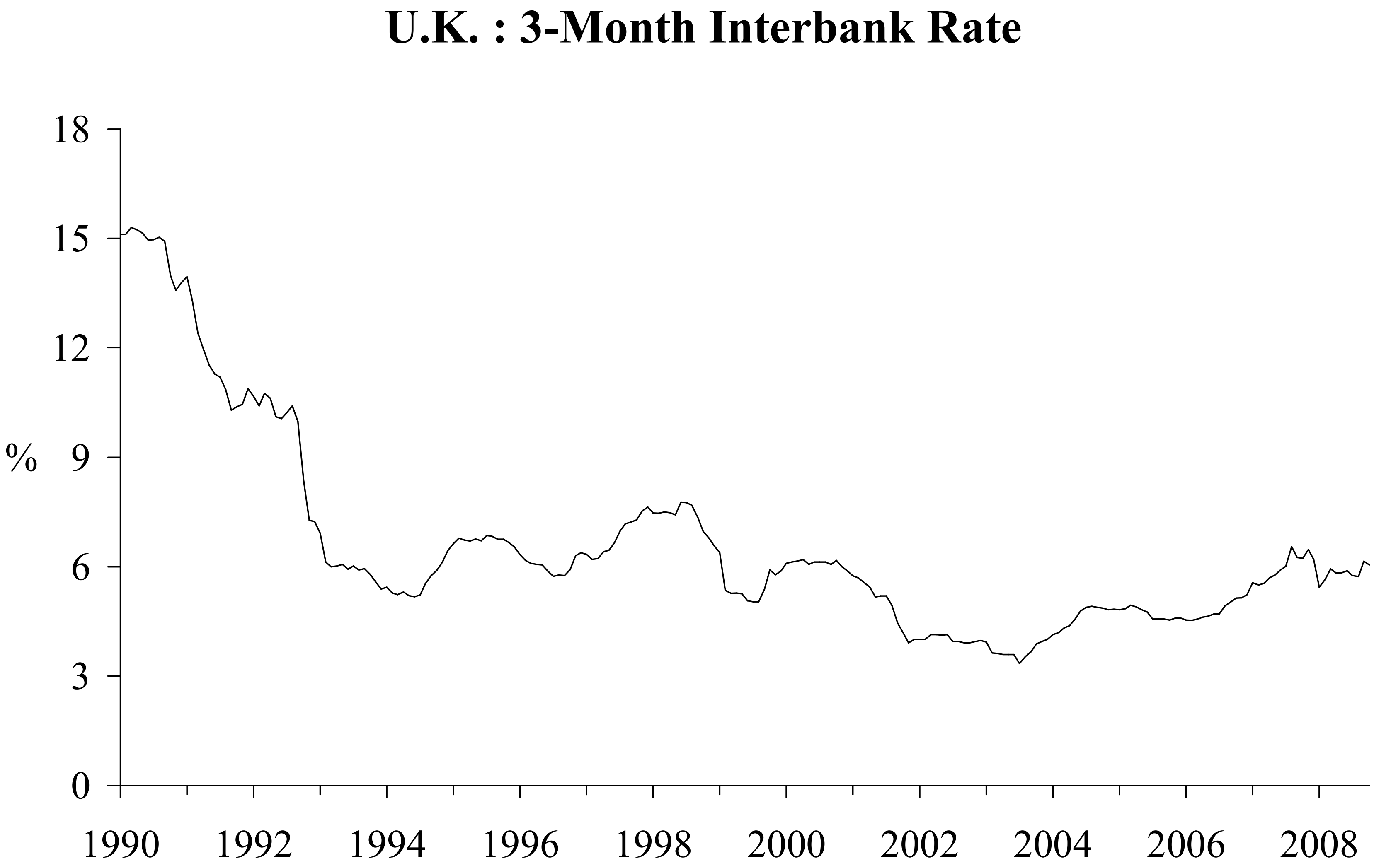
Japan: Growth of M2+CD's



Short-Term Interest Rates

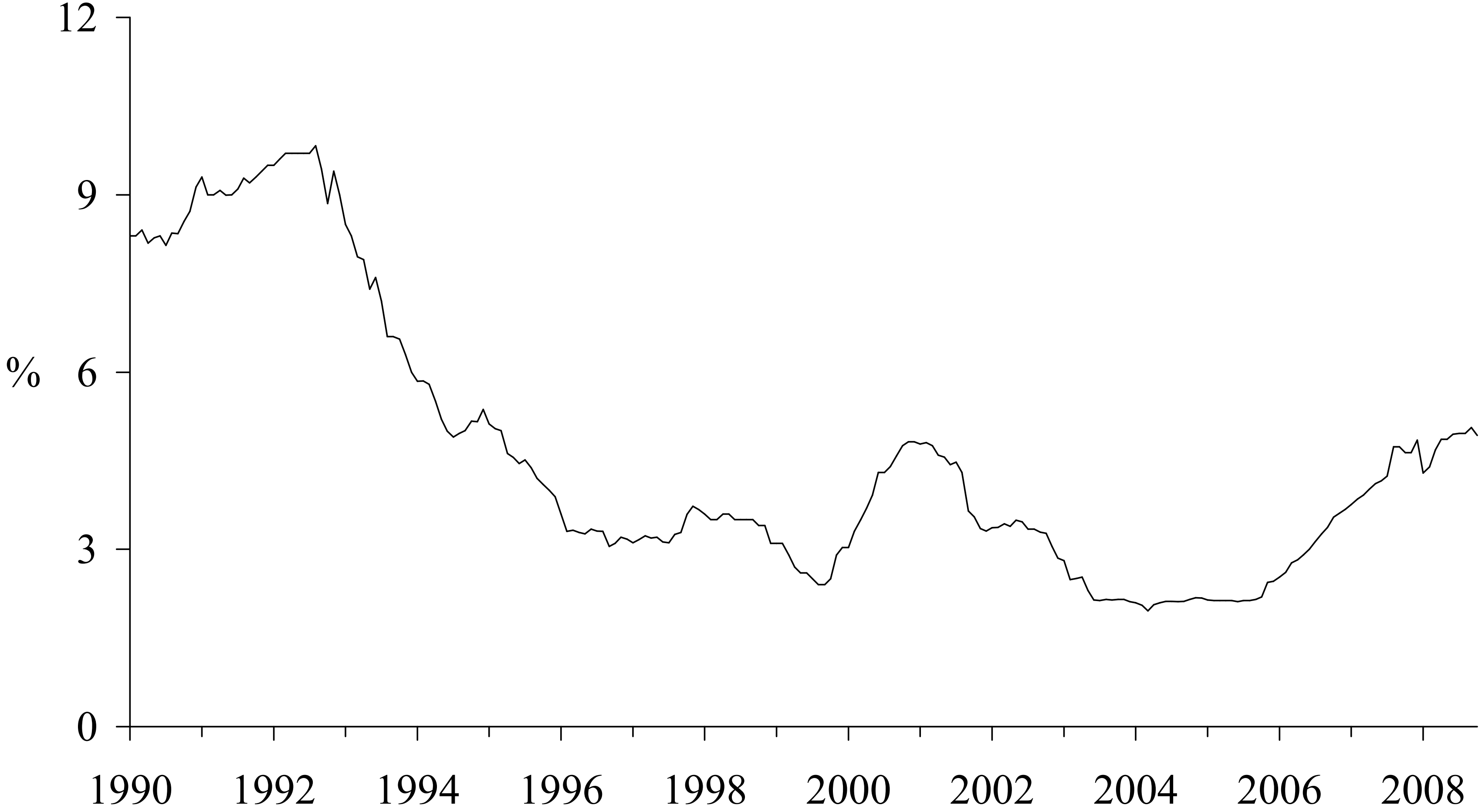


Short-Term Interest Rates

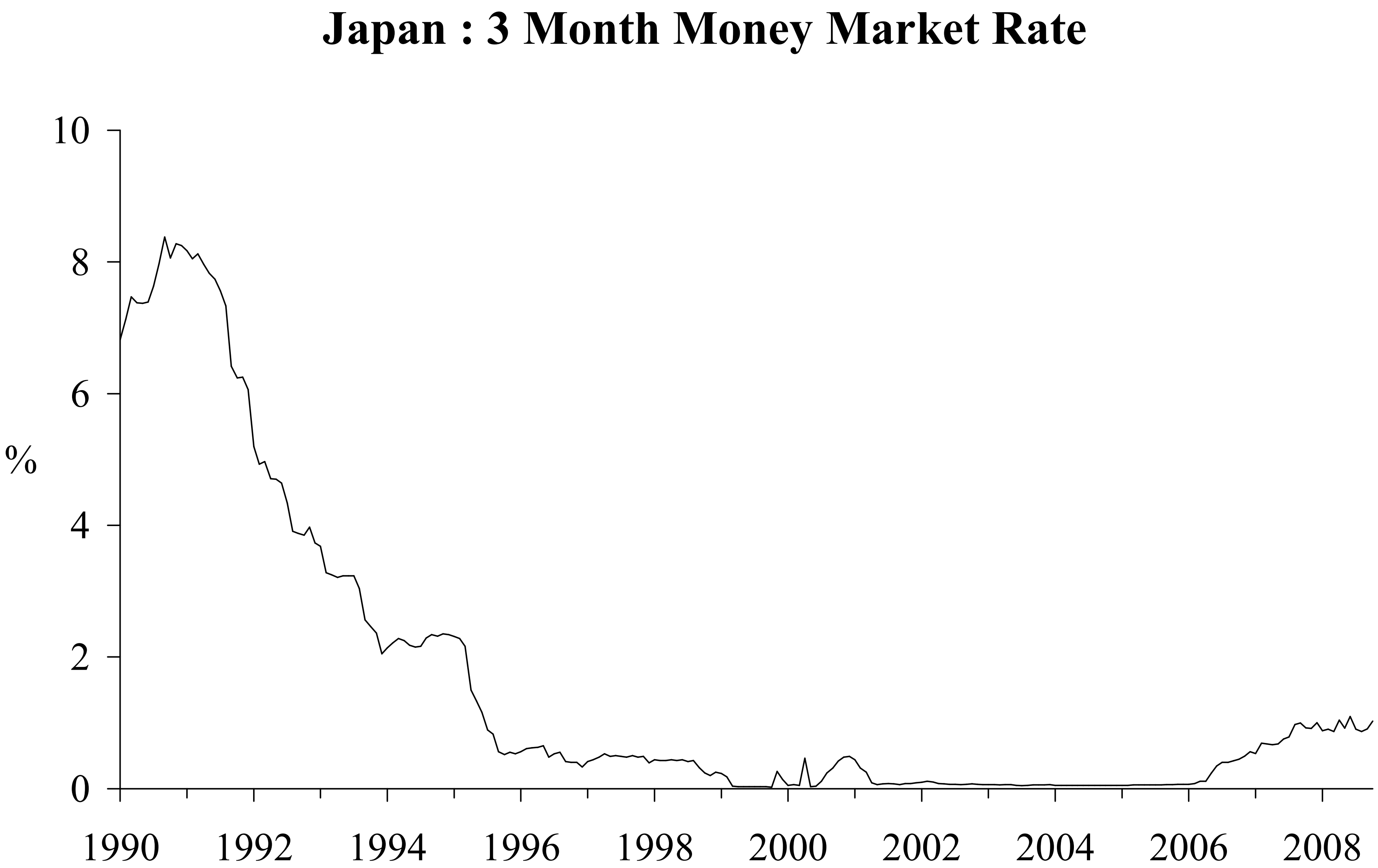


Short-Term Interest Rates

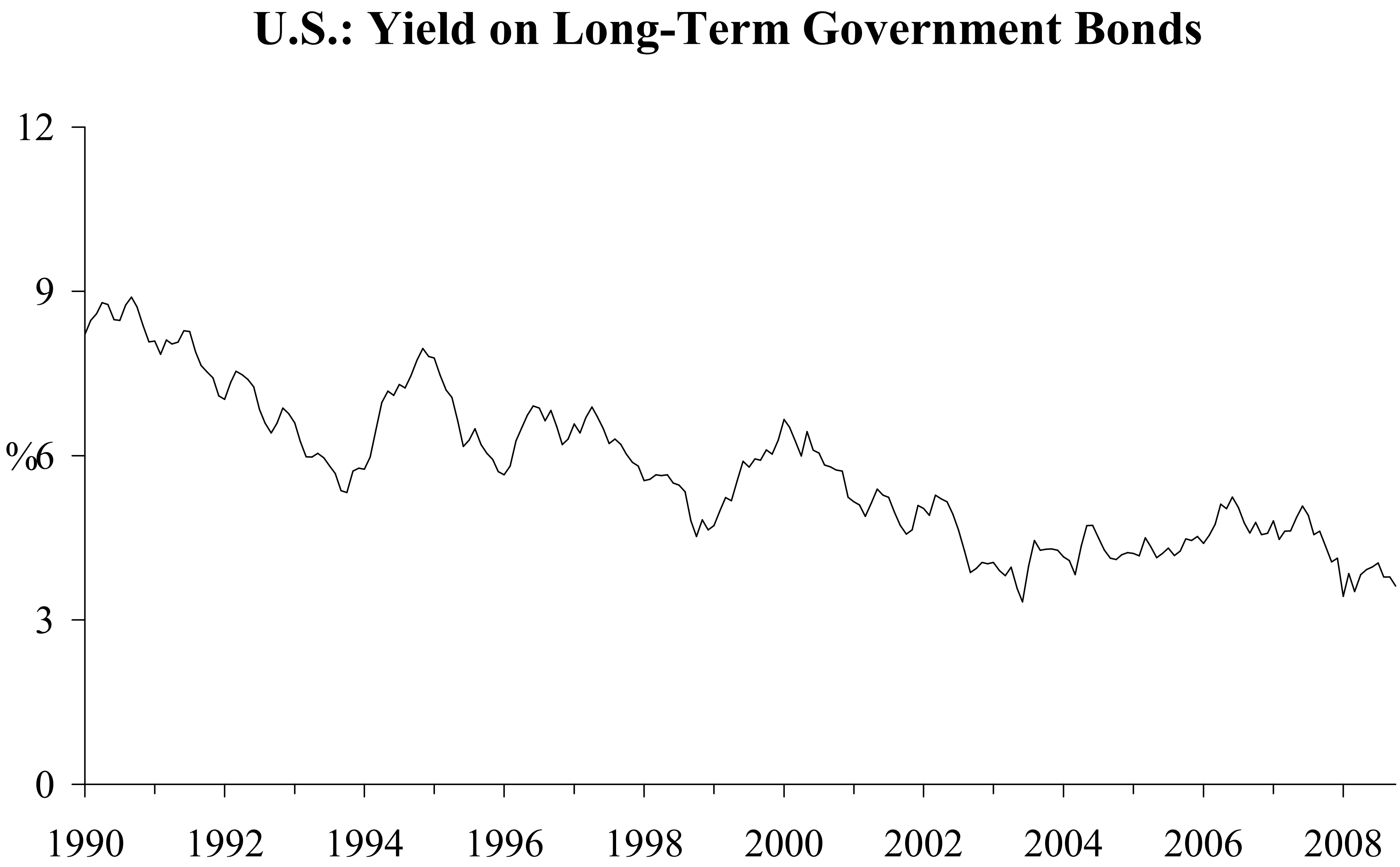
Germany : 3-Month Interbank Deposit Rate



