C32 E52 E58

QQE

Curdia Woodf

Oda Ueda 2005

IS/AS 1999

VAR VAR

Krishnamurthy Jorgensen 2011

Kobayashi 2006

VAR

Ahmadi 2009 Bayesian FAVAR

Moussa 2010 TV-FAVAR 90

M0

2016 FAVAR

VAR

VAR

AV

2008 3 JP

9 18

0.5%

2008 11 -2010 4

MBS 1.25 0.175 0.3

1.725 2010 11 -2011 6 0.6

2012 9 -2014 10 400

MBS 6 30

3 2012 12 450

400 850 2013 12

2014 MBS 50

300 2014 10 29 10 150

2008 2008 9 17

2014 10 29 44867 4.5 GDP 2008 7% 2014

2001 3 2006 3

18 5 32-35

2003 10

ABS

TARP

APF

10 2011 35

2011 3 2012 9

2013

35

10 55 2013 4

\+ ETF 1

2%

3 -2006 3 10 15

30% 2010 10 -2015 3 12 32

25% 65%

FAVAR

2008

4.5 2001-2006 50

2001-2006

2013

2013

2%

FAVAR

FAVAR

Bernanke 2005 FAVAR VAR

VAR

VAR

VAR VAR FAVAR

K×1 R_t M×1

$$\begin{bmatrix} F_t \\ R_t \end{bmatrix} = \Phi(L) \begin{bmatrix} F_{t-1} \\ R_{t-1} \end{bmatrix}$$

p υ_t 0 Q

K F_t

R_t X_t F_t R_t

$$X_t = \Lambda^f F_t + \Lambda^r R_t + u_t \quad 2$$

Λ^f $N \times K$ Λ^r $N \times M$ Xt $N \times 1$

$N \geq K + M$ u_t 0 U

ke 2005 Ft

2005

Ft 1 FAVAR

128 238

2008 9 -2015 6 CEIC

-2015 3 CEIC IFS

MATLAB FAVAR

GDP

I

CPI

GDP

Bernanke 2005 5 ①

Xt components $\hat{C}_t$ $\hat{C}_t$ Xt

R_t Xt

3 $\hat{\gamma}_R$ $\hat{C}_t - \hat{\gamma}_R R_t$

F_t $\hat{Ft}$ $\hat{Ft}$ 1 VAR

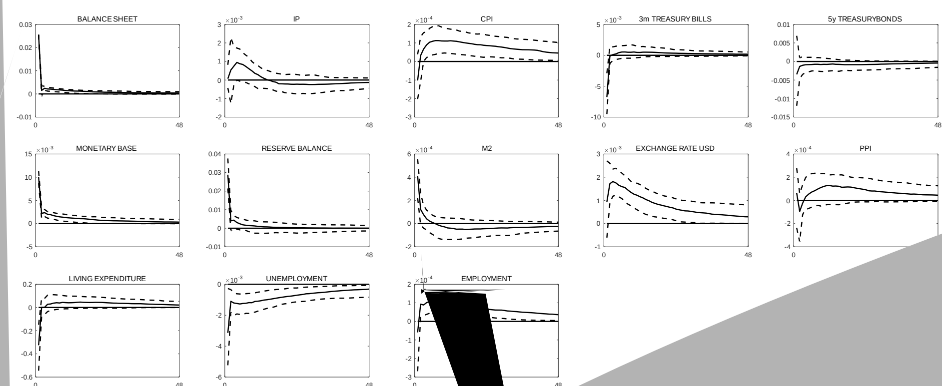
$$\hat{C}_t = \hat{\gamma}_{F^s} \hat{F}_t^s + \hat{\gamma}_R R_t + e_t$$

1 VAR

%

[redacted]

1



2

M2

M2

M2

2

M2

M2

3.

FAVAR

PPI

CPI PPI

PPI

2%

:

2001-2006

2010

FA-

2016

Oj>˜ r$'aÎAñD0ÿÐ˜ ñ¥PDY:`?X3*-ƒ ‡ ƒ ‡

2 118 128

CEIC

1 2 4 5 s f

1

				/
	US: Industrial Production Index: sa	2012=100	5	s
	US: IPI: sa: Final Product	2012=100	5	s
	US: IPI: sa: Consumer Goods	2012=100	5	s
	US: IPI: sa: Consumer Goods: Durable (DU)	2012=100	5	s
	US: IPI: sa: Consumer Goods: Non Durable (ND)	2012=100	5	s
	US: IPI: sa: Equipment	2012=100	5	s
	US: IPI: sa: Intermediate Product: Non Industrial Supplies (NI)	2012=100	5	s
	US: IPI: sa: Materials	2012=100	5	s
	US: IPI: sa: Materials: Non Energy: Durable	2012=100	5	s
	US: IPI: sa: Materials: Non Energy: Non Durable	2012=100	5	s
	US: IPI: sa: Manufacturing: NAICS	2012=100	5	s
	US: IPI: sa: Mfg: Durable	2012=100	5	s
	US: IPI: sa: Mfg: Non Durable	2012=100	5	s
	US: IPI: sa: Mining	2012=100	5	s
	US: IPI: sa: Electric & Gas Utilities	2012=100	5	s
	US: Industrial Capacity Index: sa	2012=100	5	s
	US: Capacity Utilization: sa: Manufacturing (SIC)	%	1	s
	ISM Manufacturing: PMI Composite Index(sa)		1	
19	Real Disposable Personal Income	Billions Chai		
20	US: PI: 2009p: saar: Personal Income Excl Current T	010 Dollars	5	s
21	Civilian Employment-Population	%	5	s
22	Private	Person th	5	s
23	: sa: Goods Producing	Person th	5	s
	t: NF: sa: Natural Resources & Mining (NR)	Person th	5	s
	US ment: NF: sa: Construction (CO)	Person th	5	s
	US: Em oyment: NF: sa: Mfg	Person th	5	s
	US: Em oyment: NF: sa: Mfg: Durable	Person th	5	s
	US: ent: NF: sa: Mfg: Non Durable	P		
	US : NF: sa: Service Pr			

