Armon Rezai

Cycles of Demand and Distribution and Monetary Policy in the US Economy

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Abstract

The role of monetary policy on the cyclical behavior of the labor share and capacity utilization in the US economy is studied empirically. Previous estimation results remain robust; the inclusion of the rate of interest does not alter the underlying specification of the distributive demand regime. Next, the role of monetary policy on net borrowing flows for four institutional sectors are analyzed. Interest rate effects appear most important for households. Based on this finding, implications for countercyclical stabilization policy are spelled out.

Keywords: Effective Demand, Income Distribution, Monetary Policy, Structuralist Macroeconomics

JEL classification: B500, E110, E120, E320

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1. Introduction

The interaction of economic activity and income distribution has been studied intensively over the past four decades. However, this body of work is far from complete and only recently has it been applied properly to the analysis of business cycles in industrialized economies. Goodwin (1967) was the original contribution; later works include Asada et al. (2010), Barbosa and Taylor (2006), Barbosa et al. (2008), Chiarella et al. (2005), Flaschel et al. (2006), Reiner and Asada (1994), Taylor (2004) and Taylor et al (2009).

Proano et al. (2011) give a concise overview of this development and identify the need to extend the usual analysis in real terms to take into account monetary variables. They proceed to do so theoretically. I meet their demand by including the interest rate together with the inflation rate in the VAR set-up chosen originally by Barbosa and Taylor (2006).

The focus of Proano et. al (2011) is to show that an intrinsically unstable economy with wage-led demand and pro-cyclical real wage can be stabilized through the usage of monetary policy. Previous studies found stable Goodwin type dynamics in the US economy. The only possibility to rationalize this behavior is as a stable profit-led/profit-squeeze demand-distribution system (Taylor, 2004). One way to interpret Proano et al. (2011) is that such empirical investigations, by omitting monetary policy, mistook the stability as implying a profit-led demand regime. The VAR estimation carried out below shows that such an interpretation does not hold for the US economy. Introducing interest rate effects to a simple Goodwin framework confirms the previous finding that the U.S. economy exhibits a profit-led demand regime coupled with a profit-squeeze distributive system. Another approach to modeling cycles in demand and distribution is to explicitly consider employment (Skott and Zipperer, 2010; Zipperer and Skott, 2011). While relevant to the model utilized here, these investigations are complementary as they confine themselves to 'pure capitalist dynamics' without fiscal intervention and with a neutral monetary policy (a fixed real interest rate).

While the role of fiscal policy in the macroeconomy and over the business cycle has received broad theoretical and empirical attention in the Keynesian tradition, the role of interest rates has not been investigated sufficiently. The notable exception is the work around Minsky (1986). In demand-driven models the firm sector is usually the designated responder to interest rate changes. The lore has it that business investment may be influenced by its possibility to finance them (Asada and Franke, 1994; Fazzari et al., 2008). Aggregate investment decreases in the interest rate, this translates to output changes through the investment multiplier and influences the business cycle. While investment functions are generally an elusive concept (Skott, 2012; Taylor, 2012), this fundamental correspondence is widely accepted without questioning. Introducing interest rates, however, creates the need to reassess the intimate relation between fluctuations in investment and output. Barbosa et al. (2008) analyze net borrowing flows for four institutional sectors for the US economy's post World War II period. Among their many findings is the fact that it is household investment which leads the business cycle while business investment lags it. Investment only starts to contribute to demand, once the economy is already recovering. The second aim of this paper is, therefore, to investigate the possible role of monetary policy in supporting this pattern. Econometric estimates show that it is again the household sector, and its residential investment, that responds to decreases in the interest rate with increases in net borrowing. This finding has immediate implications for current economic policy: monetary policy needs to continue at easing households' financial constraints to repair balance sheets and restart residential investment.