Short-Term Interest Rates

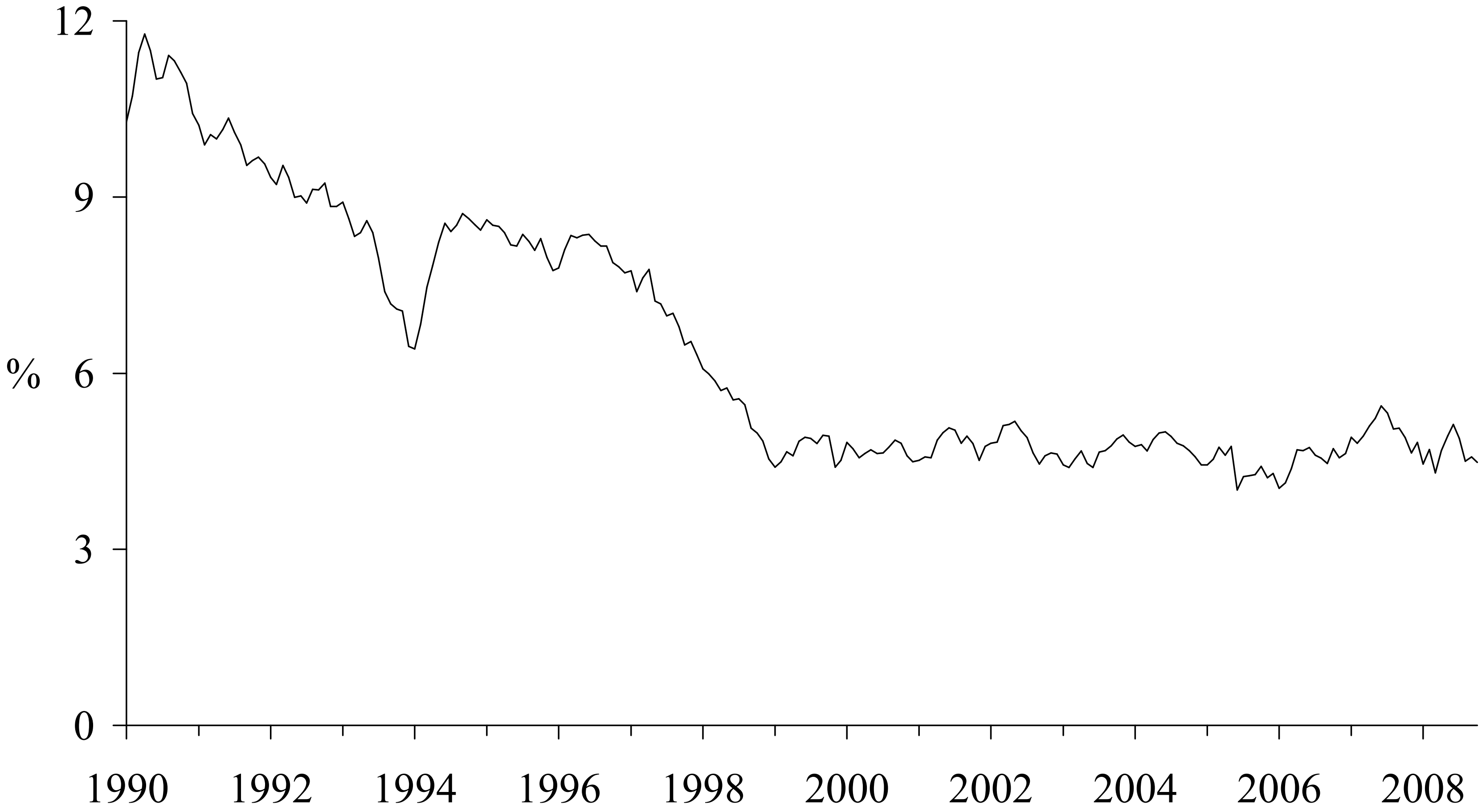


Long-Term Interest Rates



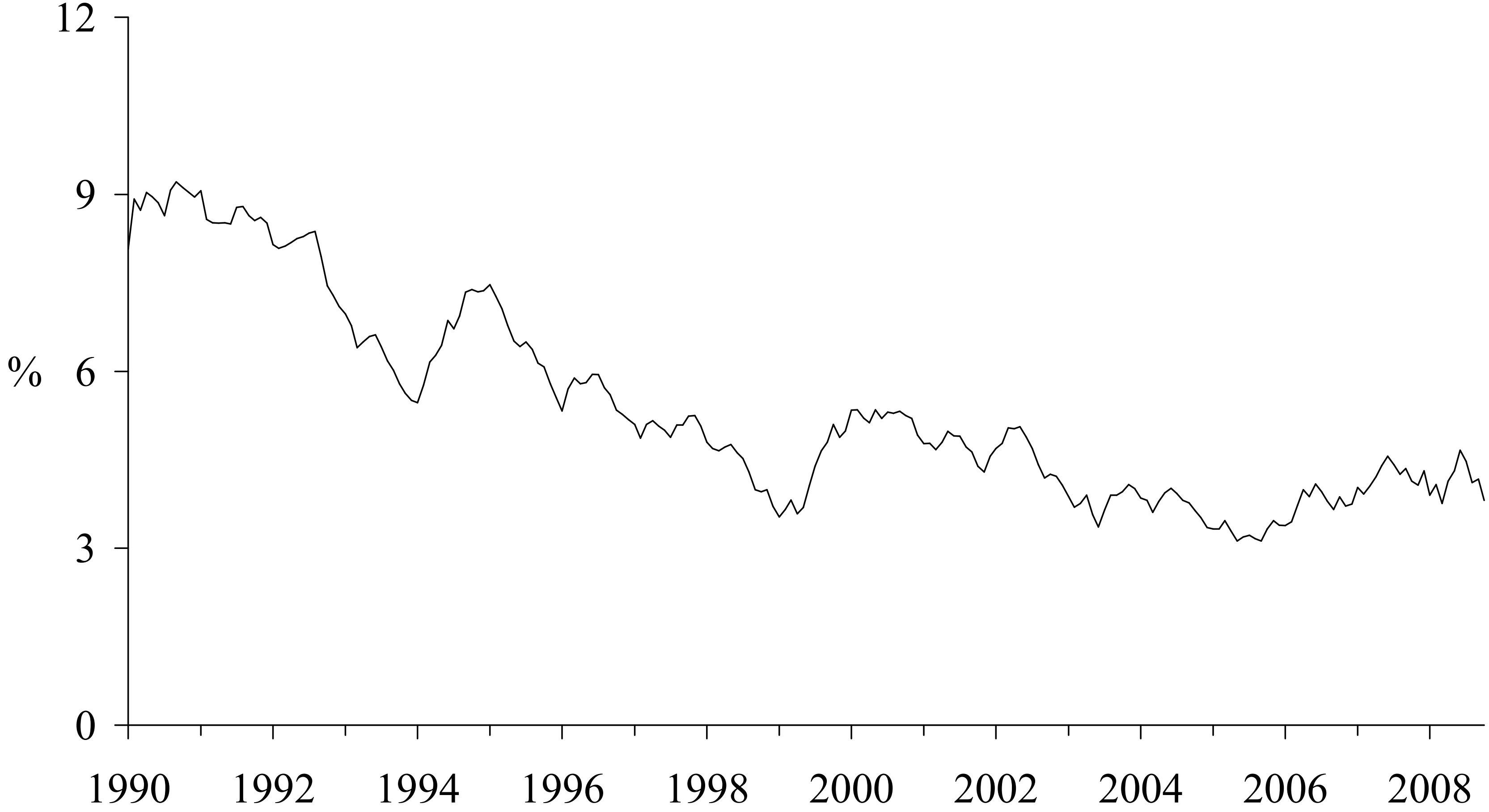
Long-Term Interest Rates

U.K. : Yield on Long-Term Government Bonds

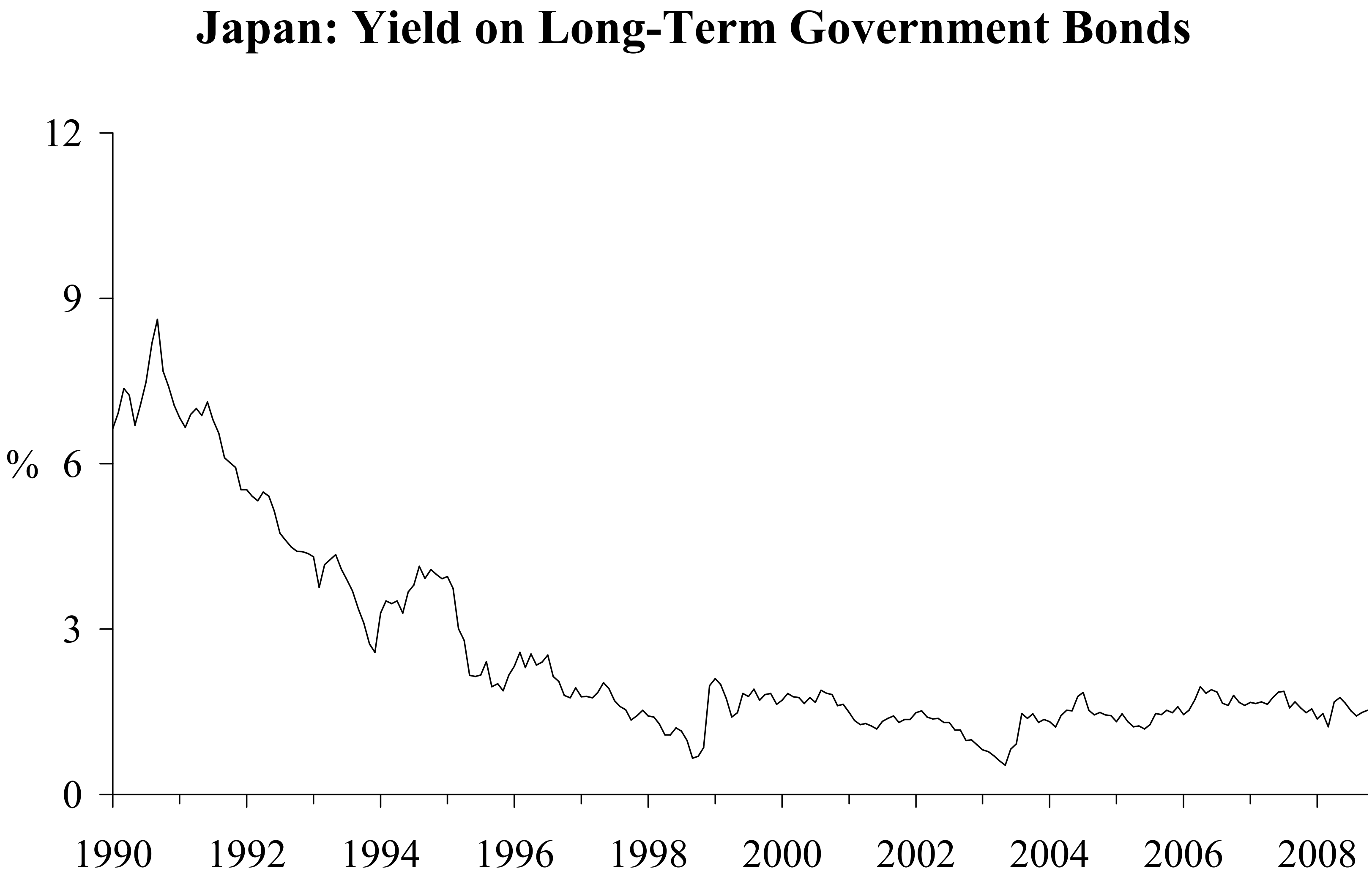


Long-Term Interest Rates

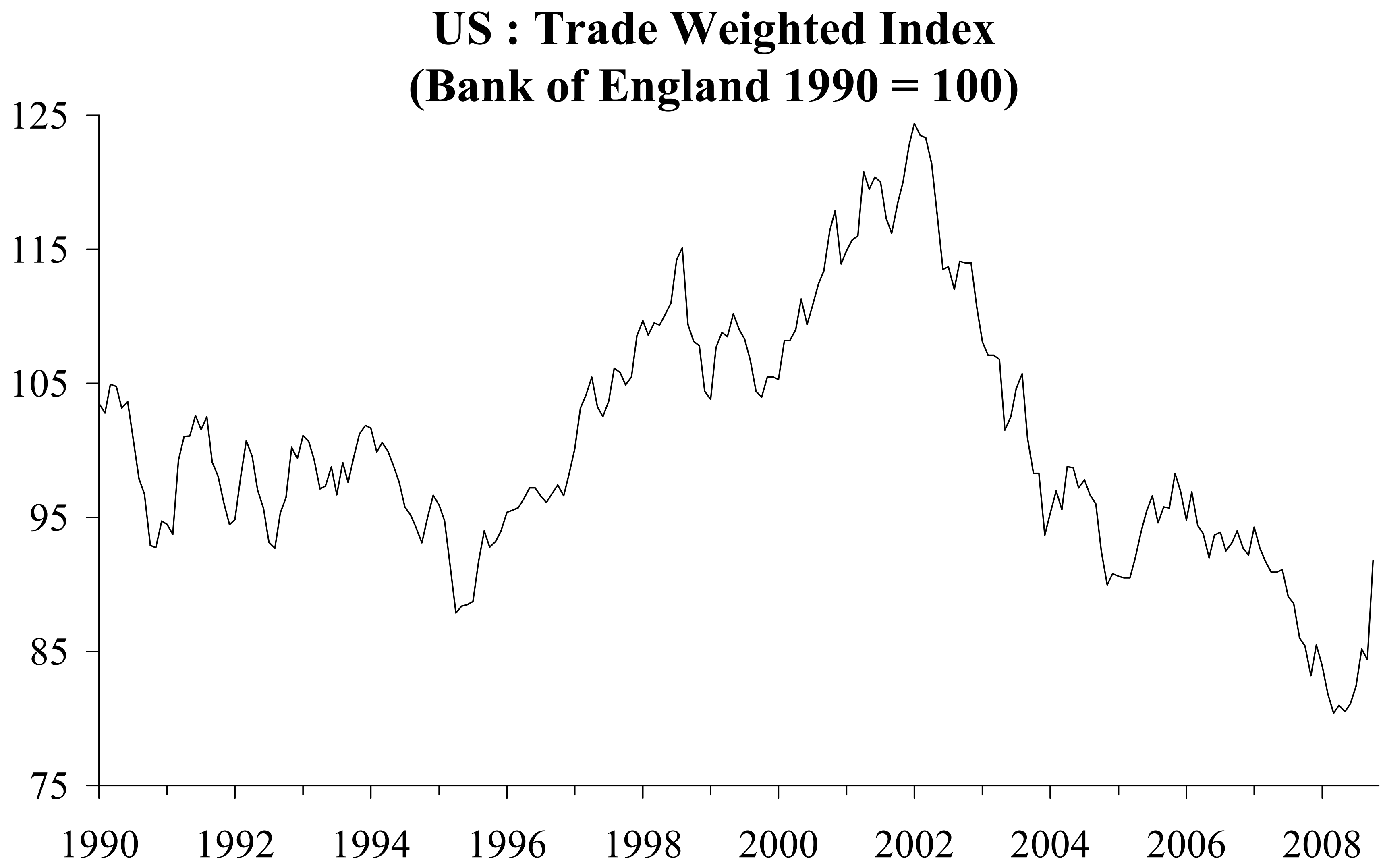
Germany: Yield on Public Authority Bonds



Long-Term Interest Rates



Exchange Rates



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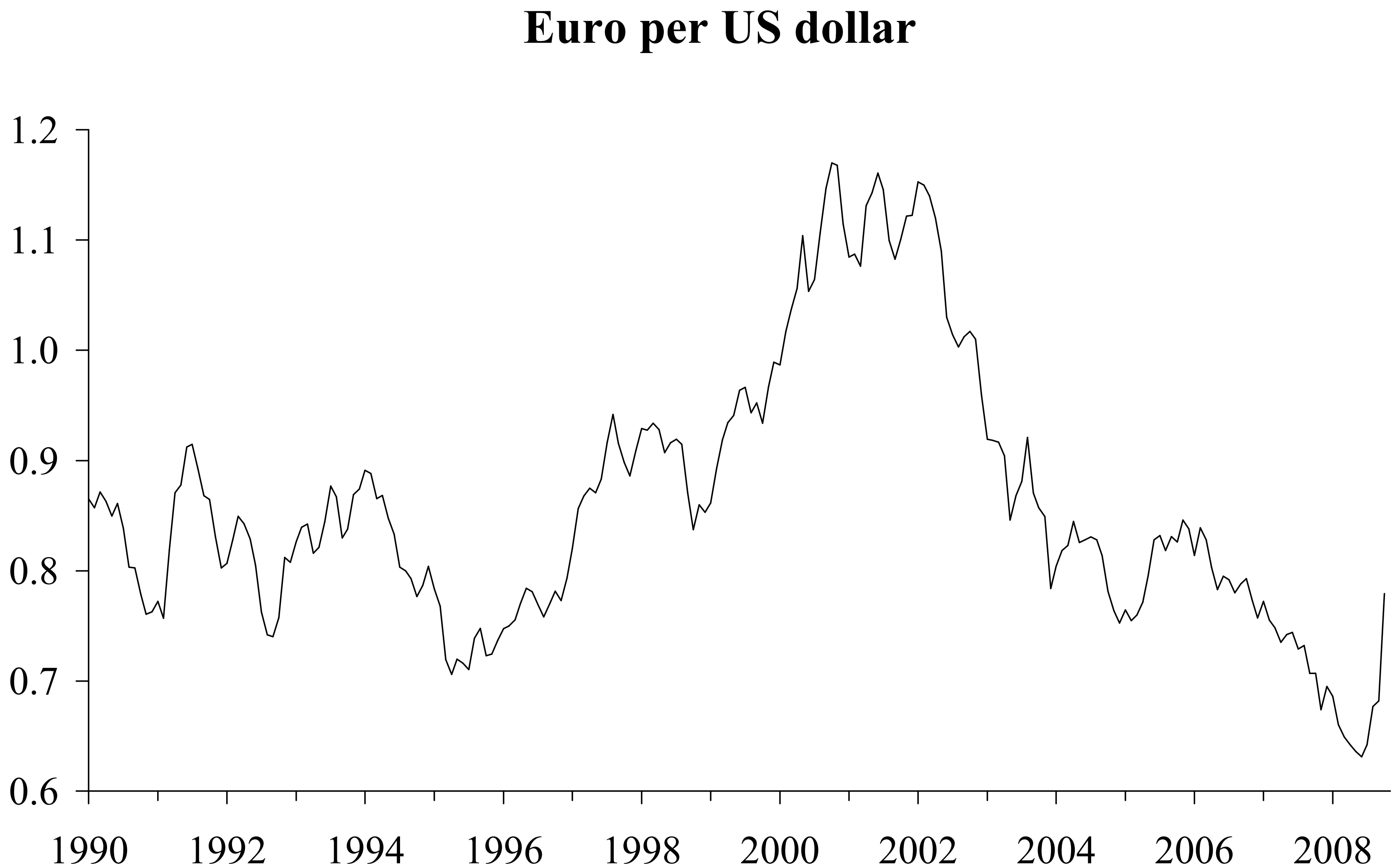
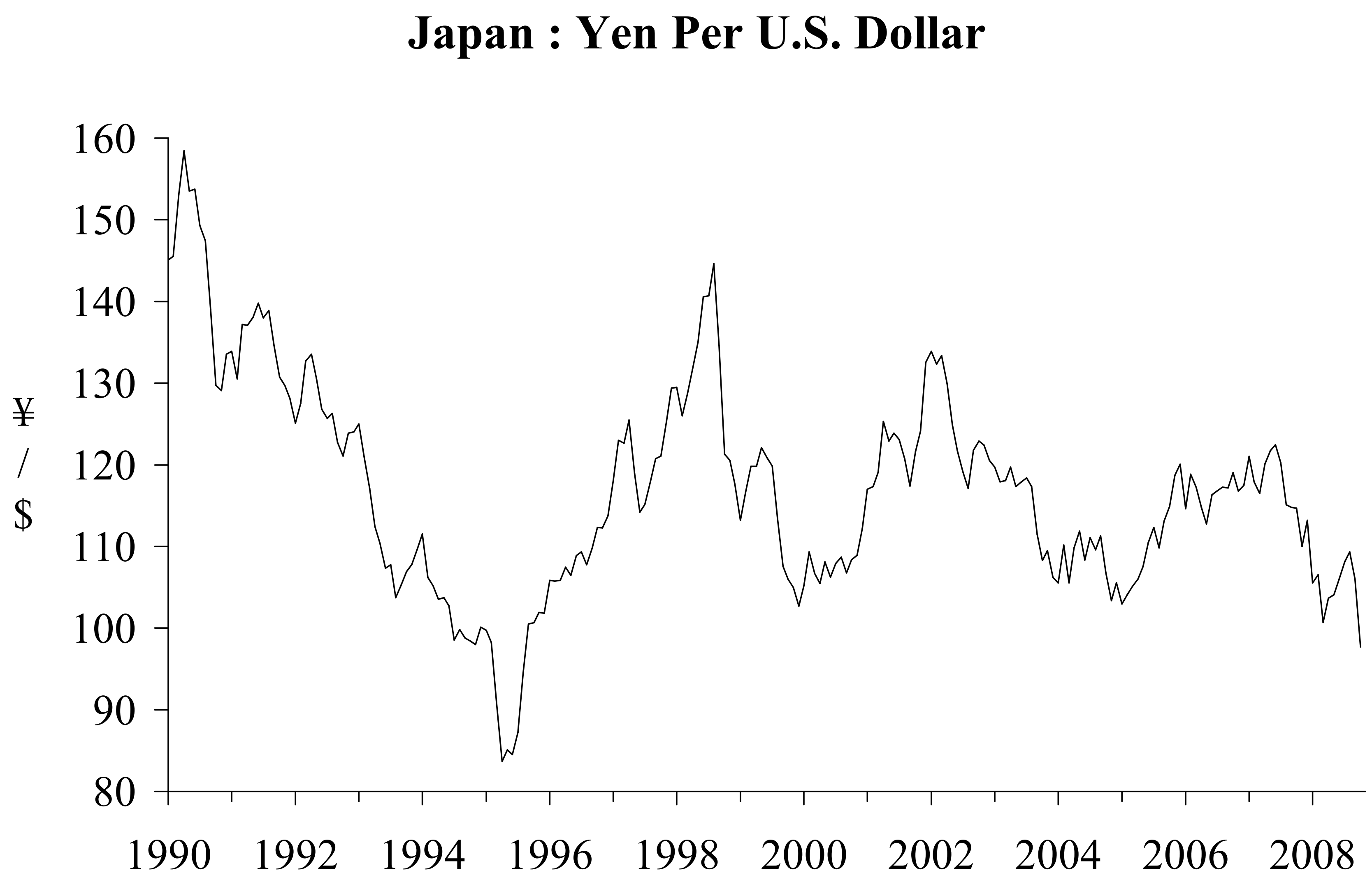
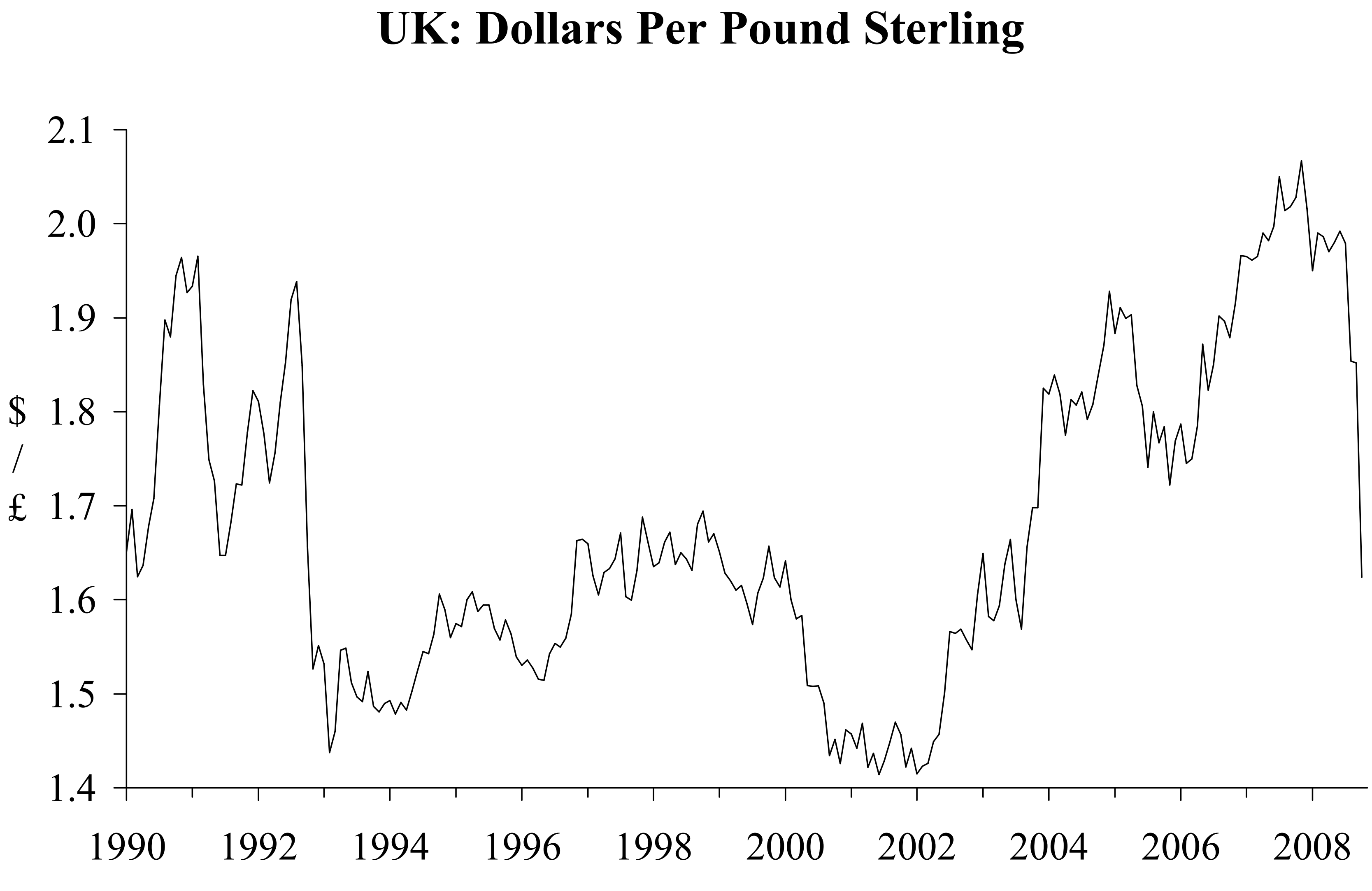


