# General writeup

Marco Brianti Laura Gati

August 2017

# 1 VAR Results - Comparison of different specifications

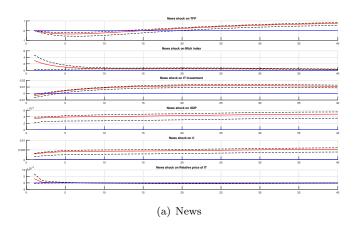
# 1.1 Relative prices LR horizon 8

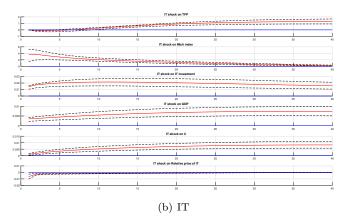
Time it took, for 500 bootstrap, Mac: 61 min

Time it took, for 500 bootstrap, server (w/o parpool): 140 min Time it took, for 500 bootstrap, server (w/ parpool): ? min

'News' 'IT' 'Total' '0.17231' '0.5386' '0.7109'

	News	IT	Total
Share of TFP FEV explained	0.2	0.5	0.7



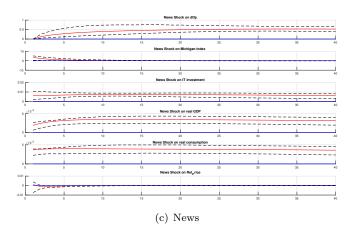


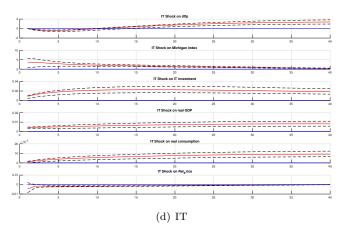
## 1.2 Relative prices LR horizon 16

Time it took, for 500 bootstrap, Mac: 61 min

'News' 'IT' 'Total' '0.10054' '0.60847' '0.70901'

	News	IT	Total
Share of TFP FEV explained	0.1	0.6	0.7



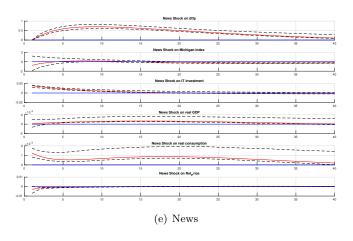


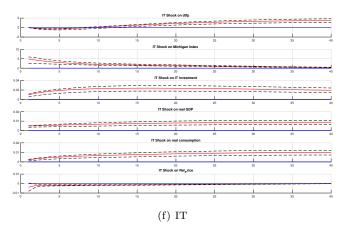
# 1.3 Relative prices LR horizon 80

Time it took, for 500 bootstrap, Mac: 81 min

'News' 'IT' 'Total' '0.044546' '0.69612' '0.74067'

	News	$\operatorname{IT}$	Total
Share of TFP FEV explained	0.0	0.7	0.7

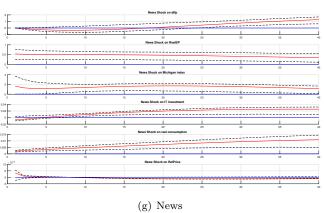


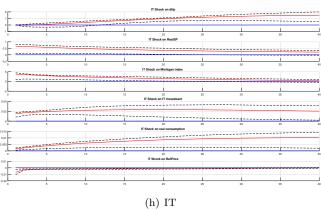


# 1.4 Relative prices LR horizon 8, adding SP 500

one lag, LR hor = 8, adding real stock prices 500, removing GDP, with relative price

	News	$\operatorname{IT}$	Total
Share of TFP FEV explained	0.45829	0.40823	0.86651





# 1.5 Relative prices LR horizon 8, adding SP 500 and leaving in GDP

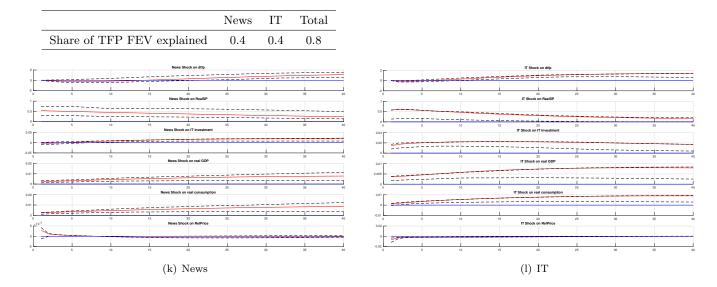
one lag, LR hor = 8, adding real stock prices 500, leaving in GDP, with relative price; only 30 bootstrap

		News	IT	Total
Share of TI	P FEV explained	0.3	0.6	0.8
	News Shock on dtfp			
5	15 20 News Shock on RealSP	25	30	35
5	15 20 News Shock on Michigan inde	25	30	35
·				
5		25	30	35
	News Shock on IT investmen			
5	15 20	25	30	35
•	News Shock on real consumpti		30	35
5		25	30	35
5	15 20 News Shock on ReiPrice	25	30	35
>====		25	30	35
5	News Shock on RelPrice	S	30	35
>===	News Shock on RelPrice	25	30	
>===	News Shock on RelPrice	25	30	

I wanted to do this to see if in the previous spec, it was adding SP500 that made things nicer or if it was removing GDP. Clearly, if you keep GDP in, things aren't so nice anymore, but they're not too bad. Things don't move so much anymore; it seems like we have too many variables for the VAR to contain. At the same time, overall they move in the right directions.