2. Data

The data for the VAR estimations is taken from the Federal Reserve Bank of St. Luis Federal Reserve Economic Data (FRED, http://research.stlouisfed.org/fred2) and the Fed (https://www.federalreserve.gov/econresdata/default.htm). The time series on output, the labor share, and the GDP deflator were obtained from FRED: OUTNFB (Nonfarm Business Sector:

Output, Index 2005=100, Quarterly, Seasonally Adjusted), PRS85006173 (Nonfarm Business Sector: Labor Share, Index 2005=100, Quarterly, Seasonally Adjusted), and GDPDEF (Gross Domestic Product: Implicit Price Deflator, Index 2005=100, Quarterly, Seasonally Adjusted). Information on the interest rates was obtained from the Fed: H15/H15/RIFLGFCY01_N.M and H15/H15/RIFLGFCY03_N.M (Market yield on U.S. Treasury securities at 1 and 3-year constant maturity, quoted on investment basis). All series span the quarterly period 1953Q2-2011Q1 and pertain to the non-farming business sector where applicable. The interest on one- and three-year bonds correlates so strongly that the estimation results do not differ between the two, so only those for 1 year maturity are presented. As the interest rate is reported in monthly frequency, it is transferred to quarterly basis by taking simple averages. All data used is available from the author upon request.

3. Goodwin cycles

Preliminary inspection of the data shows that the labor share and capacity utilization exhibit Goodwin type dynamics. Barbosa and Taylor (2006) rationalize this pattern in a model of Kaleckian output and wage conflict determination. Before interest rate effects are brought into consideration, this model is re-estimated with an updated time horizon.

Barbosa and Taylor (2006) estimate a VAR with the capacity utilization, u, and the labor share, ψ. Capacity utilization is defined as the deviation of the time series from its long-term (HP filtered) trend. The equation for the labor share is specified in log form in order to disaggregate the effects of capacity utilization on each component of the labor share. As the disaggregation of the labor share is of no importance in this investigation, both equations are estimated in level form in the reported VAR. Also the trend term in both equations is omitted as both variables appear to be mean-reverting and for fundamental ontological reasons.

[Table 1 about here]

Table 1 summarizes the estimation results. The order of 2 lags was identified by the Schwarz and Hannan-Quinn information criteria. The Akaike criterion suggests a lag length of 4. This increased lag length does not alter the qualitative results of the estimation and worsens the likelihood function. I choose a length of 2 lags to remain consistent with Barbosa and Taylor (2006). The VAR satisfies the stability condition; all roots lie within the unit circle. The output equation has a very good fit. All coefficients are significant at the 0.0001% level, the adjusted R^2 0.79 and a DW test of 1.99. The labor share equation has similarly good statistics. The p-values of 0.088 and 0.063 for the past output terms is still very good considering that the labor share is influenced by many societal and institutional forces not accounted for in this regression. The R^2 of both equations improved compared to Barbosa and Taylor (2006) from 0.83 to 0.92 for the labor share and from 0.75 to 0.79 for capacity utilization.

Barbosa and Taylor (2006) diagnose the US economy with a profit-led demand and profit-squeeze distributive regime. The re-estimation subscribes to this diagnosis. In fact, both schedules appear to have steepened. The long-term demand regime's $d\psi/du$ decreased from -3.13 to -10.25 and the long-term distributive regime's $d\psi/du$ increased from 1.92 to 20.16[3]. Impulse response functions confirm the profit-led / profit-squeeze configuration.

4. Goodwin cycles and monetary policy

Proano et al. (2011) put forward a model in which monetary policy acts as a stabilizer in an otherwise unstable Goodwin model (Jackson, 2012). In this section I extend the analysis of Barbosa and Taylor (2006) to allow for this possibility. I estimate a four dimensional VAR with capacity utilization, the labor share, the nominal interest and the inflation rate. Among the many possible interest rates in the market, I choose the yield on T-bills as these are closely linked to

[3] If one includes a trend for the labor share equation, as Barbosa and Taylor did, the slope increases less dramatically to 2.99.

monetary policy.[4] The Schwarz and Hannan-Quinn information criteria again suggest a lag length of 2. Table 2 reports the estimation results for the unrestricted VAR. The VAR satisfies the stability condition; all roots lie within the unit circle.