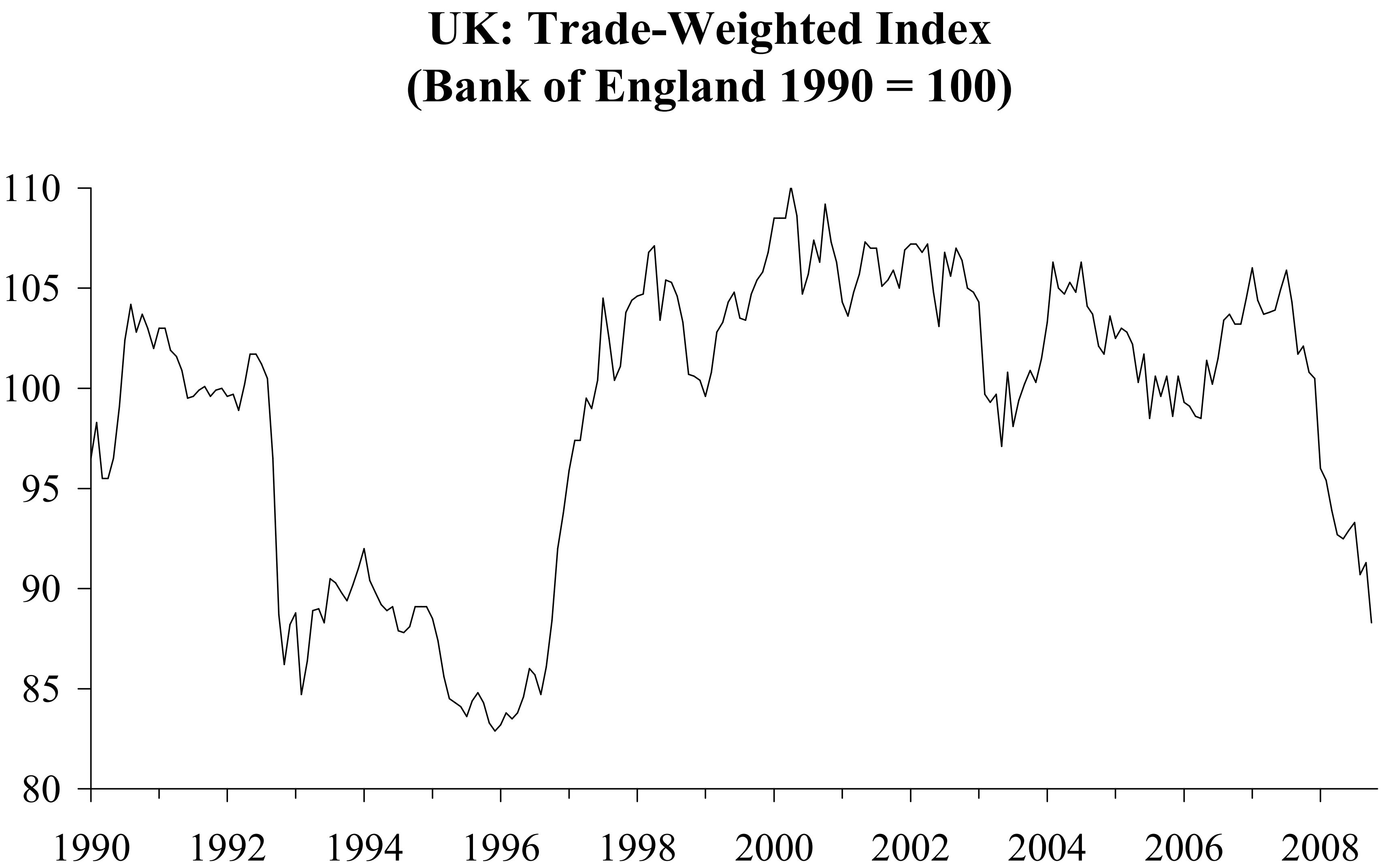
Exchange Rates



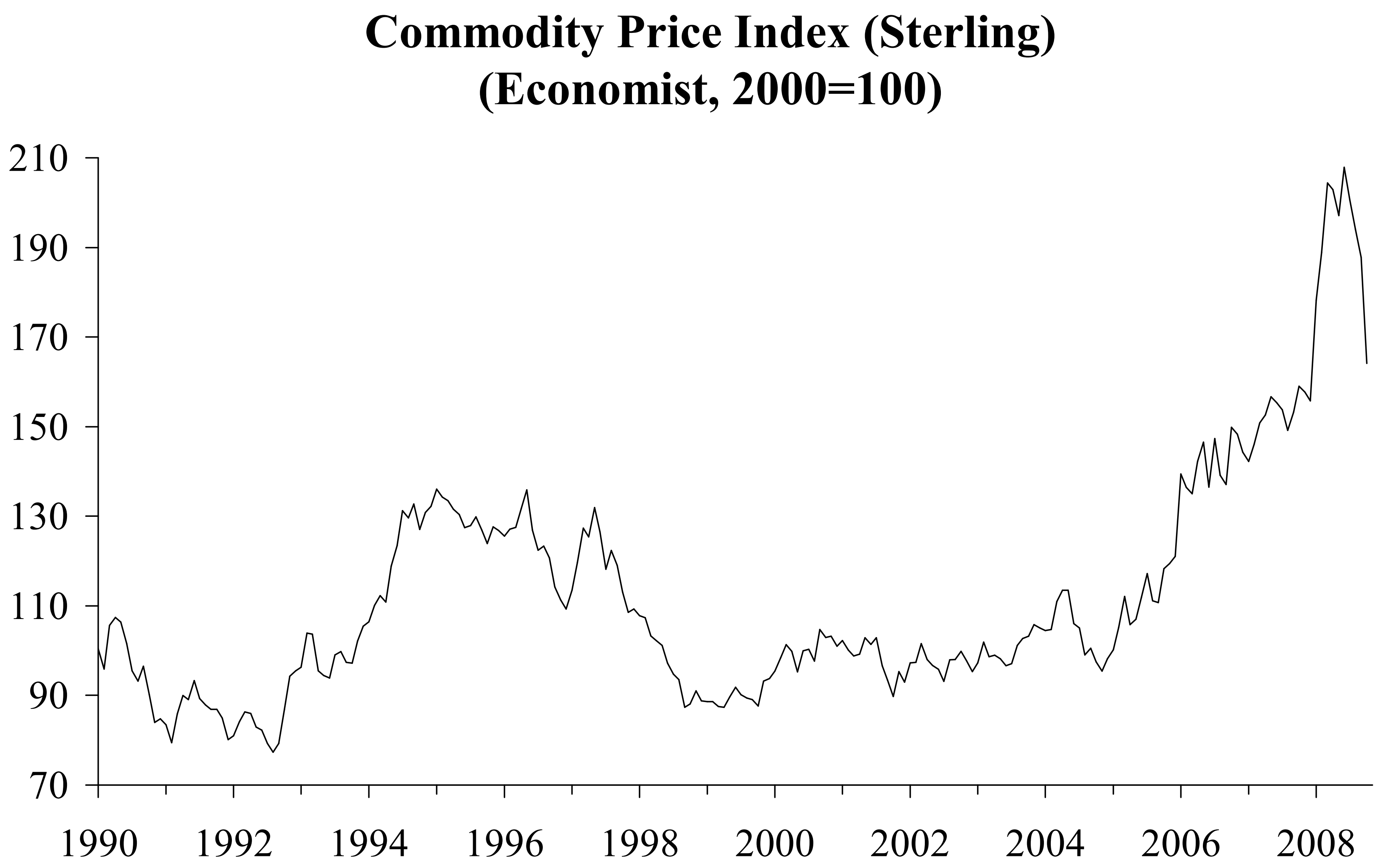
Exchange Rates



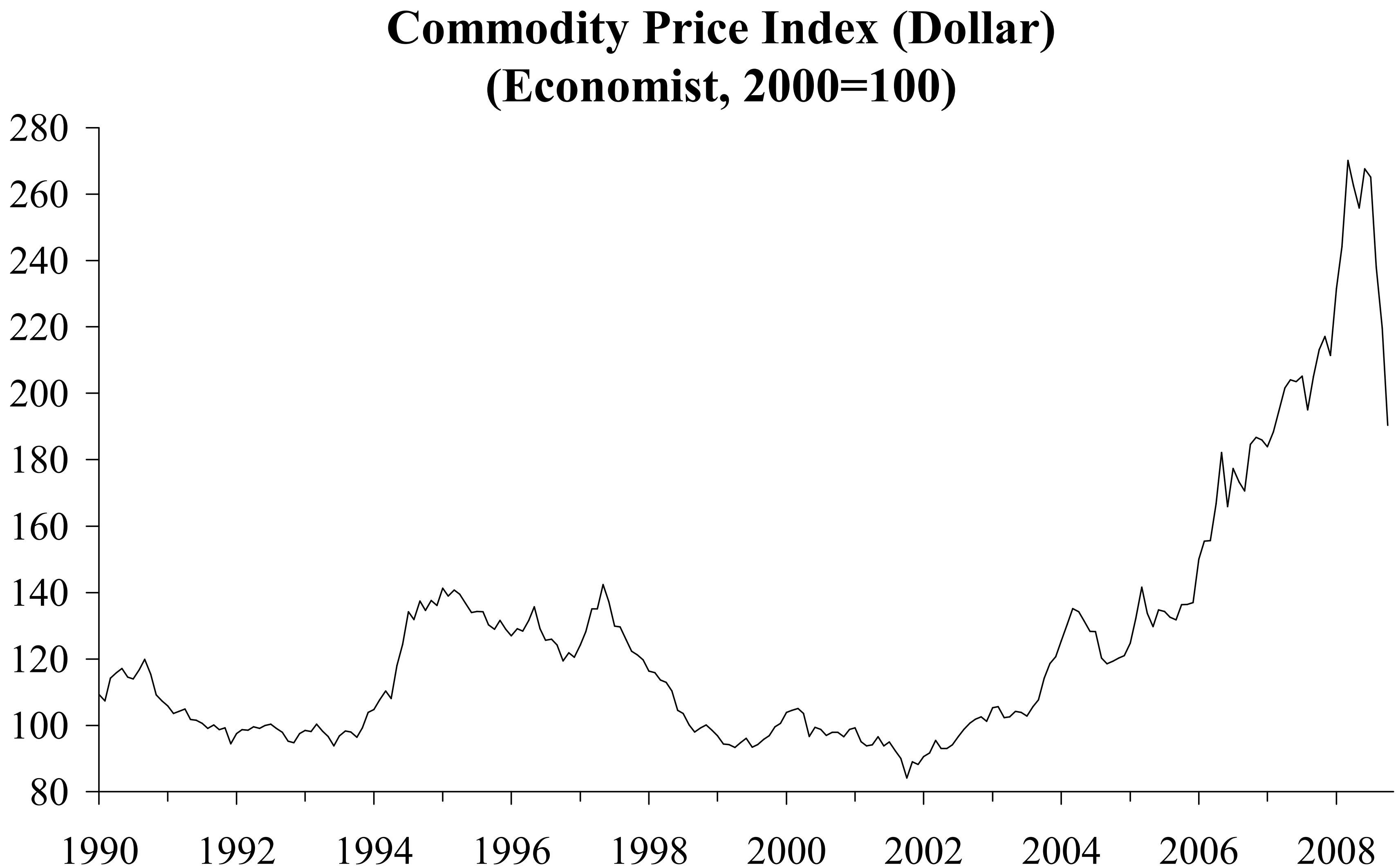
Exchange Rates



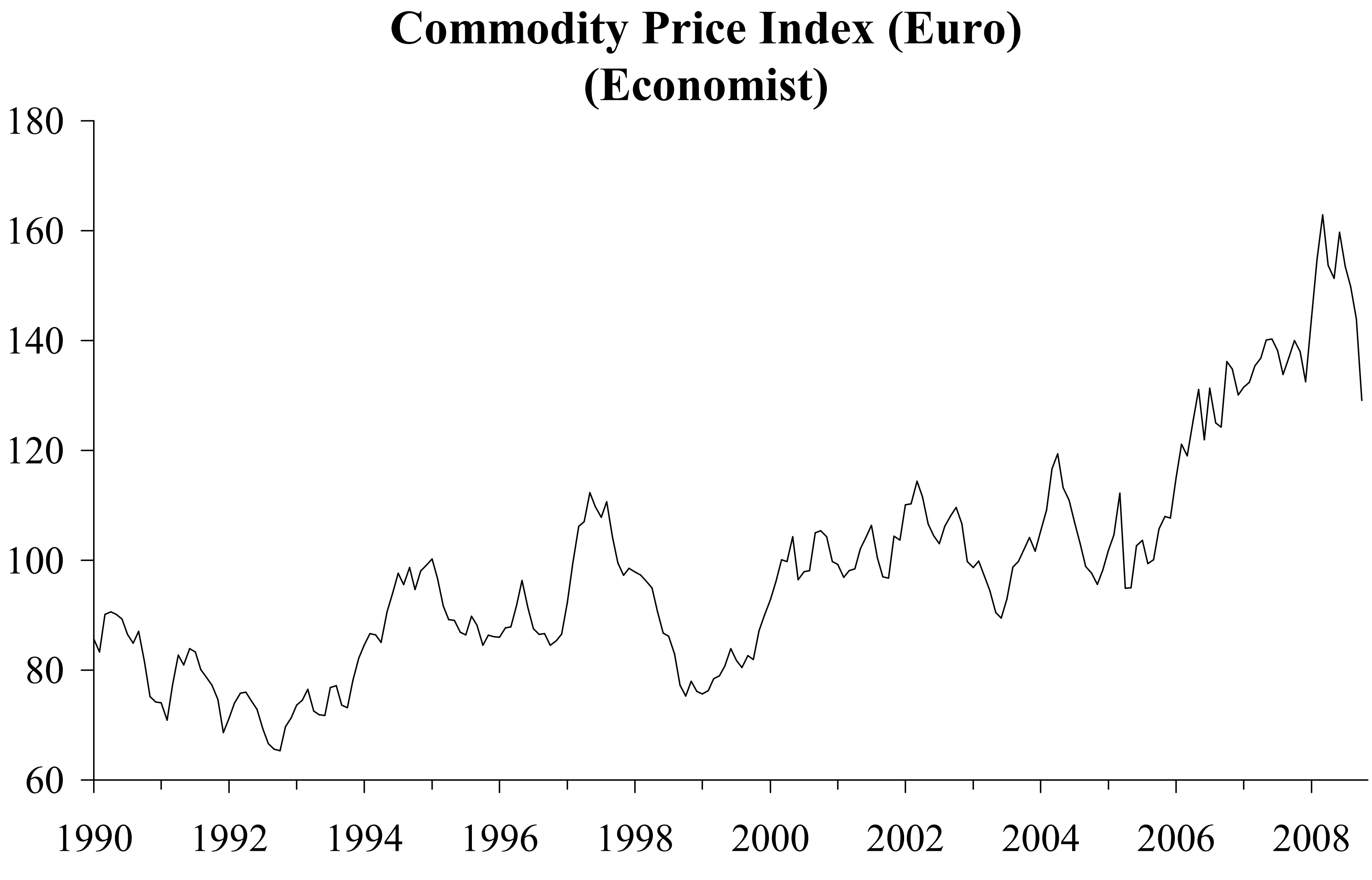
Commodities



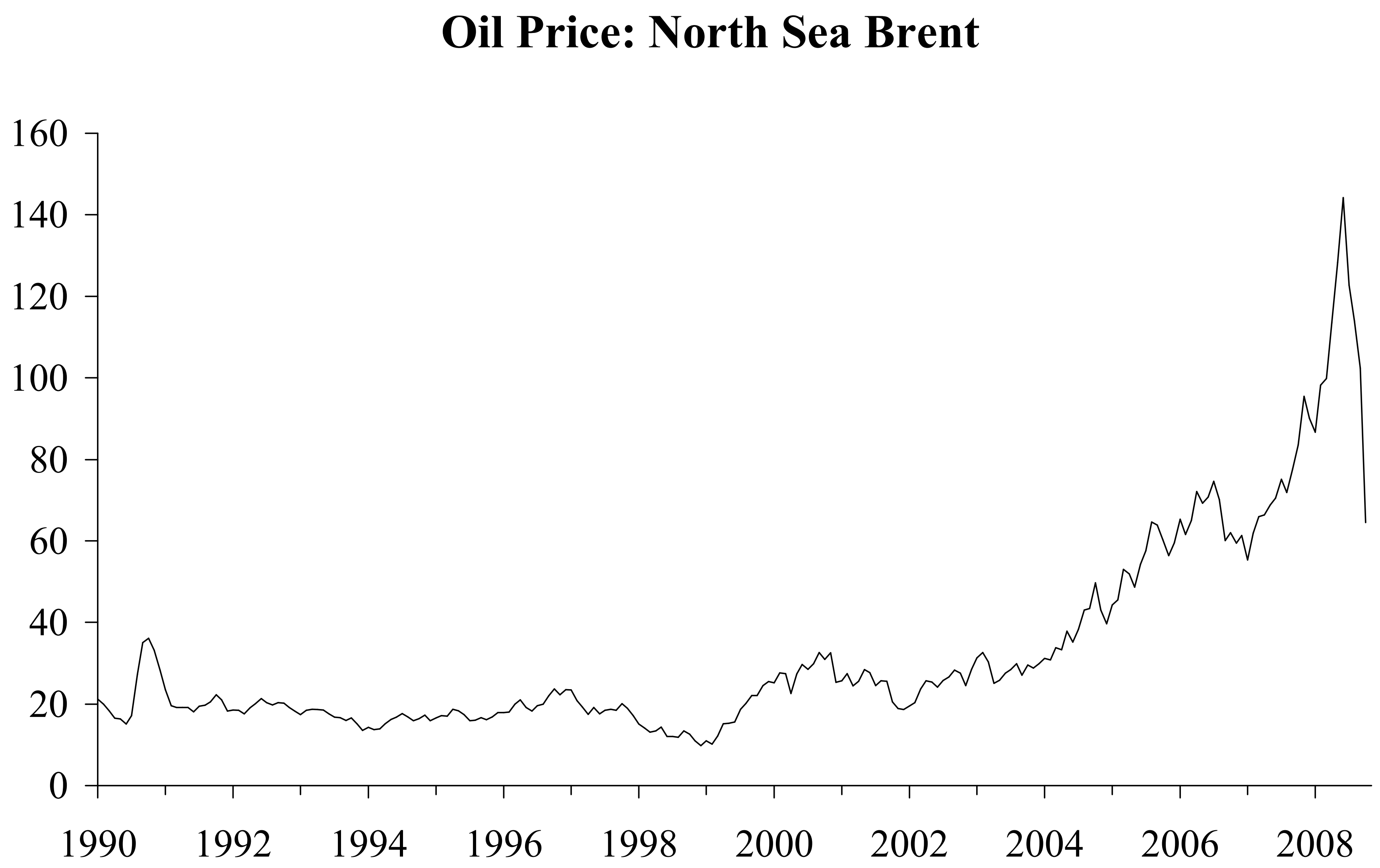
Commodities



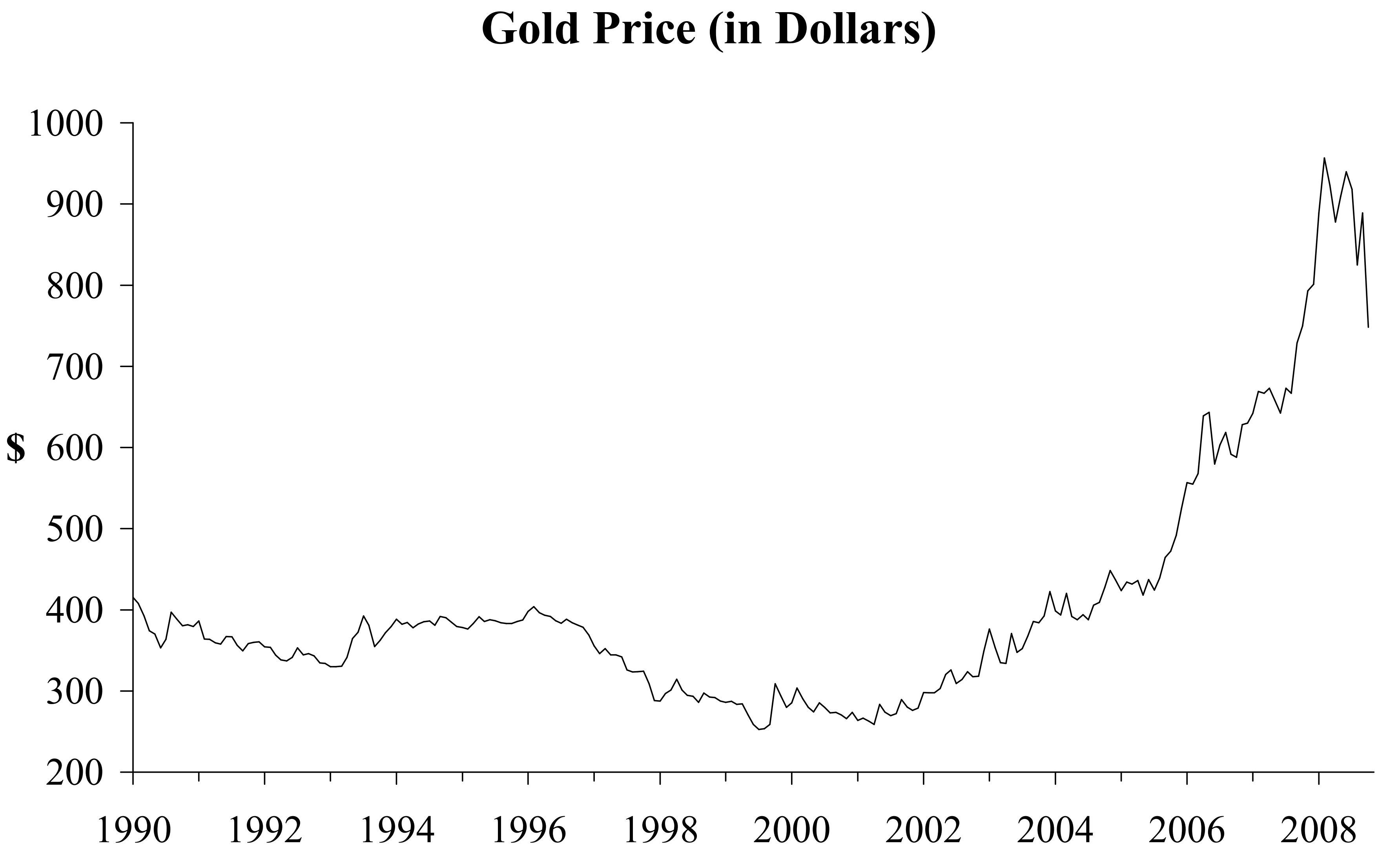
Commodities



Commodities



Commodities

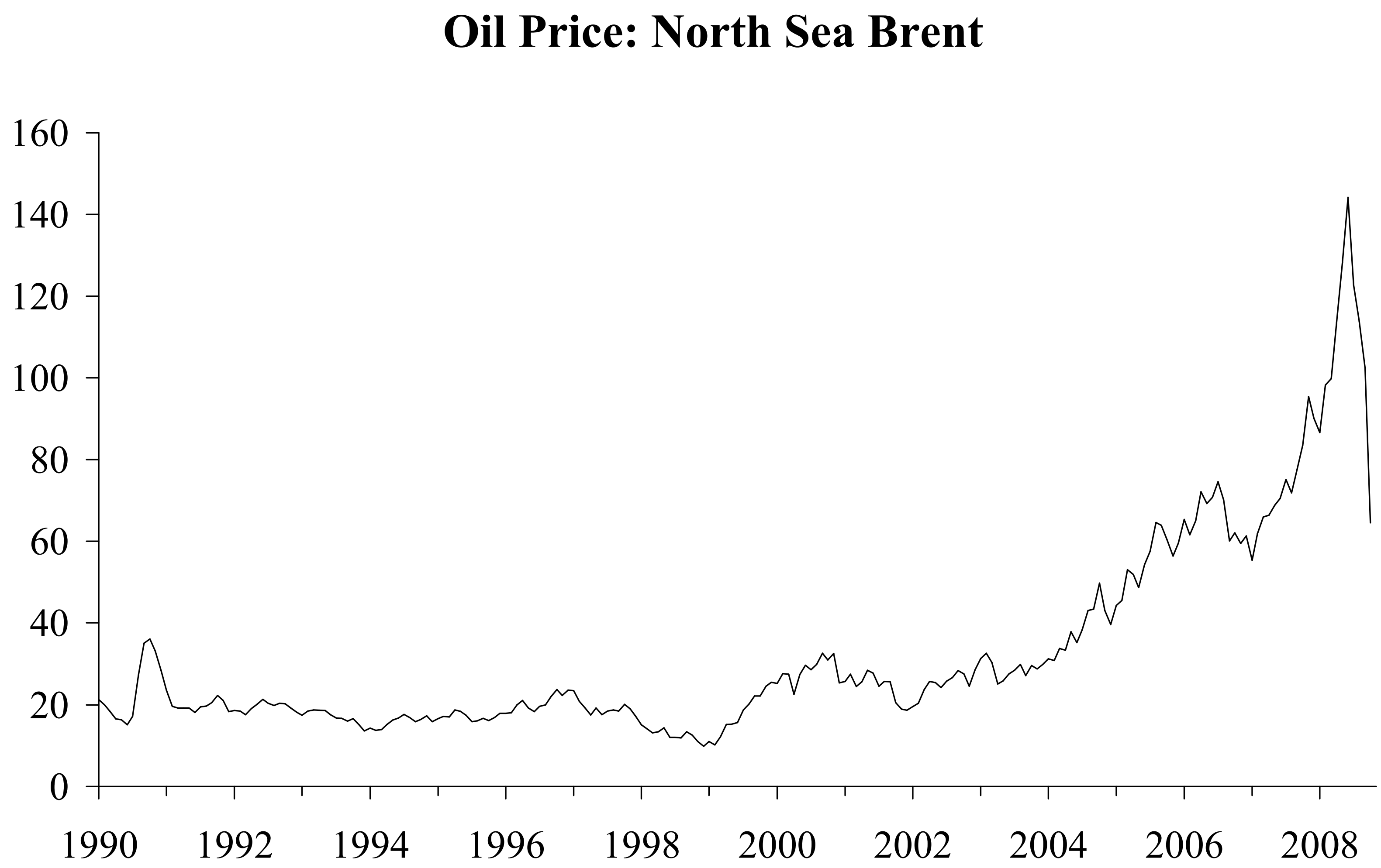


Section B: The Commodity Crisis: Origins and Cures

Causes

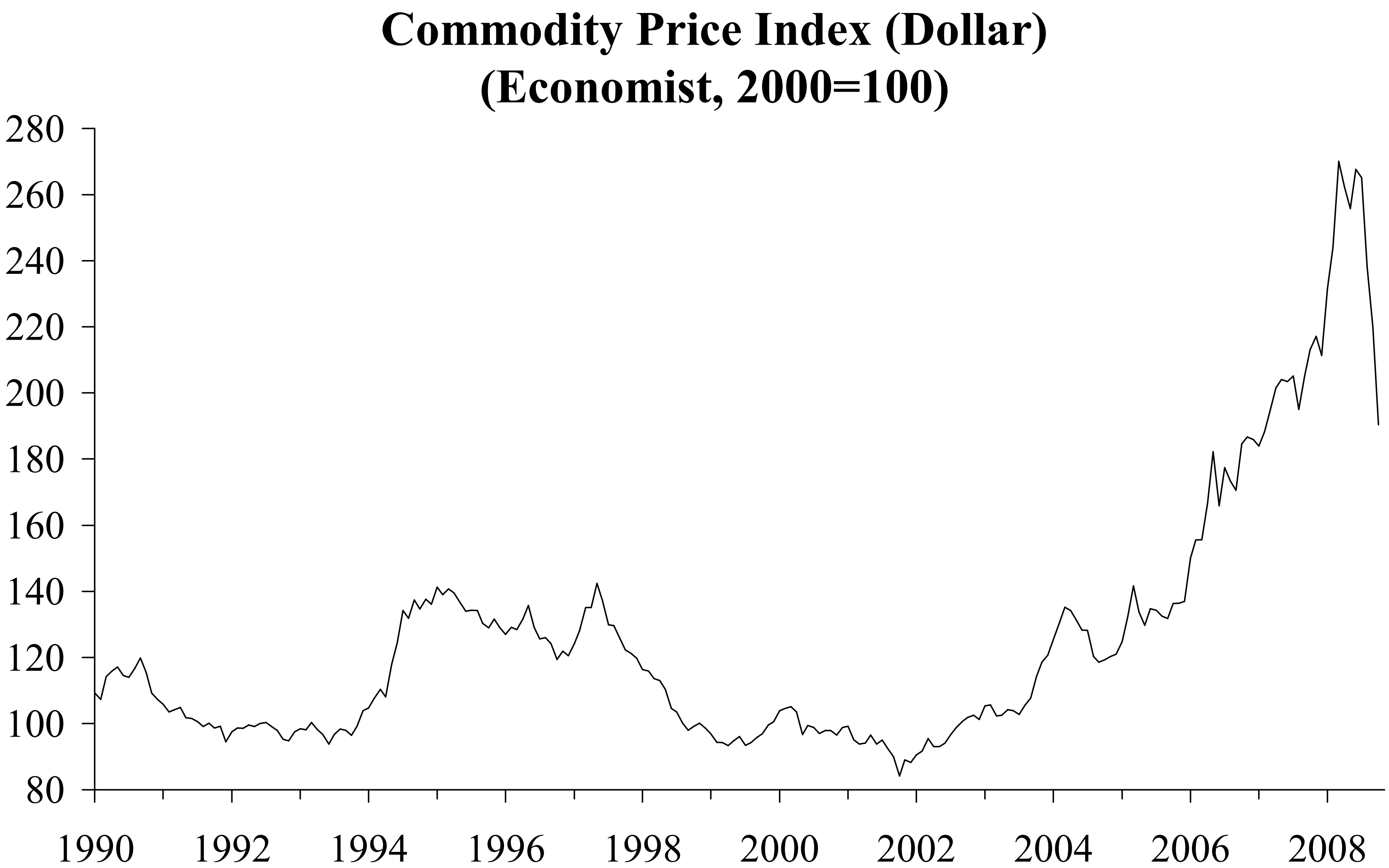
- Commodities price explosion the result of soaring demand from emerging market countries, esp China and India.
- EMC growth out of control from monetary excess; inflation now in double digits in many.
- Monetary excess comes from fixing dollar exchange rate; as dollar falls, EMCs buy dollars with own currencies, putting extra money into circulation. Attempts to offset via controls and issuing government bonds ineffective.
- So world inflation triggered by loose money linked to EMC intervention

Commodities

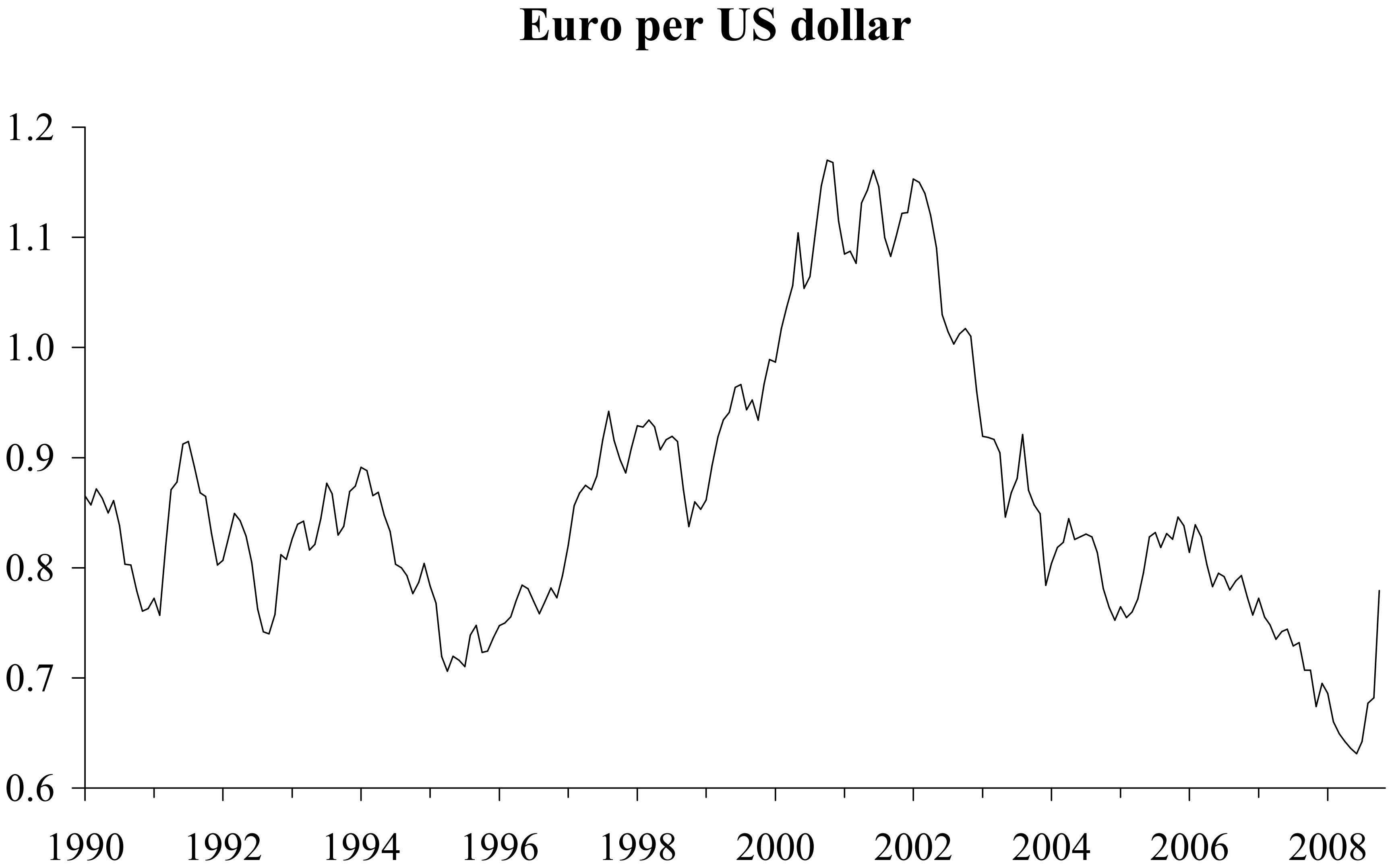


NB latest price peak is about the same in real terms as 1980 peak.

Commodities



Exchange Rates



Cures

- EITHER EMC can reduce money supply growth/Raise home interest rates. But this provokes inflow of money from abroad which restores monetary ease --- so to avoid must let exchange rate rise. But refuse to do this because fear of job loss in exports.
- OR EMC can try controls --- on bank credit and foreign inflows. But these ineffective --- money 'leaks'.