[illegible]	US: Employment: NF: sa: Trade, Transportation & Utilit[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	US: Employment: NF: sa: Wholesale Trade (WT)	[illegible]	[illegible]	[illegible]
[illegible]	US: Employment: NF: sa: Retail Trade (RT)	[illegible]	[illegible]	[illegible]
[illegible]	US: Employment: NF: sa: Finance Activities (FA)	Perso[illegible]	[illegible]	[illegible]
[illegible]	US: Employment: NF: sa: Government	Person th	[illegible]	[illegible]
[illegible]	US: Agg Weekly Payrolls Index: sa: Production Workers (PW): Private	2002=100	5	[illegible]
[illegible]	US: Agg Weekly Payrolls Index: sa: PW: Goods Producing	2002=100	5	s
[illegible]	US: Agg Weekly Payrolls Index: sa: PW: Private Service Providing	2002=100	5	s
[illegible]	US: Agg Weekly Payrolls Index: sa: PW: Natural Resources & Mining	2002=100	5	s
[illegible]	US: Agg Weekly Payrolls Index: sa: PW: Construction	2002=100	5	s
[illegible]	US: Agg Weekly Payrolls Index: sa: PW: Mfg	2002=100	5	s
[illegible]	US: Agg Weekly Payrolls Index: sa: PW: Mfg: Durable	2002=100	5	s
[illegible]	US: Agg Weekly Payrolls Index: sa: PW: Mfg: Non Durable	2002=100	5	s
[illegible]	US: Agg Weekly Payrolls Index: sa: PW: Trade, Transportation & Utilities	2002=100	5	s
[illegible]	US: Agg Weekly Payrolls Index: sa: PW: Wholesale Trade	2002=100	5	s
[illegible]	US: Agg Weekly Payrolls Index: sa: PW: Retail Trade	2002=100	5	s
[illegible]	US: Agg Weekly Payrolls Index: sa: PW: Financial Activities	2002=100	5	s
[illegible]	US: Unemployment rate: sa	%	5	s
[illegible]	US: Unemployment: By Duration: sa: Less Than 5 Weeks	Person th	5	s
[illegible]	US: Unemployment: By Duration: sa: 5 to 14 weeks	Person th	5	s
[illegible]	US: Unemployment: By Duration: sa: 15 Weeks & Over	Person th	5	s
[illegible]	US: Unemployment: By Duration: sa: 15 Weeks & Over: 15 to 26 Weeks	Person th	5	s
[illegible]	US: Unemployment: By Duration: sa: 15 Weeks & Over: 27 weeks & Over	Person th	5	s
[illegible]	US: Unemployment: By Duration: sa: Average Duration in Weeks	Week	5	s
[illegible]	US: Agg Weekly Hours Index: sa: PW: Mfg	2002=100	1	s
[illegible]	Real Personal Consumption Expenditures (SAAR, Bil.Chn.2009$)	5	5	[illegible]
[illegible]6	Personal Consumption Expenditures: Services (SAAR, Mil.Chn.2009.$)	5	[illegible]	[illegible]
57	Personal Consumption Expenditures: Nondurable Goods (SAAR, M[illegible] Chn.2009.$)	[illegible]	[illegible]	[illegible]
58	Personal Consumption Expenditures: Durable Go[illegible] Chn.2009.$)	[illegible]	5	s
59	Personal Consumption Expenditures: M[illegible](SAAR, Mil.Chn.2009.$)	5	5	s
60	[illegible]nits Started: saar: Total	Unit mn	4	f
[illegible]	[illegible]ng Units Started: saar: Northeast	Unit th	4	f
[illegible]	U[illegible]ousing Units Started: saar: Midwest	Unit th	4	f
[illegible]	US: P[illegible]e Housing Units Started: saar: South	Unit th	4	f
[illegible]	US: Private Housing Units Started: saar: West	Unit th	4	f
[illegible]	US: P[illegible] Housing Units Authorized: saar: Total	Unit mn	[illegible]	[illegible]