[Table 2 about here]

Using these estimation results, figure 1 reports the accumulated impulse response function for each variable. The labor share responds positively to itself and to changes in the utilization rate. The responses to changes in the inflation rate and the interest rate are minor and, when considering the error bands of the estimates (not shown here), the overall signs of the effects cannot be determined. The utilization rate still responds negatively to a change in the labor share; the inclusion of monetary variables did not change the profit-led demand regime. The utilization rate responds weakly to monetary policy. Increases in the interest rate lower the utilization rate, but the consideration of the error bands associated with the point estimates, again, makes it impossible to assign the sign the overall effect. The inflation rate responds positively to the level of output and itself, but negatively to the interest rate. There appears no evidence for a Patman/Cavallo effect or cost-push inflation in the US economy.[5] The labor share does not have any significant effect on either monetary variable. The interest rate responds positively to the level of capacity utilization and the inflation rate, both in line with the practice of inflation targeting. Overall, the close relationship between capacity utilization and labor share does not change once one considers monetary policy. The Goodwin model is robust in this sense. A decomposition of the forecast error variance in figure 2 confirms this point.

[Figure 2 about here]

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[4] I choose the one-year yield on T-bills as representative of the term structure. The close correlation between one-year, three-year, and five-year yields makes this choice insignificant to the outcomes.

[5] The effect describes a *positive* relationship between interest rates and prices (see Taylor, 2004, pp. 89-90)

The sum of the lagged responses (as a rough-and-ready overview) is reported in Table 3. The long-run results concur with the impulse response findings. It is interesting to note that inflation does not seem to have a much of a redistributive effect. Inflation also has a weak effect on capacity utilization; the inflation tax does not play an important role in the U.S. economy. With the qualification that the VAR only indicates correlation and not causality, the estimates seem to support Structuralist economic wisdom about how an advanced capitalist economy operates. Demand and distribution form a fairly closed system on which monetary variables like the interest and inflation rates only have very limited effect.

[Table 3 about here]

5. Disaggregation into Institutional Sectors

Demand patterns differ across institutional sectors of an economy. Following Barbosa et al. (2008), I divide the US economy into the following standard sectors: Households, Business, Government, and Foreign. Their demand contributions are measured in terms of net borrowing, i.e. investment over saving. Each sector *i* has to finance its expenditure (E_i) by its income (Y_i) or a change of its liabilities (NB_i for net borrowing):

$$E_i = Y_i + NB_i \qquad i = 1, ..., I.$$

Therefore, we can express net borrowing as:

$$NB_i = E_i - Y_i = I_i - S_i = -NL_i.$$

where NL_i denotes net lending.

An adding-up constraint can be defined as sector i's net borrowing has be financed by the overall net lending of all the other sectors in the economy. The sum of all flows has to equal zero. All net investment has to be financed by net saving:

$\sum_i NB_i = 0$.[6]

This analysis has been championed by Godley and Cripps (1983). Godley et al. (2007, p.2) explain for their three-way decomposition that “[a]lthough the three balances must always sum to exactly zero, no single balance is more a residual than either of the other two. Each balance has a life of its own, and it is the level of real output that, with minor qualifications, brings about their equivalence.” The accounting identities and the balancing condition are tautological; by construction of the national accounts, they hold for each point in time. The relevant questions, however, regard causality and the interaction with the macroeconomy.

Figure 3 plots cross-correlations between net borrowing flows of all four sectors as a share of GDP and dated levels of capacity utilization (Barbosa et al., 2008). The shaded bars provide the range in which the hypothesis that the correlation coefficient is not different from 0 cannot be rejected with 99% probability.

[Figure 3 about here]

Household net borrowing is positively correlated with future levels of capacity utilization, while (non-financial) business net borrowing is positively correlated with past levels. Household net borrowing leads the cycle, business net borrowing lags it. The government net borrowing is negatively correlated with capacity. Through “automatic stabilizers” the government stabilizes the business cycle.

An interesting, unexplored question is how the demand contribution of each of these sectors is related to the interest rate. To shed light on this question, we first consider the cross-correlations between the net borrowing series and the interest rate in figure 4.

[6] This condition is a disaggregated version of the macro balance condition – i.e. that aggregate saving has to equal aggregate investment – commonly used in Kaleckian models.