- OR- US tightens money, raising dollar, tightening monetary conditions in EMC. Credit crunch has already done this but US has offset.
- OR- rest of West tightens causing world slowdown; this feeds into lower demand for EMC goods and directly into lower world demand for commodities

Conclusions

- For world inflation to be ended, world money growth must be tightened, one way or another.
- This process is happening with credit crunch in West and money tightening in East.
- Whether soft landing depends a) how soon world inflation subsides- quickly; b) calming of credit crunch via govt action.

Monetary policy considerations

- The shocks in the recent crisis
- The model of the economy?
- The effects of world inflation and credit crunch shocks
- Reasons for worrying about non-modelled factors in inflation?

Crisis — demand and supply shocks and responses

- Demand shock — in August 2007 sub prime crisis struck; inaugurating 'credit crunch'.
- Supply shock — over the past 3 years rapid escalation of oil and other commodity prices. This has triggered 'dilemma' for central banks.

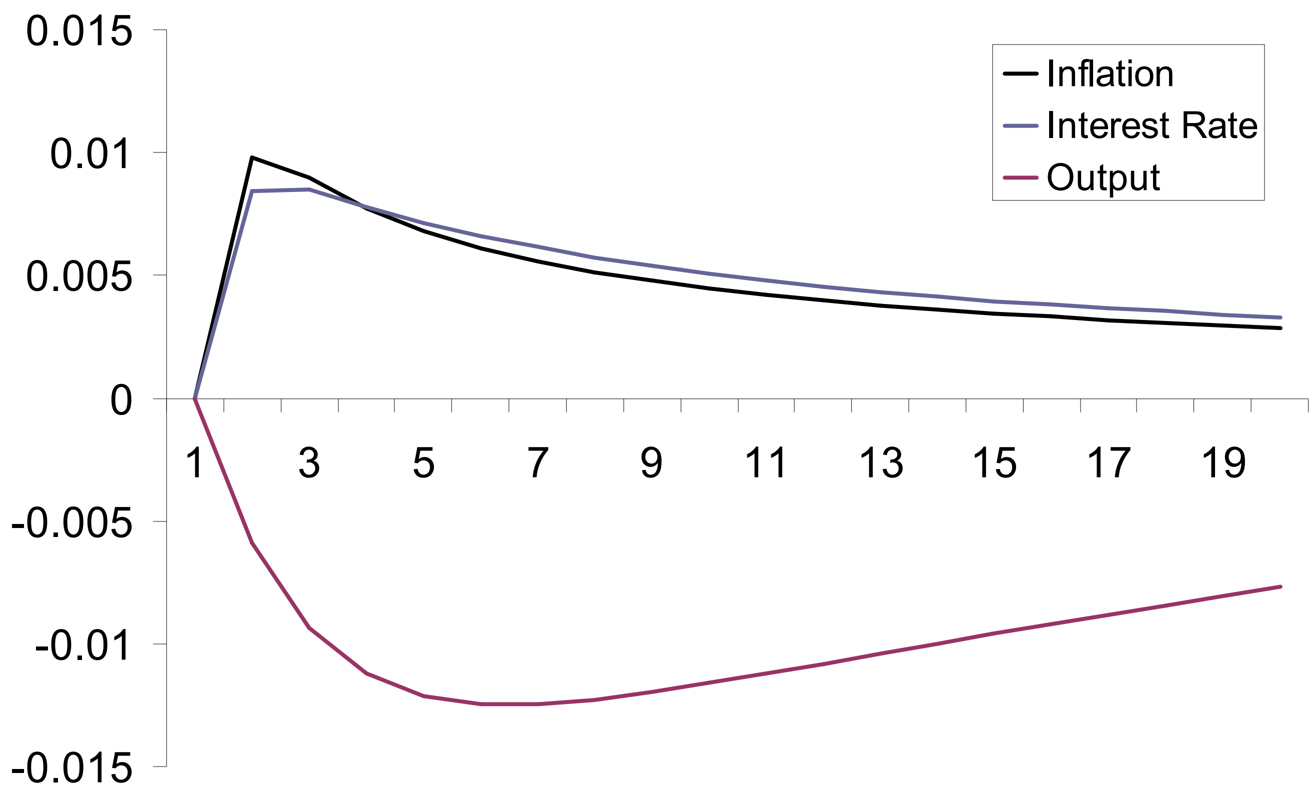
Model of economy — verdict on inflation process

- medium-term inflation rate depends on the inflation target; interest rates force that target to be accepted and affect the path of inflation to the target
- world inflation has no effect on medium-term inflation, just affects inflation short-term.
- credit crunch: little evidence but will use estimate of weighted interest rate equivalent rise.
- use recent ECB model of EU by Smets and Wouters to evaluate; also Liverpool model of UK.