## 1.6 Relative prices LR horizon 8, adding SP 500 instead of Mich

one lag, LR hor = 8, adding real stock prices 500 instead of Mich, leaving in GDP, with relative price; only 30 bootstrap



I wanted to do this one to see how well SP500 can replace Mich. Results are fairly in line, that's great, contribution of news and IT is *identical*. VERY nice!

# 1.7 Default spec, 2 lags

two lags, LR hor = 8, Mich is back, with relative price; only 30 bootstrap

					News	$\overline{\mathrm{IT}}$	Total
h	are of	FP FE	V expla	ined	0.2	0.6	0.8
			News SI	ihock on dtfp			
	5	10		20 on Michigan Index	25	30	35
	5	10		20	25	30	35
			News Shock	on IT investment			
_			15	20		30	95
	,			ick on real GDP			
_							
		10	15		25		95
	5	10		20 in real consumption	25	30	35
_							
	5	10	15 News Sho	20 ock on RelPrice	25	30	35
_							
	5	10	15	20	25	30	35
			( ) 1	N.T.			
			(m)	News			

A little too much uncertainty here on the news shock side. Doing this with a 500 bootstrap might make sense.

## 1.8 Default spec, removing consumption

one lag, LR hor = 8, no consumption, with relative price; only 30 bootstrap

	News	IT	Total	
Share of TFP FEV explaine	ed 0.2	0.6	0.8	
News Shock on	dttp			IT Shock on dttp
·				134-4
5 10 15 20	25	30	35 40	5 10 15 20 25 30
News Shock on Michig	gan Index			IT Shock on Michigan Index
				·
5 10 15 20	25	30	35 40	0 5 10 15 20 25 30
News Shock on IT in	vestment			IT Shock on IT investment
5 10 15 20	25	30	35 40	0 5 10 15 20 25 30
News Shock on rea	al GDP			IT Shock on real GDP
5 10 15 20	25	30	35 40	5 10 15 20 25 30
News Shock on Re	elPrice			×10 <sup>-2</sup> IT Shock on RelPrice
				- /,
5 10 15 20	25	30	35 40	5 10 15 20 25 30
_ 10 10 20	-	-4		= 10 13 km km 39
(o) Nev				(p) IT

Not too bad, but wiggly - strangely enough, something seems to be missing.

# 1.9 Default spec, adding hours

one lag, LR hor = 8, adding hours, with relative price; only 30 bootstrap

	News	IT	Total								
Share of TFP FEV explained	0.2	0.6	0.8								
News Shock on dttp							IT Shor	sk on dtfp			
				5							
				0							
5 10 15 20 News Shock on Michigan Index	25	30	35	-5 0	5	10	15 IT Shock on I	20 Wichigan Index	25	30	35
				-10							7
5 10 15 20 News Shock on IT investment	25	30	35	0.05	5	10		20 IT investment	25	30	35
				0.00							
				0.05							T
5 10 15 20 News Shock on real GDP	25	30	35	-0.05	5	10		20 on real GDP	25	30	35
News Shock on real GDP				0.02			II SHOCK	on real GDP			
				0.01			======				
5 10 15 20	25	30	35	0	5	10		20	25	30	35
News Shock on real consumption				0.02			IT Shock on re	eal consumption			
				0.01							
5 10 15 20	25	30	95	0 ===			15	20	25	30	95
News Shock on ReiPrice	~			0.01	,		IT Shock	on RelPrice		-	
				0							
7				.001			1			T	
5 10 15 20 News Shock on hours	25	30	35	0	5	10		20 k on hours	25	30	35
				² [							
				0							
5 10 15 20	25	30	35	-2	5	10	15	20	25	30	35
(q) News							(r)	IT			

As usual, it screws up the news shock, leaving the IT shock very nice.

## 1.10 Capital prices LR horizon 8

Time it took, for 500 bootstrap, Mac: 12 min

Time it took, for 500 bootstrap, server (w/o parpool): 30 min

'News' 'IT' 'Total'

'0.40843' '0.23982' '0.64824'

	News	IT	Total
Share of TFP FEV explained	0.4	0.2	0.6