[Figure 4 about here]

The first thing to note is that business, government and foreign net borrowing relative to GDP are correlated with the (nominal) interest rate only positively at significant levels, while household net borrowing is consistently significantly negatively correlated. The highest cross-correlation with the household series occurs with a slight lag of three quarters compared to the interest rate, i.e. a low rate slightly leads net borrowing.

Taylor et al. (2006) use net borrowing behavior of the economy's institutional sectors to explain business cycles. Building on such an understanding, economic policies can be designed to support demand injections at a trough while curbing excess net borrowing during boom times. In their analysis Taylor et al (2006) do not go beyond simple descriptive statics. They conclude to leave "thorough statistical analysis" to future research. This is (partially) done here by including the net borrowing series in the model of section 4. The results show that net borrowing flows have no impact significantly different from 0 on any of previous variables (labor share, capacity utilization, interest rate, inflation rate). They themselves, however, can be explained by combinations of autoregressive terms, the labor share, capacity utilization, and the interest rate. Table 4 reports the estimation results. The system of equations was estimated using OLS estimators. Starting out from a full VAR, terms with less than 10% significance were eliminated.

[Table 4 about here]

The estimates perform well in terms of goodness of fit and autocorrelation of the residuals. All equations are stationary. One way to interpret the results is that in the long-run, household net borrowing responds negatively to capacity utilization and the interest rate. Higher output provides households with income to fund expenditure. Lower interest rates induce them to increase investment and lower saving, both contributing to higher net borrowing. Somewhat counter intuition, higher past levels of the labor share lead to higher net borrowing. Business net borrowing decreases in the labor share which is consistent with the fact that the labor share also represents unit labor cost. Past high levels of capacity utilization lead to higher net borrowing. An increase in the interest rate leads to higher levels of net borrowing. The equations for the net borrowing series of households and business include a significant trend which implies that there are important aspects not considered in the present variables. Barbosa et al. (2008) identify some of them. Government net borrowing decreases in past levels of the labor share and capacity utilization and increases in the interest rate. Foreign net borrowing (which equals the trade deficit) decreases in capacity utilization. Other variables do not appear to have a significant effect on foreign net lending.

6. Conclusions

Economic fluctuations have only recently been combined with research on demand and distribution. In most contributions growth is prioritized over the business cycle. The work of the "Bielefeld School" forms a noteworthy exception (Chiarella et al., 2005; Flaschel et al., 2006). Barbosa and Taylor (2006) use a simple two-dimensional model of demand and distribution to rationalize the cyclical dynamics of Goodwin type in US post-war data. In this paper, I extended their analysis to include monetary variables and to investigate the effects of monetary policy as called for by Proano et al. (2011).

The inclusion of the interest and inflation rates does not alter previous results significantly. Most importantly, the US economy still exhibits a stable profit-led / profit-squeeze configuration (Taylor, 2010). Capacity utilization and the labor share remain unimpressed by either the rate of inflation or interest. In this simple, aggregate regression, monetary policy does not seem well suited to stabilize the cycle of demand and distribution. In this sense, the omission of monetary variables in previous theoretical work on the topic does not appear problematic. Proano et al. (2011) put forward the possibility that monetary policy can act to stabilize Goodwin cycles, thereby opening up the possibility of a wage-led / profit-squeeze economy. Econometric results for the US economy suggest a rejection of this hypothesis.

When considering a disaggregated economy, the interest rate does affect demand. The economy is disaggregated into the institutional sectors household, (non-financial) business, government, and foreign. Only households increase their demand contribution relative to GDP trend when the interest rate is lowered. Business decreases its demand injection.

The somewhat perverse response of business net borrowing to interest rate movements sheds important insight for monetary policy. Decreases in the interest rate to boost demand appear to only work for the household sector. The implications for current economic policy are clear: it should aim at overcoming the credit crisis and its repercussions into the real economy. Given the structural configuration of the U.S. economy – as reflected in its net borrowing behavior – policy makers ought to focus on household spending and residential investment. These components of aggregate demand historically carried the economy out of recession. Empirical estimates show that business net borrowing trails the business cycle. Business increases its demand contributions once the economy is in a boom and reduces it when the economy is in a bust.