World inflation — effects of rise in world inflation

(productivity fall by 1%) — weighted model (percent of Calvo contracts and NC optimally weighted to fit VAR for EU data 1983–2003, source Meenagh, Minford and Wickens, 2008, on Minford Cardiff webpage; weighting approx 94% NC, 6% NK)

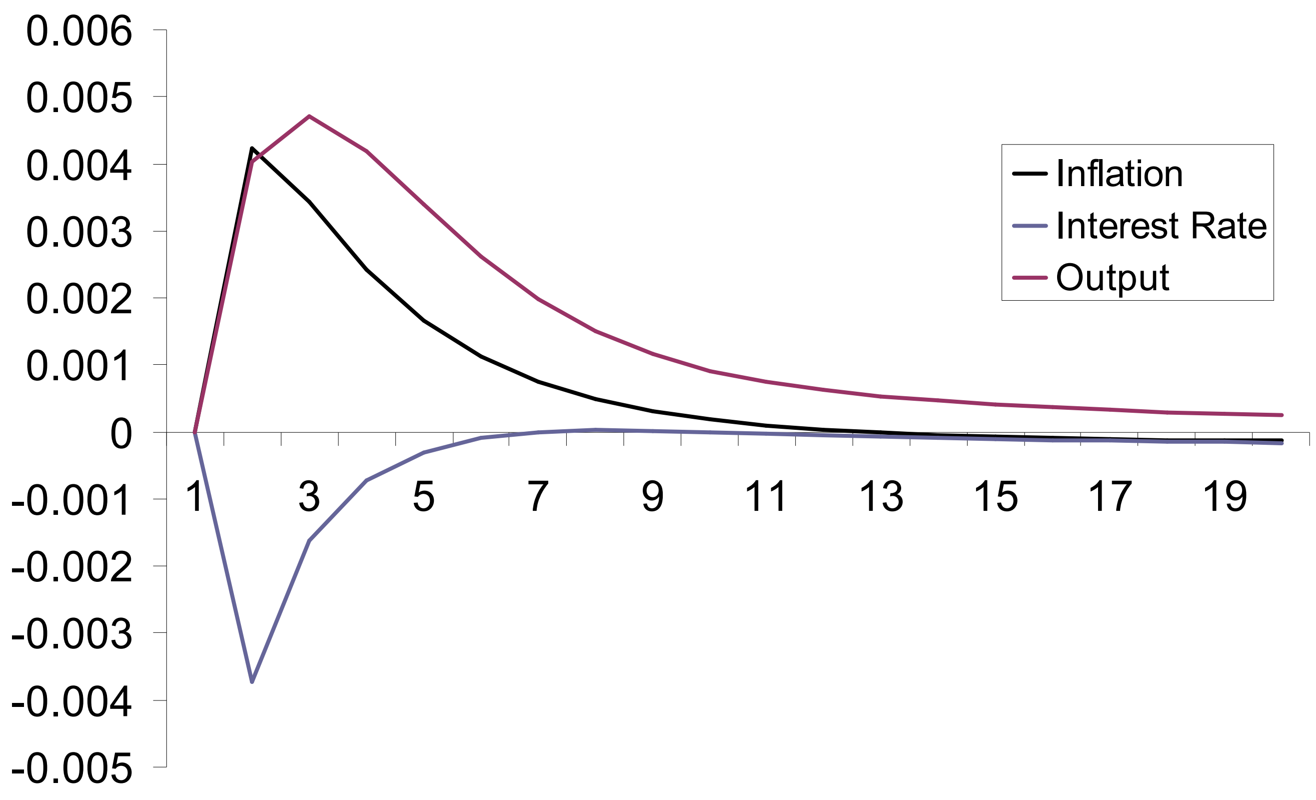
Productivity Fall (Weighted Model, Taylor Rule)



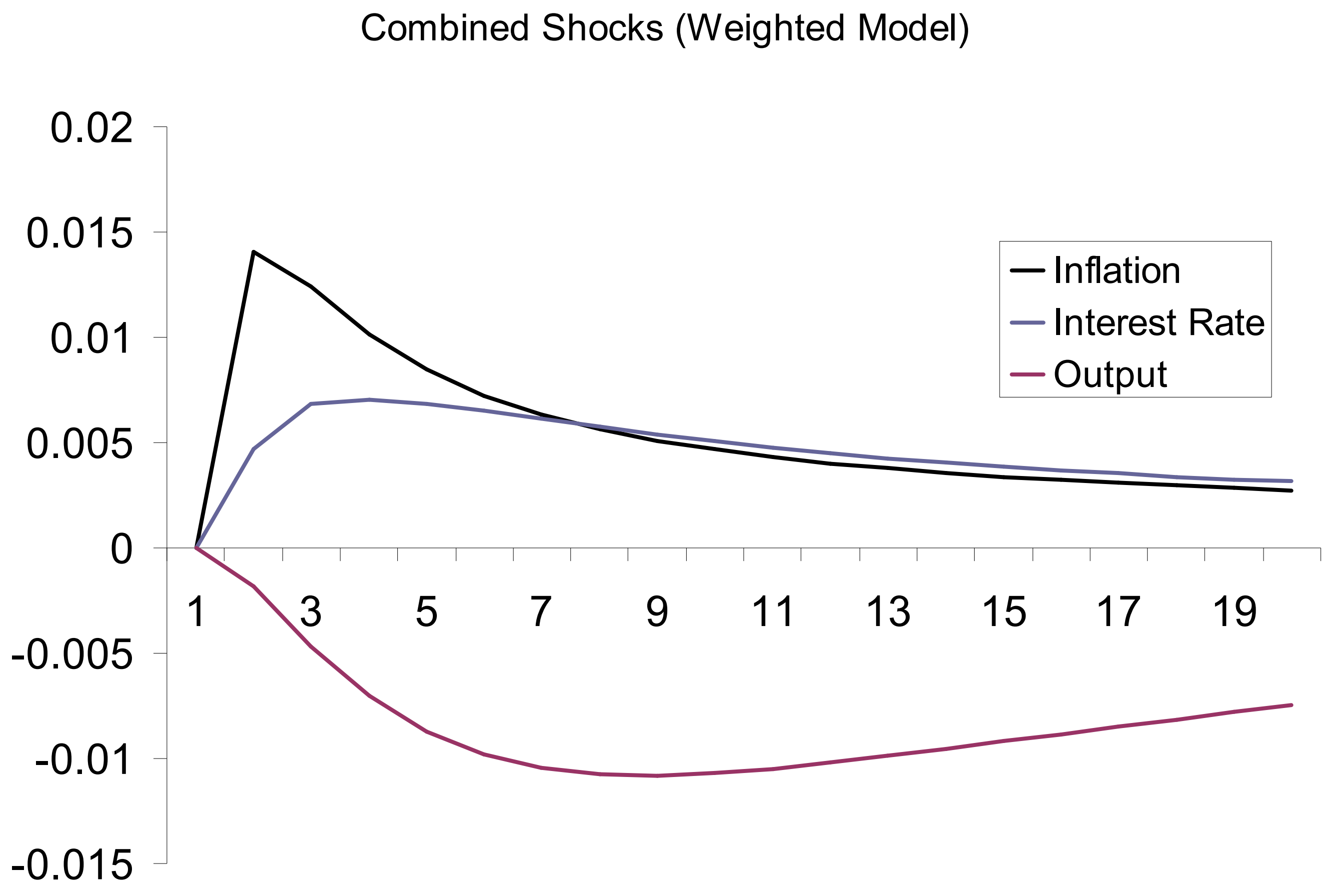
Monetary policy — effects of policy fall in interest rates by 1% per qtr then gradually falling back

also responding via Taylor Rule — net fall in int. rate is 0.4% per qtr (1.6% per annum)

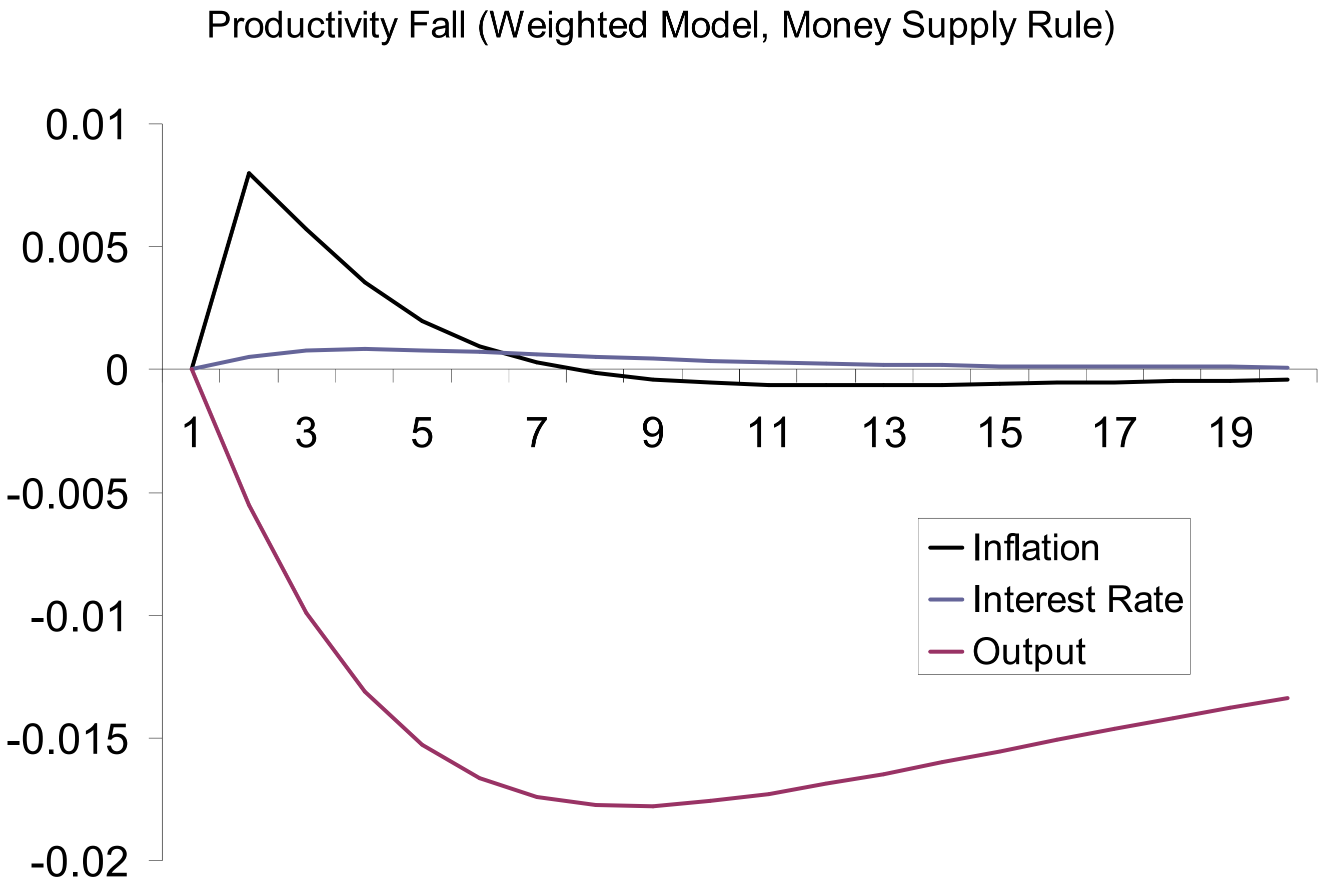
Interest Rate Fall (Weighted Model)



A possible optimal response to commodity price shock? Combine normal Taylor Rule with interest rate cut as above?

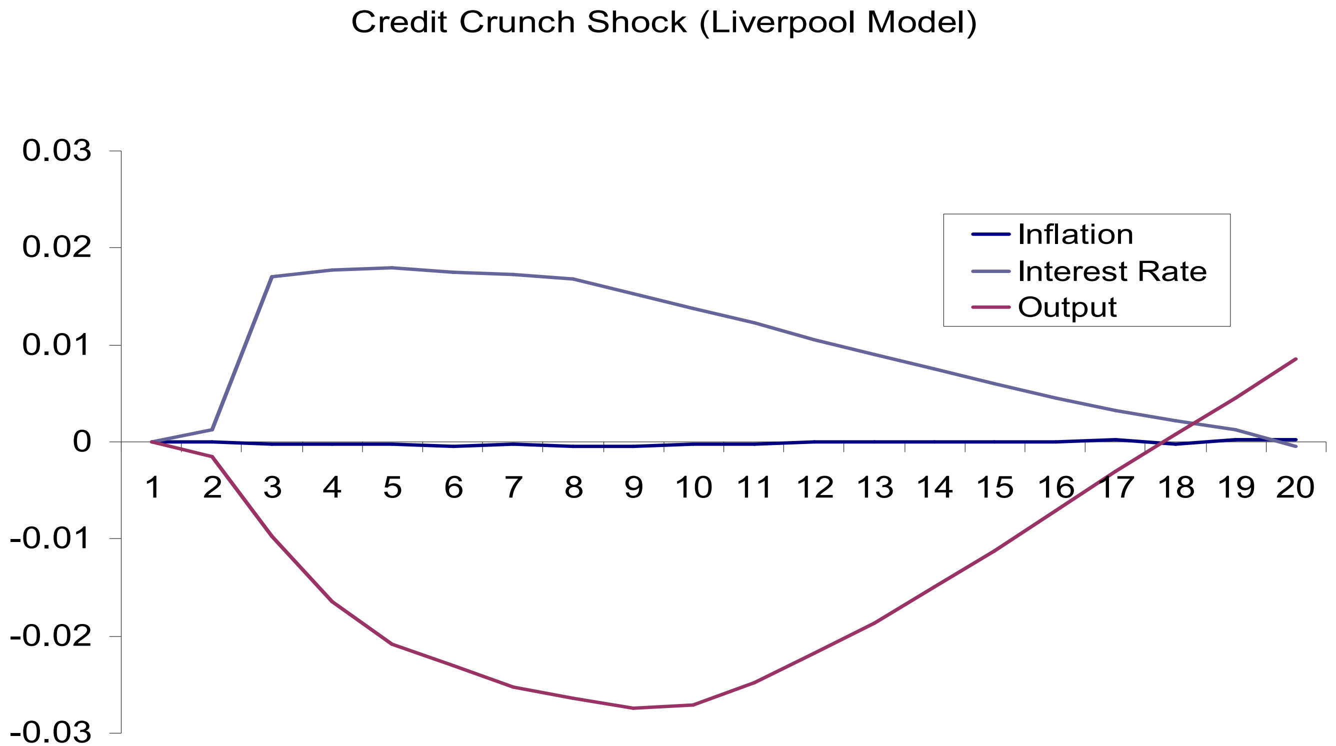


Compare this with what a money supply rule (money elasts: 0.075 to R, unity to prices and output) would have generated (not dissimilar)



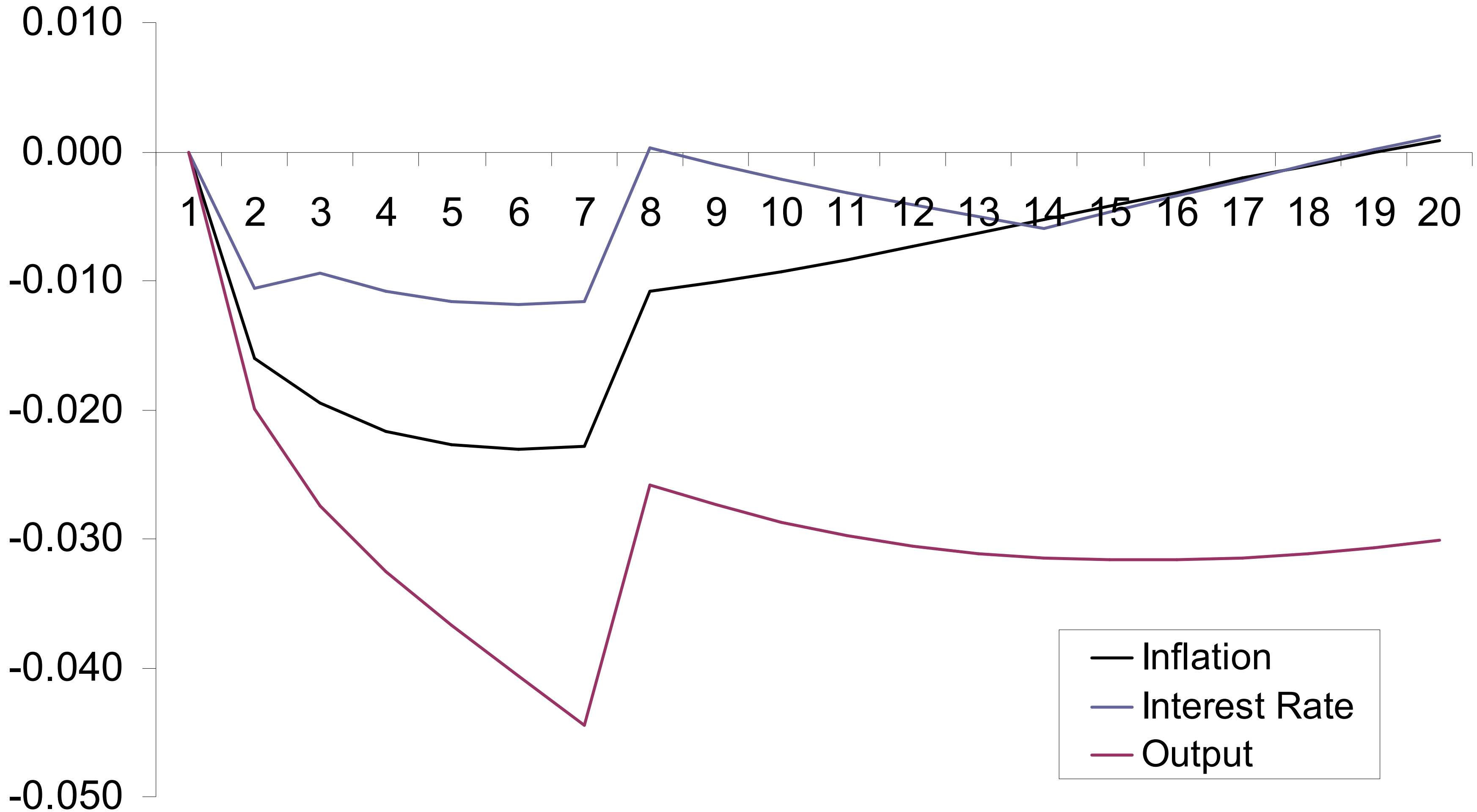
How big is the credit crunch shock today?

Calibrate assuming 20% of borrowers face 'infinite' (30%, credit card) cost of credit; rest face 7% (variable mortgage rate) — this compared with 5% base rate gives a rough 6% p.a. (.015 fraction per quarter) illustrative shock. Use Liverpool NC model of UK (money supply targets inflation). Shows interest rate inclusive of credit crunch effect.