	Inventories Index(nsa)			
	new order index(sa)			
	supplier deliveries index sa			
	CFNAI: Sales, Orders, & Inventories(nsa)	index		
	US: Index: Dow Jones: Industrial Average	5/26/96=40.94		
	US: Index: Dow Jones: Utilities Average	1/02/29=85.64		
	US: Index: Dow Jones: Composite Average	1/02/34=39.57		
	US: Index: Standard &Poors: 500	1941-43=10		
	US: Index: Standard &Poors: 500 Industrial	1941-43=10		
	US: Index: Standard &Poors: Utilities	1941-43=10		
	US: Index: Standard &Poors: Financial	1941-43=10		
	US: Equity Market Index: Month End: NYSE Composite	31Dec02=5000		
	Foreign Exchange Rate: United Kingdom (US$/Pound)			
	Foreign Exchange Rate: Switzerland (Franc/US$)			
	Foreign Exchange Rate: Japan (Yen/US$)			
	Foreign Exchange Rate: Canada (C$/US$)			
	US: Prime Lending Rate: Month Average	% pa		
	US: Corporate Bonds Yield: Moody's Seasoned: Aaa Rated	% pa		
	US: Corporate Bonds Yield: Moody's Seasoned: Baa Rated	% pa		
	US: Treasury Bills Rate: Auction High: Month Average: 3 Months	% pa		
	US: Treasury Bills Rate: Auction High: Month Average: 6 Months	% pa		
	US: Treasury Bills Rate: Secondary Market: Month Average: 3 Months	% pa		
	US: Treasury Bills Rate: Secondary Market: Month Average: 6 Months	% pa		
	1-Year Treasury Bill: Secondary Market Rate	%		
	3-Year Treasury Constant Maturity Rate(nsa)	%		
	5-Year Treasury Constant Maturity Rate(nsa)	%		
2	10-Year Treasury Constant Maturity Rate(nsa)	%		
93	M1(sa)			
94	M2(sa)			
95	Monetary Base; Total(nsa)			
96	Commercial and Industrial Loans, All Com			
97	Total Consumer Credit Owned and S utstanding(sa)			
98	sumer Credit Outstanding: sa: Nonrevolving			
99	eserves: Total			
	itory Institutions, Nonborrowed(nsa)			
	y Inst: Reserves: Required			
	US: itory Inst: Vault Cash: Total			
	Loans and Leases in Bank Credit, All Commercial Banks(sa)			
	US: onsumption Expenditure (PCE): Price I			

[illegible]	US: PCE: PI: sa: Goods	[illegible]	[illegible]	[illegible]
[illegible]	US: PCE: PI: sa: Gds: Durable Goods (DG)	[illegible]	[illegible]	[illegible]
[illegible]	US: PCE: PI: sa: Gds: Nondurable Goods (NG)	[illegible]	[illegible]	[illegible]
[illegible]	US: PCE: PI: sa: Excl Food & Energy	[illegible]	[illegible]	[illegible]
[illegible]	Consumer Price Index for All Urban Consumers: All Items	[illegible]	[illegible]	[illegible]
[illegible]	Consumer Price Index for All Urban Consumers: All Items Less Food & Energy	Index 1982-1984=100	5	s
[illegible]	Consumer Price Index for All Urban Consumers: Medical Care	Index 1982-1984=100	5	s
[illegible]	Consumer Price Index for All Urban Consumers: Energy	Index 1982-1984=100	5	s
[illegible]	Consumer Price Index for All Urban Consumers: Apparel	Index 1982-1984=100	5	s
[illegible]	Consumer Price Index for All Urban Consumers: Transportation	Index 1982-1984=100	5	s
[illegible]	Consumer Price Index for All Urban Consumers: New vehicles	Index 1982-1984=100	5	s
[illegible]	Consumer Price Index for All Urban Consumers: Durables	Index 1982-1984=100	5	s
[illegible]	Consumer Price Index for All Urban Consumers: All items less shelter	Index 1982-1984=100	5	s
[illegible]	Consumer Price Index for All Urban Consumers: All items less medical care	Index 1982-1984=100	5	s
[illegible]	Consumer Price Index for All Urban Consumers: All Items Less Food	Index 1982-1984=100	5	s
[illegible]	US: PPI: sa: Intermediate Materials (IM)	1982=100	5	s
[illegible]	US: PPI: sa: Finished Goods (FG)	1982=100	5	s
[illegible]	US: PPI: sa: FG: Finished Consumer Goods	1982=100	5	s
[illegible]	US: PPI: sa: Crude Materials (CM)	1982=100	5	s
[illegible]	US: Avg Weekly Earnings: sa: PW: Construction	USD	5	[illegible]
[illegible]	US: Avg Weekly Earnings: sa: PW: Mfg	USD	[illegible]	[illegible]
[illegible]	Consumer Sentiment	[illegible]	[illegible]	[illegible]
[illegible]	US: USD Trade Weighted Index: Real: Broad	[illegible]	[illegible]	f
[illegible]	US: USD Trade Weighted Index: Real: Major Cu[illegible]	[illegible]	5	f
129	US: USD Trade Weighted Index: Real: [illegible] partners	Mar73=100	5	f

2

FAVAR

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