For these reasons, policy needs to aim at loosening households' financial constraints. The credit crunch in the mortgage market puts important strain on the households' ability to capitalize on and invest in property and residences. Several policy interventions can help restart residential investment: Long-term interest rates can be reduced by Federal Reserve interventions in the relevant bond markets. Mortgage restructuring should be pursued more aggressively so that more households will be in a position or re-enter the market. Expanded tax rebates for new construction of environmentally beneficial housing are desirable (as well as for upgrades of the available housing stock).

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Sample (adjusted): 1953Q4 2011Q1
Standard errors in ( ) & t-statistics in [ ]

	LS	U
LS(-1)	0.773442	0.500711
	(0.07780)	(0.09341)
	[9.94084]	[5.36026]
LS(-2)	0.215737	-0.528350
	(0.07729)	(0.09280)
	[2.79119]	[-5.69363]
U(-1)	0.100896	1.367996
	(0.05694)	(0.06837)
	[1.77187]	[20.0100]
U(-2)	0.117300	-0.651324
	(0.06222)	(0.07470)
	[1.88540]	[-8.71977]
C	-0.207304	0.312470
	(0.03619)	(0.04345)
	[-5.72874]	[7.19222]
R-squared	0.925419	0.792983
Adj. R-squared	0.924099	0.789319
Sum sq. resids	0.014962	0.021567
S.E. equation	0.008137	0.009769
F-statistic	701.0688	216.4246
Log likelihood	786.1797	743.9487
Akaike AIC	-6.763461	-6.397824
Schwarz SC	-6.688950	-6.323313
Mean dependent	1.048347	0.999536
S.D. dependent	0.029534	0.021283

Table 1: VAR Re-estimates of Barbosa - Taylor (2006)

Sample (adjusted): 1953Q4 2011Q2
Standard errors in ( ) & t-statistics in [ ]

	LS	U	YIELD01YR	INFL_RATE
LS(-1)	0.753480	0.516927	0.149443	0.103256
	(0.07884)	(0.09523)	(0.06802)	(0.03205)
	[9.55708]	[5.42806]	[2.19714]	[3.22160]
LS(-2)	0.238242	-0.544050	-0.131438	-0.086494
	(0.07897)	(0.09539)	(0.06813)	(0.03210)
	[3.01684]	[-5.70340]	[-1.92922]	[-2.69415]
U(-1)	0.131866	1.333744	0.221884	0.107909
	(0.06334)	(0.07651)	(0.05465)	(0.02575)
	[2.08181]	[17.4318]	[4.06034]	[4.19055]
U(-2)	0.123810	-0.651029	-0.212309	-0.062117
	(0.06759)	(0.08164)	(0.05831)	(0.02748)
	[1.83177]	[-7.97400]	[-3.64092]	[-2.26063]
YIELD01YR(-1)	-0.076647	0.082598	1.016926	-0.005124
	(0.08529)	(0.10303)	(0.07358)	(0.03467)
	[-0.89864]	[0.80173]	[13.8201]	[-0.14778]
YIELD01YR(-2)	0.086625	-0.092985	-0.098649	-0.016219
	(0.08348)	(0.10084)	(0.07202)	(0.03394)
	[1.03768]	[-0.92213]	[-1.36976]	[-0.47790]
INFL_RATE(-1)	-0.339079	0.305501	0.226405	1.365470
	(0.15330)	(0.18517)	(0.13225)	(0.06232)
	[-2.21191]	[1.64984]	[1.71192]	[21.9106]
INFL_RATE(-2)	0.333988	-0.310298	-0.136922	-0.374211
	(0.15652)	(0.18906)	(0.13503)	(0.06363)
	[2.13389]	[-1.64128]	[-1.01401]	[-5.88114]
C	-0.247814	0.346609	-0.027111	-0.061801
	(0.04294)	(0.05187)	(0.03705)	(0.01746)
	[-5.77075]	[6.68203]	[-0.73177]	[-3.54005]
R-squared	0.928002	0.797705	0.950959	0.980480
Adj. R-squared	0.925407	0.790415	0.949192	0.979776
Sum sq. resids	0.014444	0.021075	0.010751	0.002387
S.E. equation	0.008066	0.009743	0.006959	0.003279
F-statistic	357.6752	109.4259	538.1075	1393.834
Log likelihood	790.2497	746.6137	824.3594	998.1707
Akaike AIC	-6.764066	-6.386266	-7.059389	-8.564249
Schwarz SC	-6.629946	-6.252145	-6.925268	-8.430128
Mean dependent	1.048347	0.999536	0.054038	0.034375
S.D. dependent	0.029534	0.021283	0.030873	0.023059