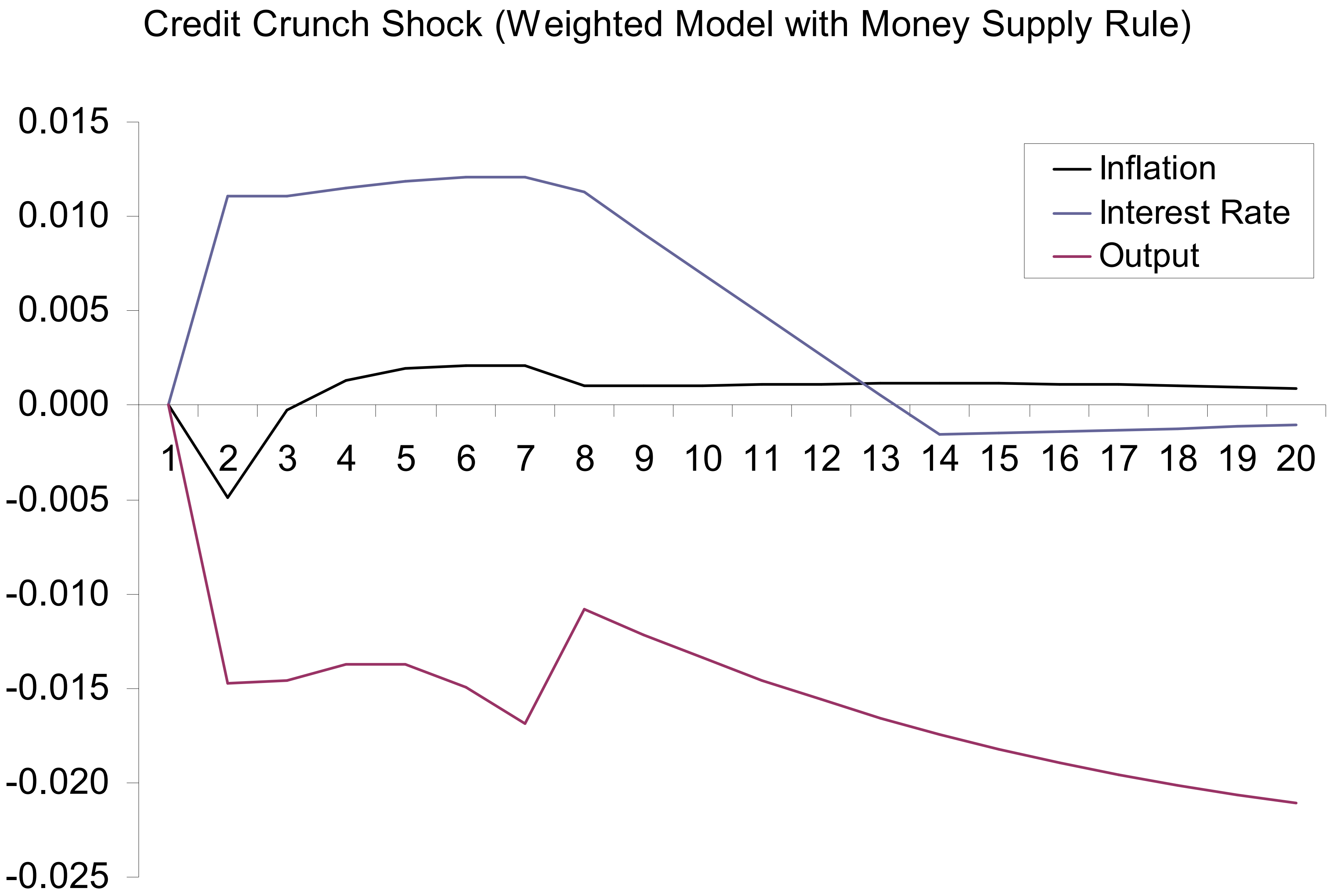


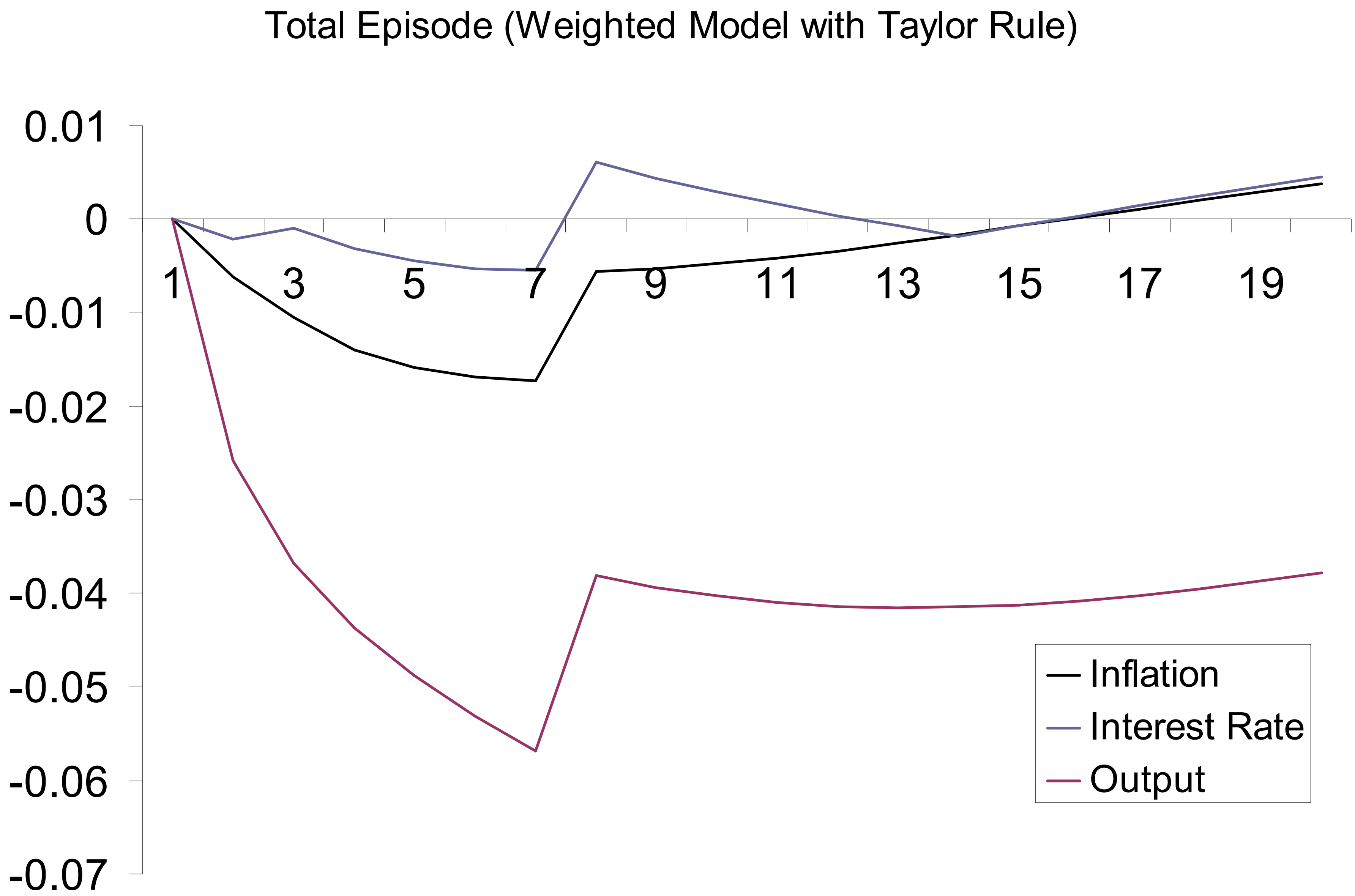
This shock has been operating in UK market effectively since 2007 Q4 (UK housing market frozen with credit withdrawn from first time buyers). Likely money feedback on output to reduce interest rates and mitigate recession.

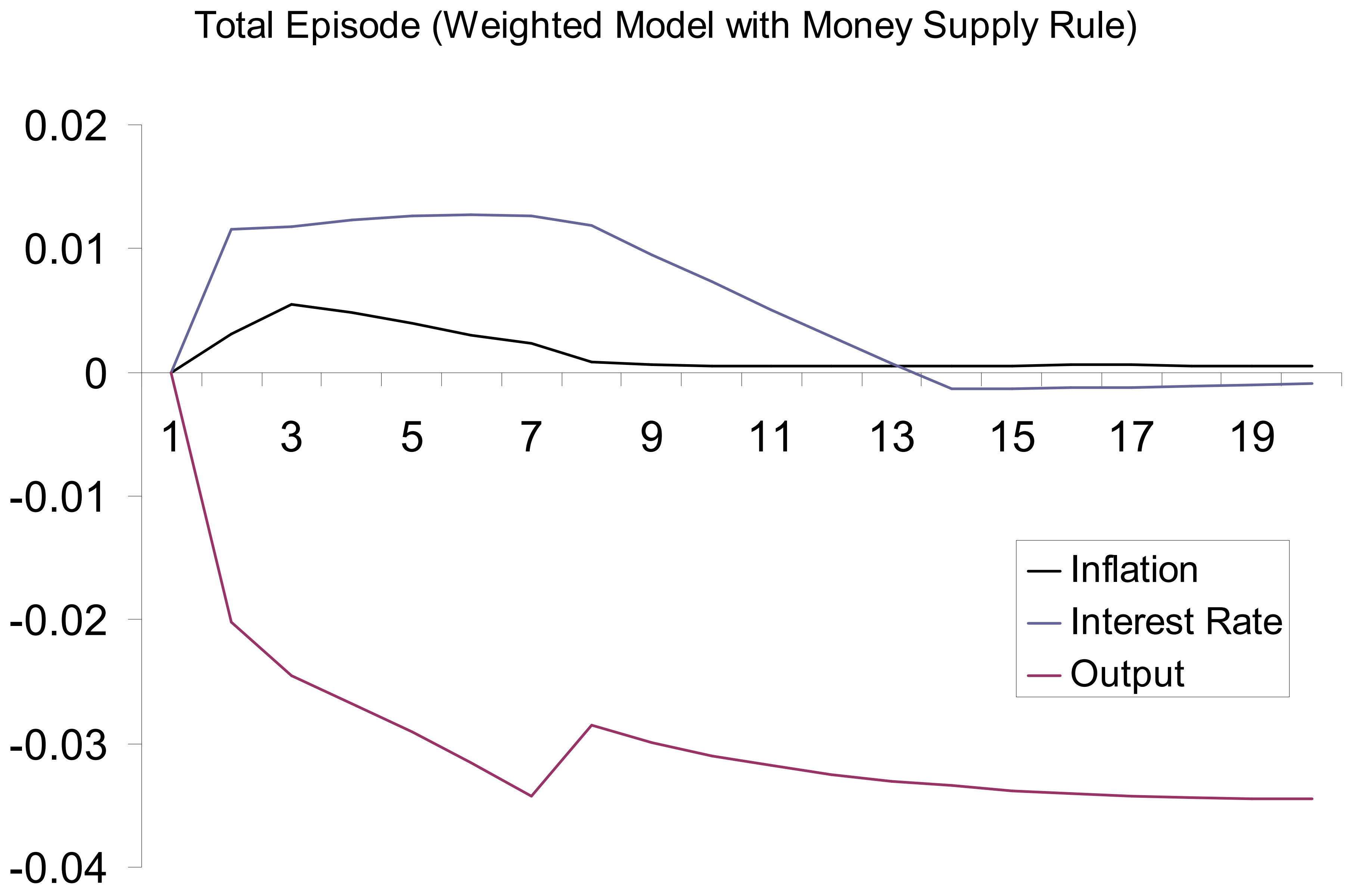
Credit Crunch Shock (Weighted Model)



Note: chart shows interest rate inclusive of credit crunch effect. Here Taylor Rule is more than offsetting the shock to interest rates as inflation falls and recession takes hold.


Credit Crunch Shock (Weighted Model with Money Supply Rule)
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Inflation
Interest Rate
Output


Total Episode (Weighted Model with Taylor Rule)
0.01
0
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06
-0.07
1
3
5
7
9
11
13
15
17
19
Inflation
Interest Rate
Output


Total Episode (Weighted Model with Money Supply Rule)
0.02
0.01
0
-0.01
-0.02
-0.03
-0.04
1
3
5
7
9
11
13
15
17
19
Inflation
Interest Rate
Output

Implications for UK monetary policy

- For commodity price shock alone interest rate reaction should have been a small rise — possibly up to 2% per annum. — needed to moderate pass-through effect.
- For credit crunch however there is a need to offset the effect of the credit crunch. Note that crunch risks 'inflation undershoot' towards deflation.

Reasons for worrying about non-modelled factors?

- **Learning**: would people be confused by higher world inflation into thinking the central bank had abandoned its inflation target? 'Learn about' higher inflation target from higher actual inflation?
- But the inflation target framework and the same target (except for small definition changes) there for a long time — decade or more.
- Also everyone can see that it is world prices that are rising. Different from 1970s when rising world prices led to fast rising wages as inflation (or other monetary) target were either weak or non-existent.
- What is there to learn?

Reasons for worrying about non-modelled factors?

- **Credibility**: could the central bank abandon or be forced (e.g. by political pressure) to abandon its inflation target in favour say of keeping down unemployment?
- Legitimate concern: credit crunch/recession causing pain to public and union members.
- But a) central banks determined to maintain independence b) governments would lose support if assaulted bank independence.
- Credibility is secure. Is some (minor) 'demonstration' of central bank independence possibly needed to reinforce it in short term — slower cuts in interest rates than otherwise? Risk is this could put Bank's independence at risk, by upsetting political opinion.

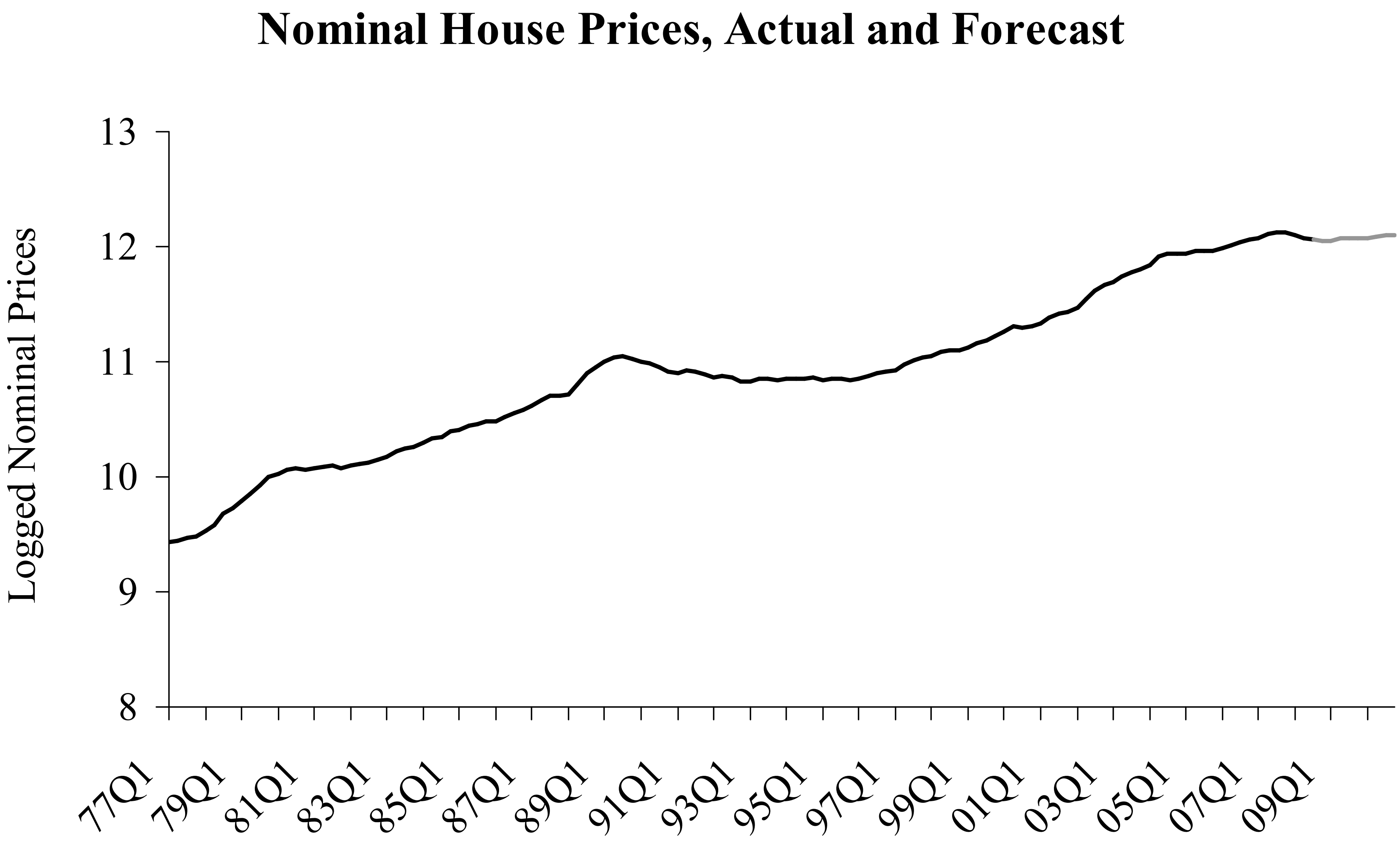
Conclusions

- UK Monetary policy has faced two large shocks: 1. a worsening credit crunch 2. an imported commodity inflation
- An attempt to establish roughly the effects of the two shocks and of interest rate responses, suggests the credit crunch is cutting output substantially with some negative effect on inflation, while the commodity shock is raising inflation temporarily and also cutting output somewhat.
- A money supply framework would have meant no rise in base rates for the commodity shock and some offset of the credit effect on rates — i.e. base rates cut to mitigate recession.
- A Taylor Rule would have meant cuts in base rates by now of at least 4% per annum (+2% for commodities, -6% or more for credit shock), and lower rates still by the end of this year (5 quarters from credit shock) as it reacts to sharp recession.
- In short monetary policy is currently quite a lot too tight, and needs to get urgently back on track.

Outcome and Forecast Nominal Growth, Forecast Made in 2007Q4

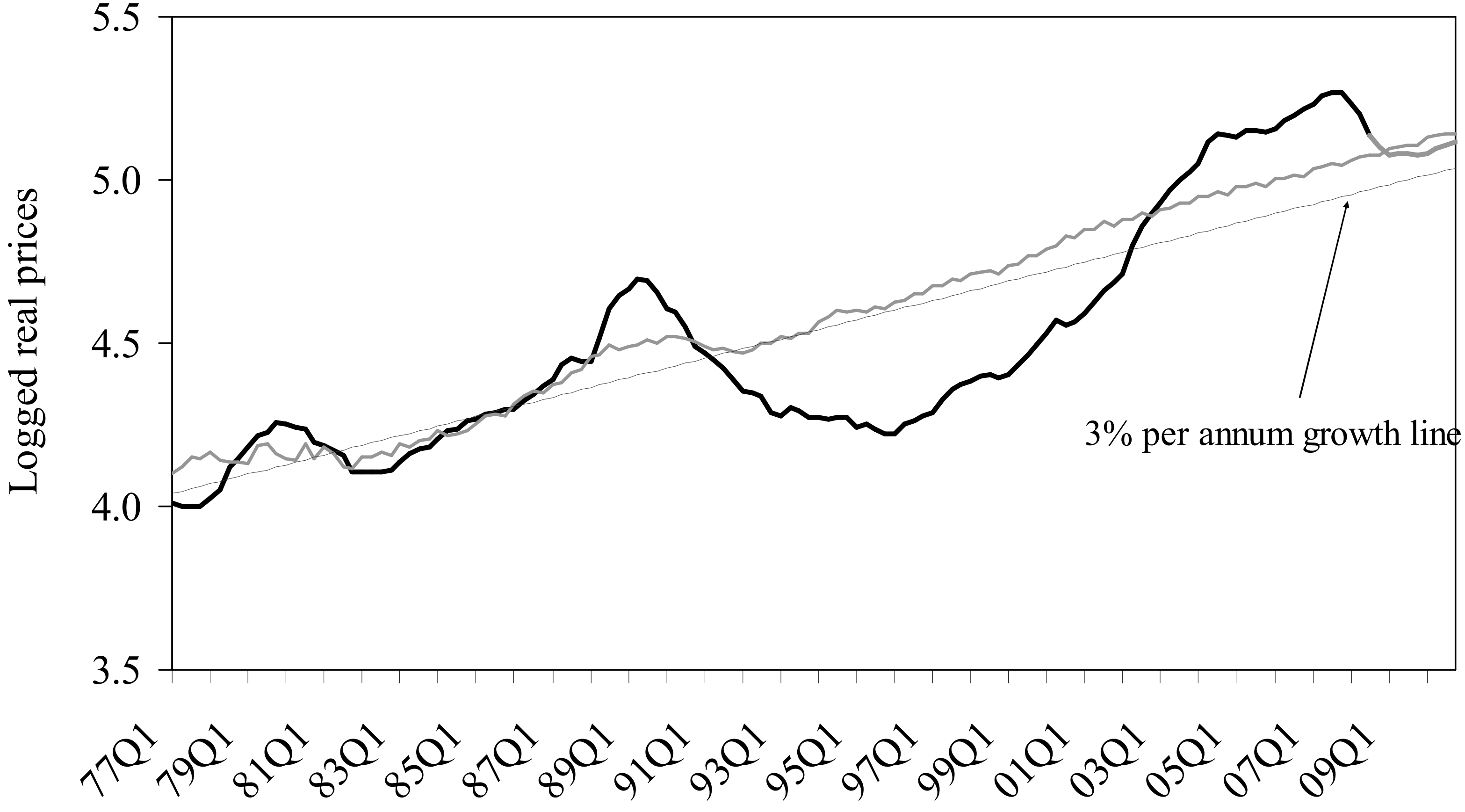
	Outcome				Forecast			
	2008Q1	2008Q2	Q1 & Q2	Q3*	2008Q1	2008Q2	Q1 & Q2	Q3
UK	-2.50%	-2.70%	-2.60%	-5.81%	-2.30%	-0.73%	-1.52%	-0.75%
NORTH	-0.64%	-2.00%	-1.32%		-0.10%	-1.04%	-0.57%	
YORKS & HSIDE	-1.89%	-3.75%	-2.83%		-0.24%	-0.65%	-0.45%	
NORTH WEST	-3.10%	-2.57%	-2.84%		-1.91%	-1.37%	-1.64%	
EAST MIDS	-1.34%	-3.69%	-2.52%		-1.62%	-0.73%	-1.17%	
WEST MIDS	-2.51%	-2.80%	-2.65%		-4.02%	-1.34%	-2.69%	
EAST ANGLIA	-2.03%	-4.28%	-3.16%		-1.37%	-1.53%	-1.45%	
OUTER S EAST	-1.64%	-3.23%	-2.44%		-0.28%	-0.57%	-0.42%	
GREATER LONDON	-2.18%	-3.05%	-2.62%		-4.84%	-0.50%	-2.69%	
SOUTH WEST	-3.12%	-1.01%	-2.07%		-3.01%	-0.85%	-1.94%	
WALES	-2.23%	-5.51%	-3.88%		-1.50%	-2.51%	-2.01%	
SCOTLAND	-0.89%	-0.20%	-0.54%		-2.48%	-0.45%	-1.47%	
N IRELAND	-12.42%	-6.81%	-9.66%		-4.06%	-2.74%	-3.40%	

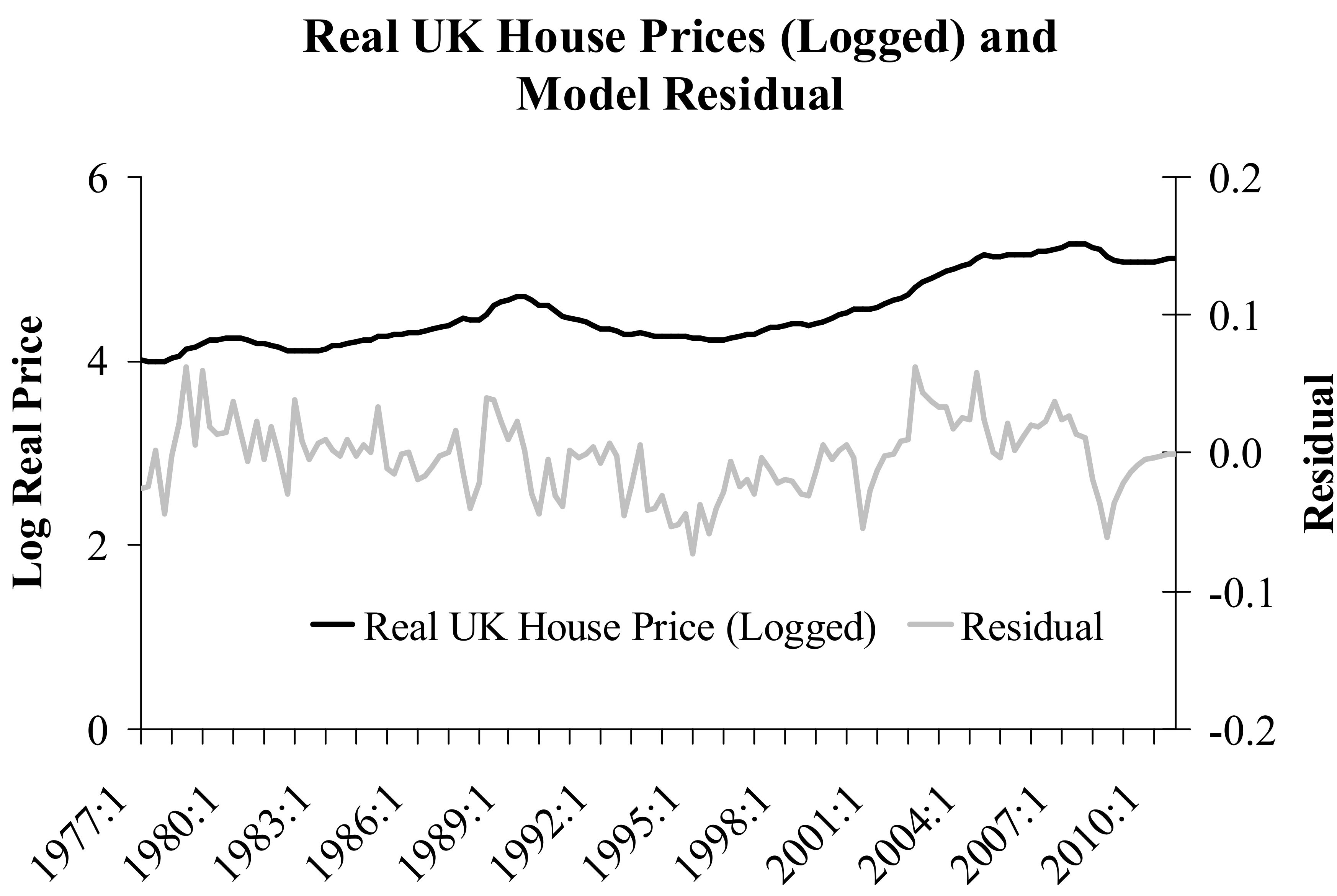
*Q3 outcome extrapolated from July and August, forecast made in 2007Q4



Nominal House Prices, Actual and Forecast
Logged Nominal Prices
13
12
11
10
9
8
77Q1
79Q1
81Q1
83Q1
85Q1
87Q1
89Q1
91Q1
93Q1
95Q1
97Q1
99Q1
01Q1
03Q1
05Q1
07Q1
09Q1

UK Real House Prices, Forecast and Underlying




Real UK House Prices (Logged) and
Model Residual
Log Real Price
Residual
6
4
2
0
0.2
0.1
0.0
-0.1
-0.2
1977:1
1980:1
1983:1
1986:1
1989:1
1992:1
1995:1
1998:1
2001:1
2004:1
2007:1
2010:1
Real UK House Price (Logged)
Residual

Forecasts for UK and Regions – Nominal House Prices

	UK	North	Yorkshire and Humberside	North West	East Midlands	West Midlands	East Anglia
1999	9.1%	3.3%	4.8%	6.3%	7.6%	7.0%	7.5%
2000	13.0%	4.8%	5.8%	6.4%	11.0%	10.7%	15.6%
2001	10.5%	8.4%	9.5%	10.5%	11.7%	11.1%	14.2%
2002	19.8%	19.3%	22.8%	18.7%	23.9%	21.5%	23.1%
2003	19.6%	32.4%	27.5%	24.0%	25.3%	22.6%	17.8%
2004	16.6%	29.5%	25.5%	27.0%	18.4%	16.8%	14.3%
2005	5.4%	5.3%	8.2%	7.8%	4.1%	4.6%	3.8%
2006	6.5%	2.7%	6.0%	4.7%	3.3%	3.3%	5.3%
2007	8.9%	5.5%	5.1%	4.7%	5.1%	4.9%	7.3%
2008	-5.7%	-3.0%	-3.0%	-5.0%	-1.5%	-3.5%	-3.7%
2009	-4.5%	0.5%	2.9%	-0.2%	2.6%	3.7%	-2.4%
2010	3.9%	4.2%	4.9%	3.8%	6.4%	8.9%	1.4%

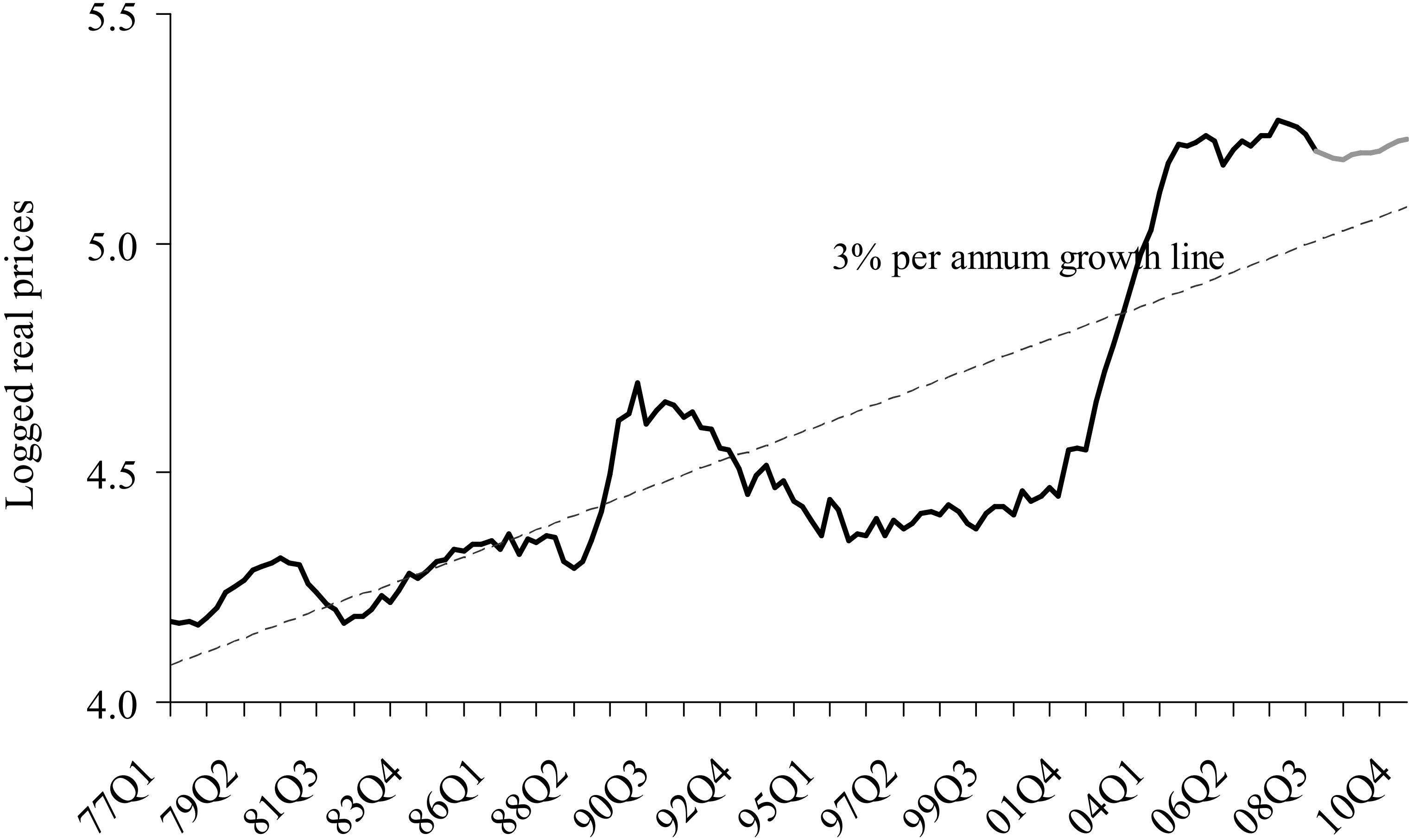
Forecasts for UK and Regions – Nominal House Prices

	Rest of South East	Greater London	South West	Wales	Scotland	Northern Ireland
1999	10.8%	15.8%	10.6%	6.0%	3.6%	10.4%
2000	18.9%	20.1%	16.6%	8.3%	4.6%	12.5%
2001	10.8%	11.3%	11.9%	9.0%	3.0%	8.0%
2002	19.9%	18.0%	24.5%	18.9%	12.9%	9.2%
2003	16.4%	12.8%	18.6%	26.2%	14.8%	11.3%
2004	10.2%	8.9%	15.4%	31.5%	22.5%	15.1%
2005	2.3%	2.8%	3.9%	6.0%	10.4%	12.8%
2006	5.2%	7.1%	5.3%	5.3%	13.0%	30.5%
2007	9.6%	14.8%	8.4%	5.8%	13.0%	43.1%
2008	-5.3%	-6.4%	-6.5%	-4.4%	-4.0%	-13.9%
2009	-4.4%	-5.4%	-4.7%	-1.0%	-0.8%	0.1%
2010	1.1%	1.6%	1.9%	2.8%	3.8%	4.1%

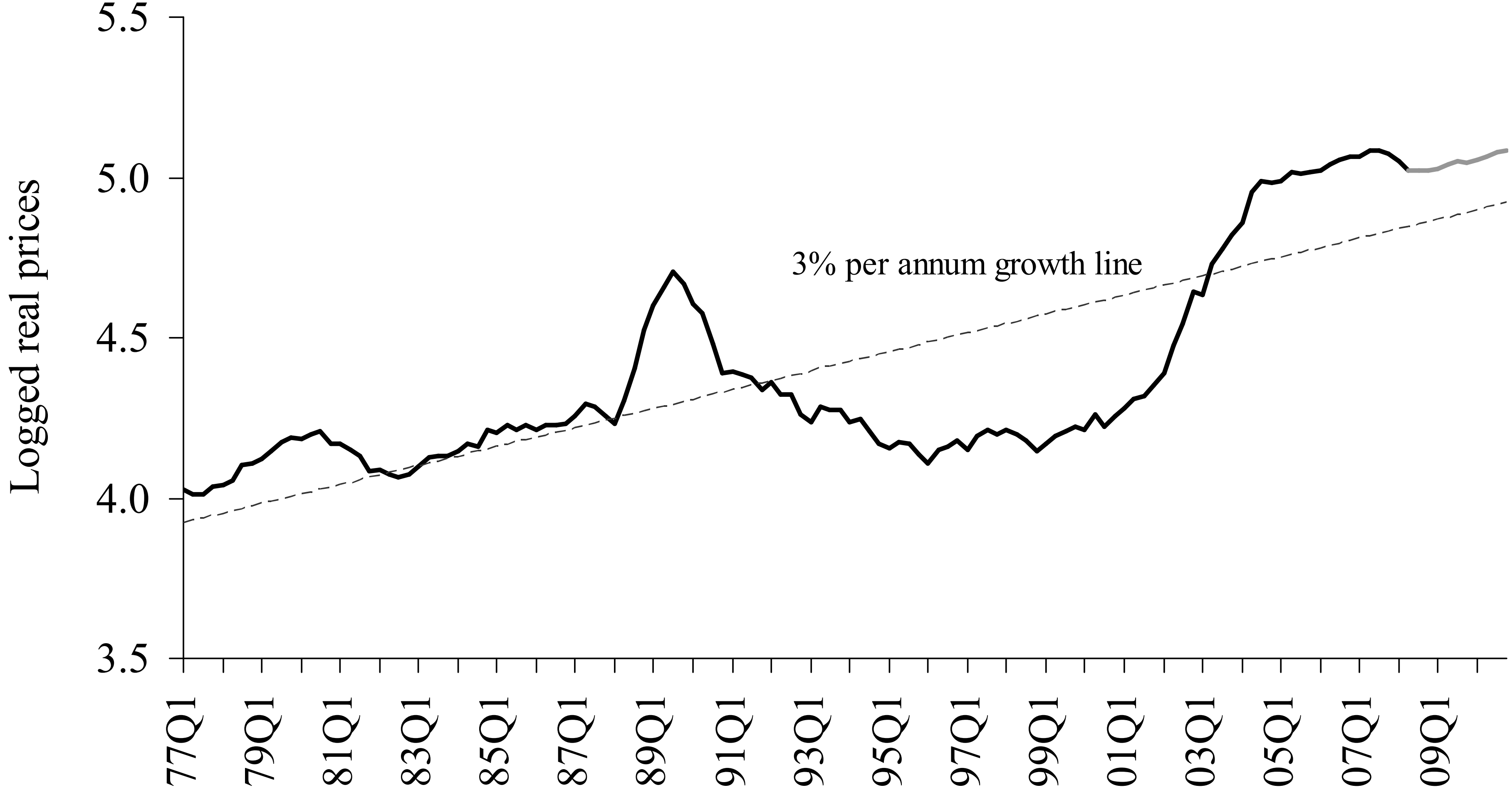
Nationwide, HBOS and FT House Price Indices

	Nationwide	HBOS	FTHPI
May 07	£181,584	£199,264	£222,797
Jun 07	£184,070	£199,458	£224,729
Jul 07	£184,270	£200,578	£225,605
Aug 07	£183,898	£201,081	£227,458
Sep 07	£184,723	£200,168	£229,153
Oct 07	£186,044	£197,817	£230,411
Nov 07	£184,099	£194,258	£230,046
Dec 07	£182,080	£195,333	£230,344
Jan 08	£180,473	£191,275	£230,751
Feb 08	£179,358	£193,448	£231,908
Mar 08	£179,110	£190,619	£231,198
Apr 08	£178,555	£190,952	£230,780
May 08	£173,583	£186,482	£229,149
Jun 08	£172,415	£181,765	£227,256
Jul 08	£169,316	£178,440	£225,297
Aug 08	£164,654	£175,408	£222,456

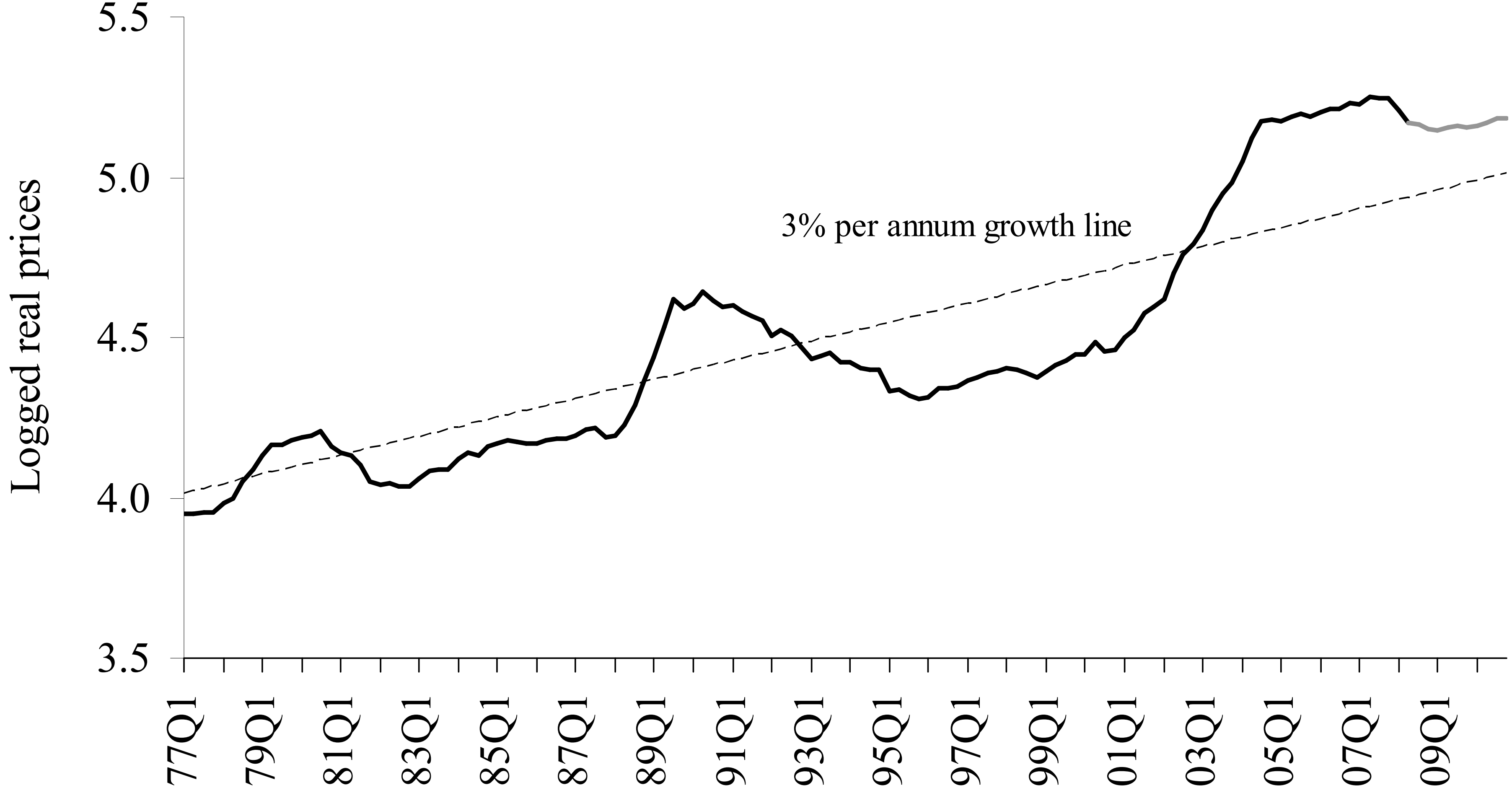
North: Real House Prices



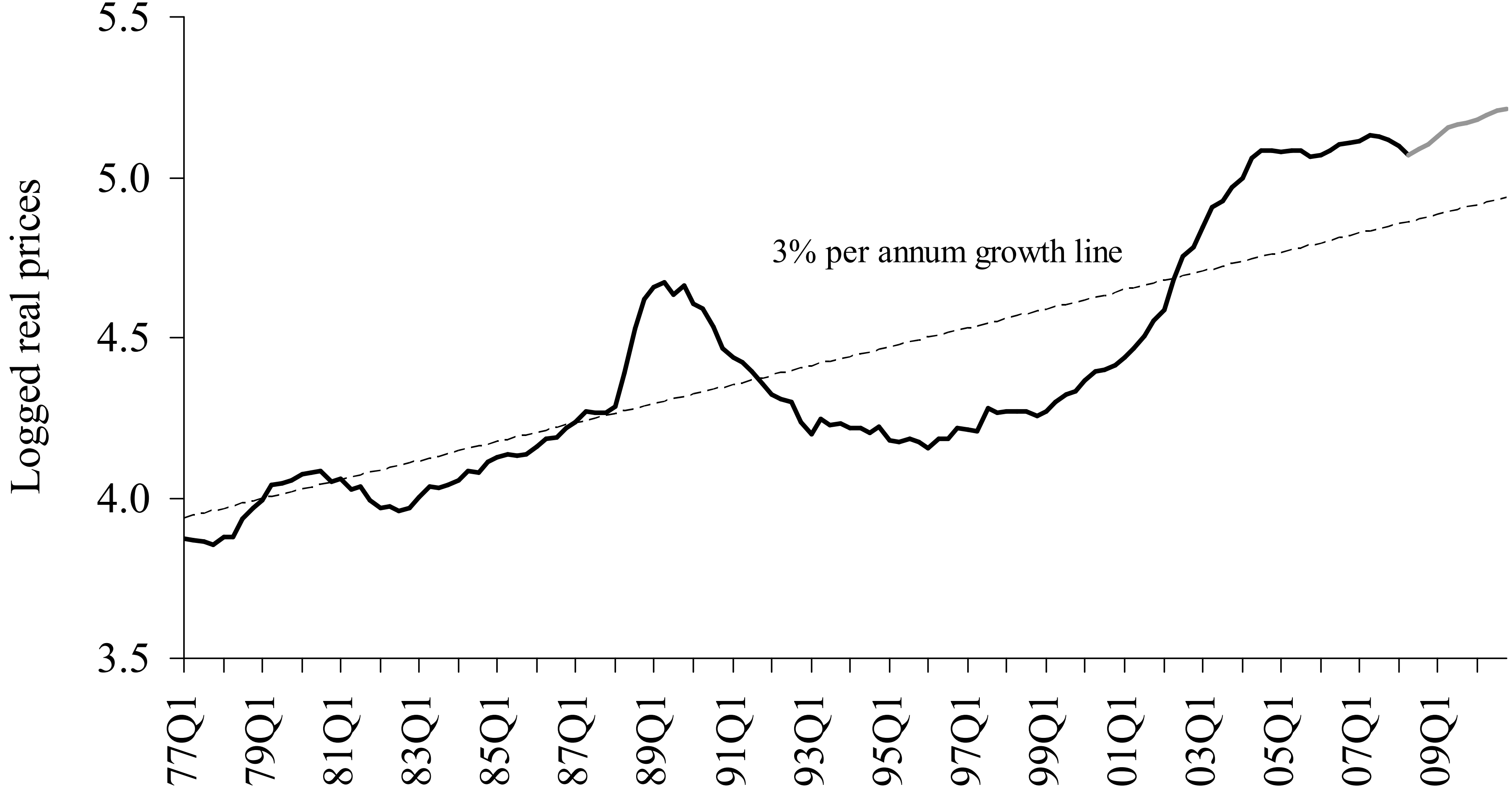
Yorkshire and Humberside: Real House Prices