Table 2: Results for unrestricted VAR in labor share (ls), output utilization (u), interest rate (yield01yr) and inflation (infl_rate)

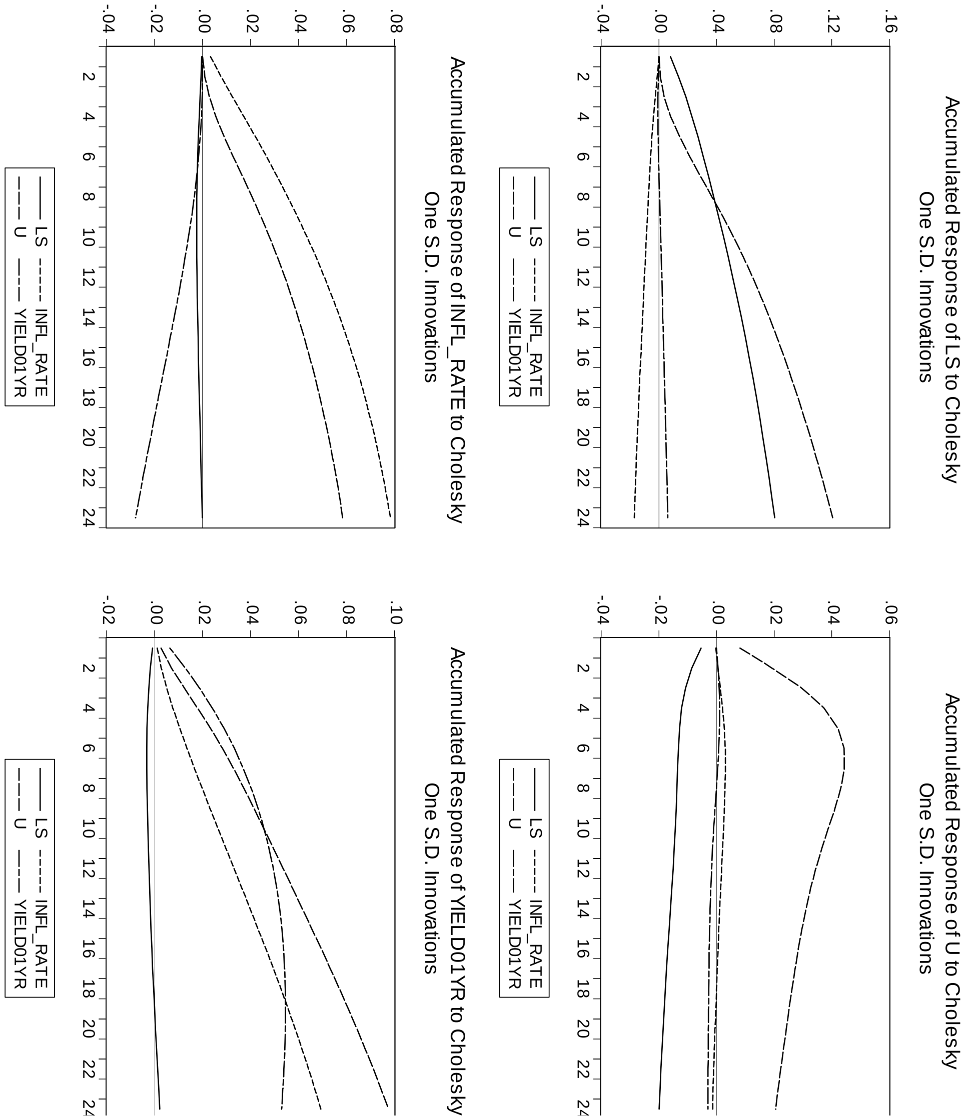

Figure 1: Accumulated IRF for unrestricted VAR in labor share (ls), output utilization (u), interest rate (yield01yr) and inflation (infl_rate)