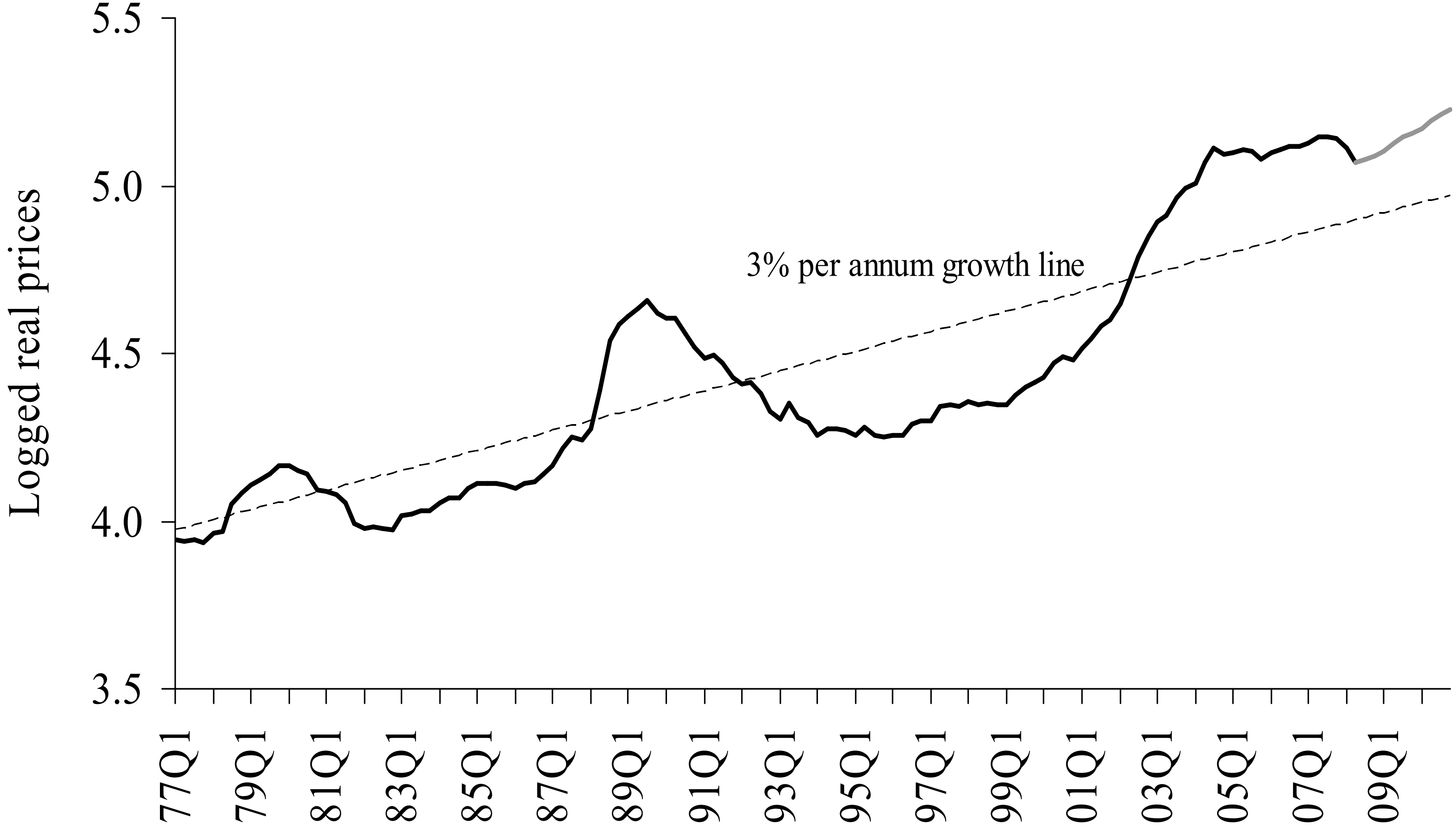
North West: Real House Prices



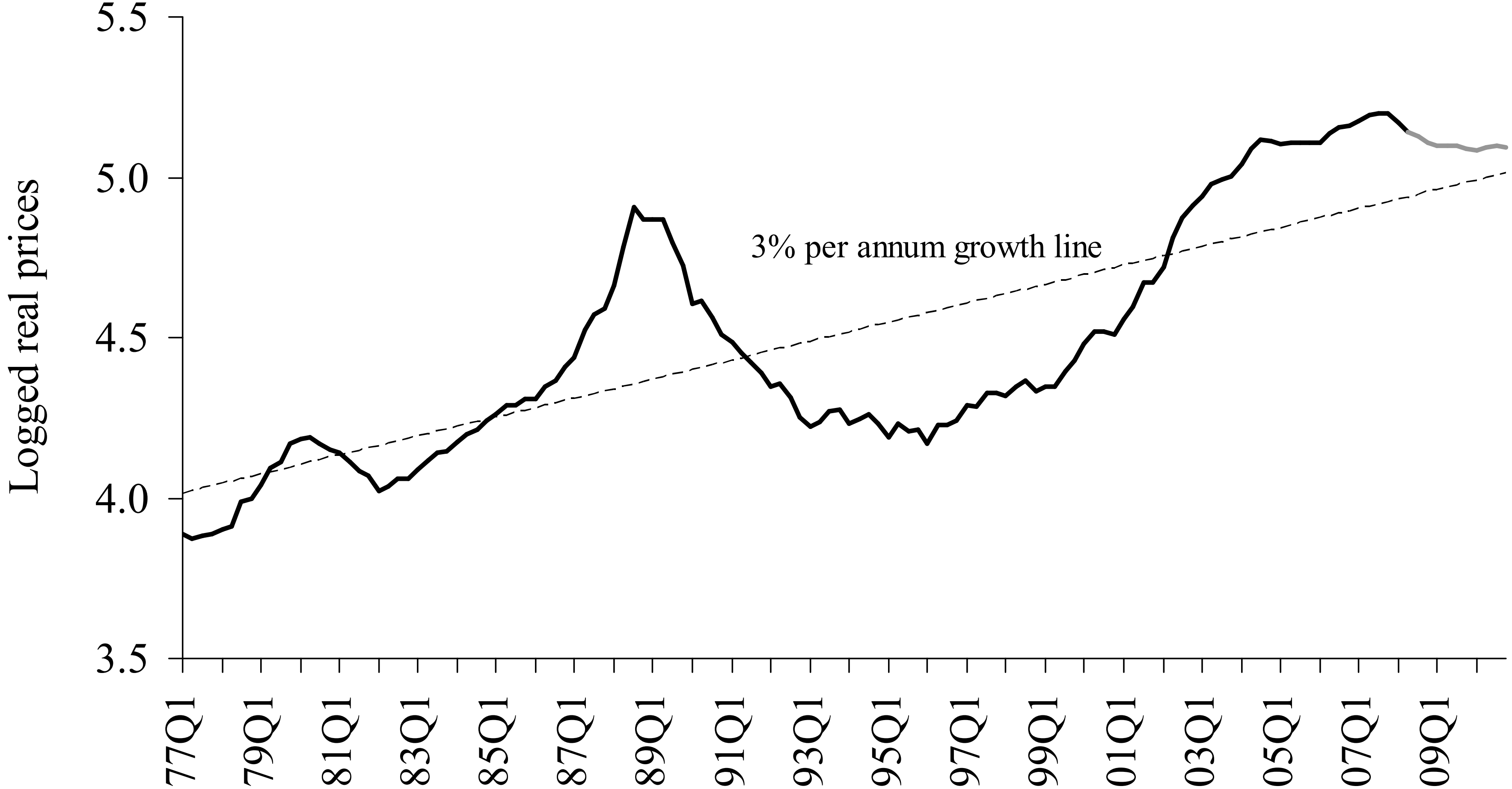
East Midlands: Real House Prices

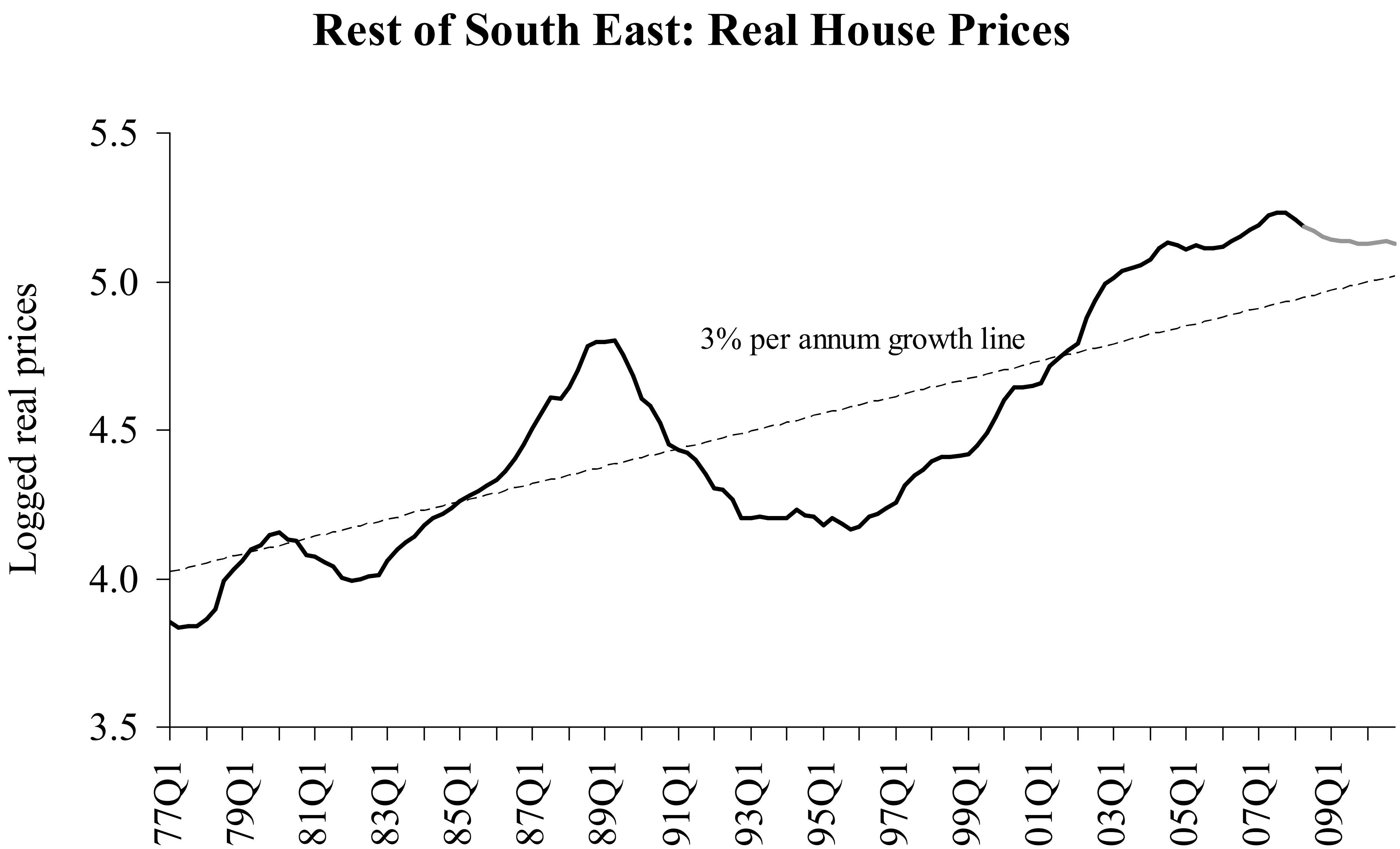


West Midlands: Real House Prices



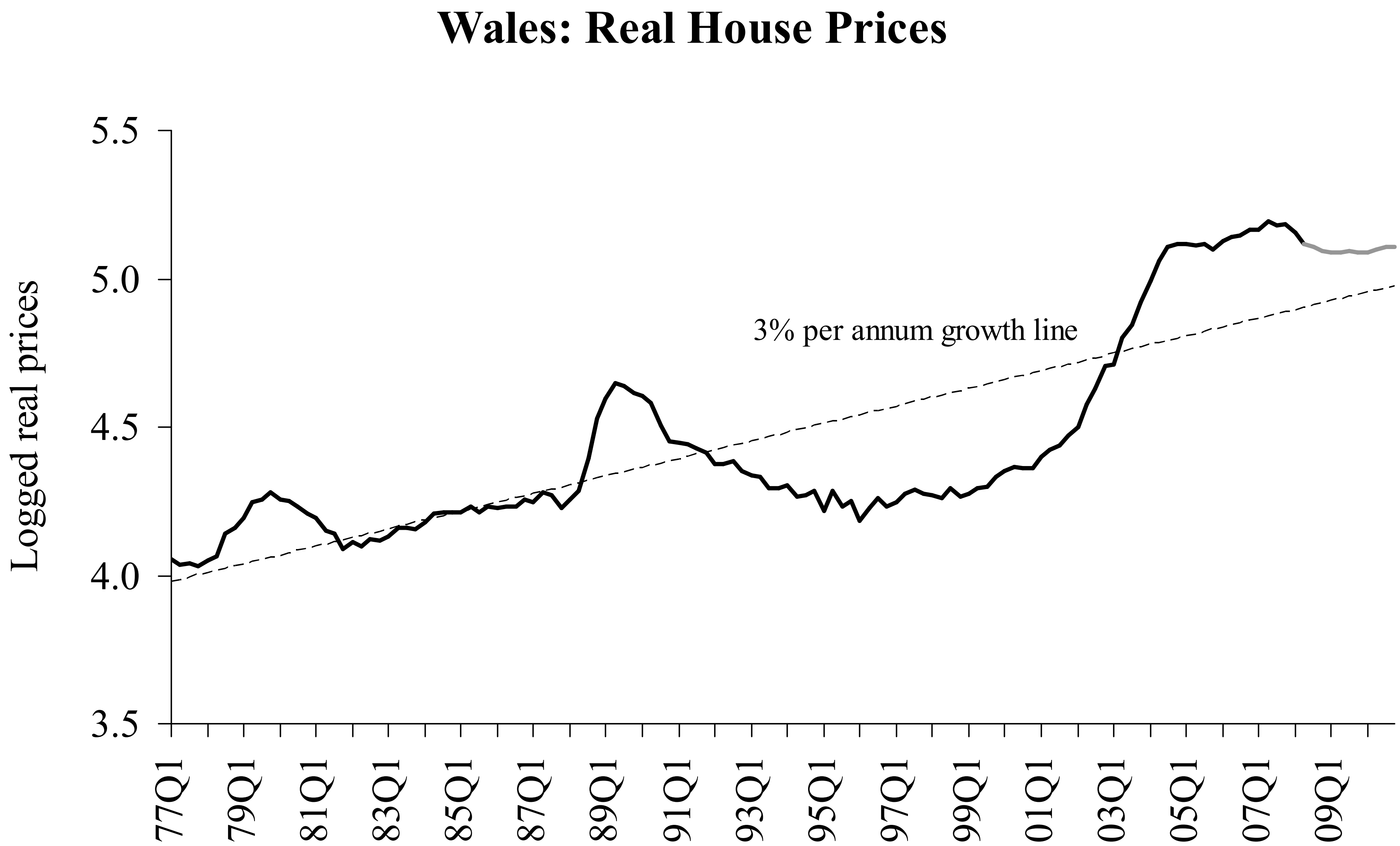
East Anglia: Real House Prices



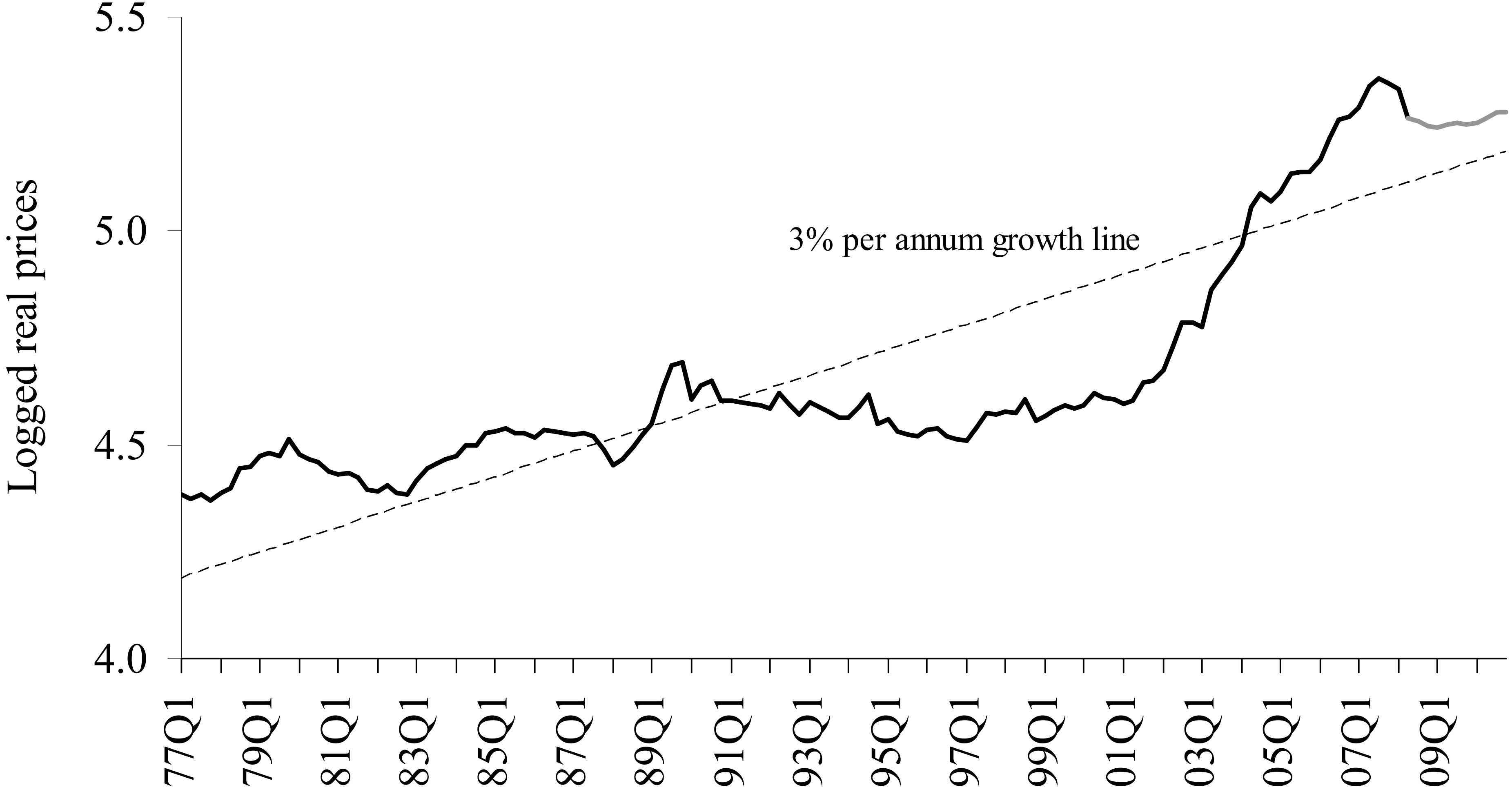

Rest of South East: Real House Prices
Logged real prices
5.5
5.0
4.5
4.0
3.5
3% per annum growth line
77Q1
79Q1
81Q1
83Q1
85Q1
87Q1
89Q1
91Q1
93Q1
95Q1
97Q1
99Q1
01Q1
03Q1
05Q1
07Q1
09Q1

Greater London: Real House Prices
Logged real prices
5.5
5.0
4.5
4.0
3.5
3% per annum growth line
77Q1
79Q1
81Q1
83Q1
85Q1
87Q1
89Q1
91Q1
93Q1
95Q1
97Q1
99Q1
01Q1
03Q1
05Q1
07Q1
09Q1


South West: Real House Prices
Logged real prices
5.5
5.0
4.5
4.0
3.5
3% per annum growth line
77Q1
79Q1
81Q1
83Q1
85Q1
87Q1
89Q1
91Q1
93Q1
95Q1
97Q1
99Q1
01Q1
03Q1
05Q1
07Q1
09Q1


Wales: Real House Prices
5.5
5.0
4.5
4.0
3.5
Logged real prices
3% per annum growth line
77Q1
79Q1
81Q1
83Q1
85Q1
87Q1
89Q1
91Q1
93Q1
95Q1
97Q1
99Q1
01Q1
03Q1
05Q1
07Q1
09Q1

Scotland: Real House Prices



Northern Ireland: Real House Prices