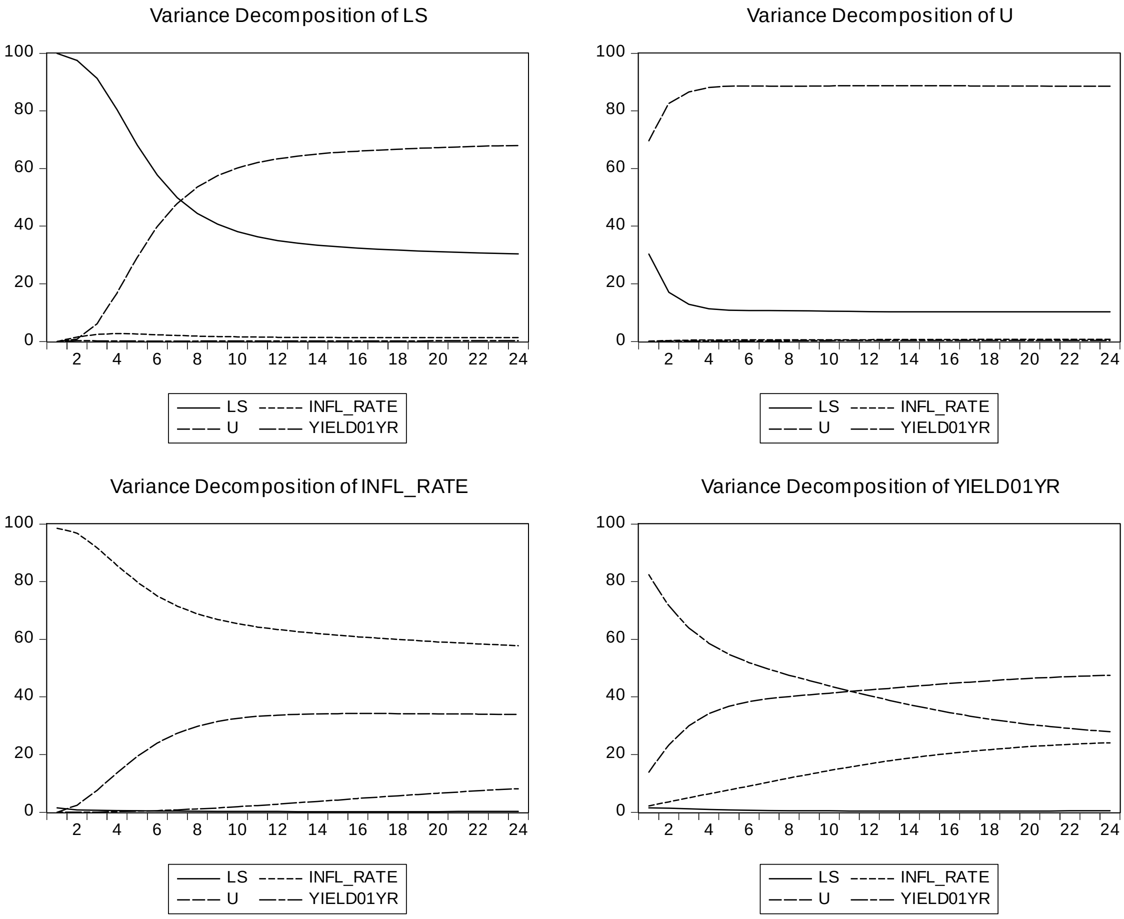

Figure 2: Variance decomposition for unrestricted VAR in labor share (ls), output utilization (u), interest rate (yield01yr) and inflation (infl_rate)

	LS	U	Yield01Yr	Infl_Rate
ΔLS	0,992	-0,027	0,018	0,017
ΔU	0,256	0,683	0,010	0,046
ΔYield01Yr	0,010	-0,010	0,918	-0,021
Δinfl_Rate	-0,005	-0,005	0,090	0,991

Table 3: Long term responses at steady state

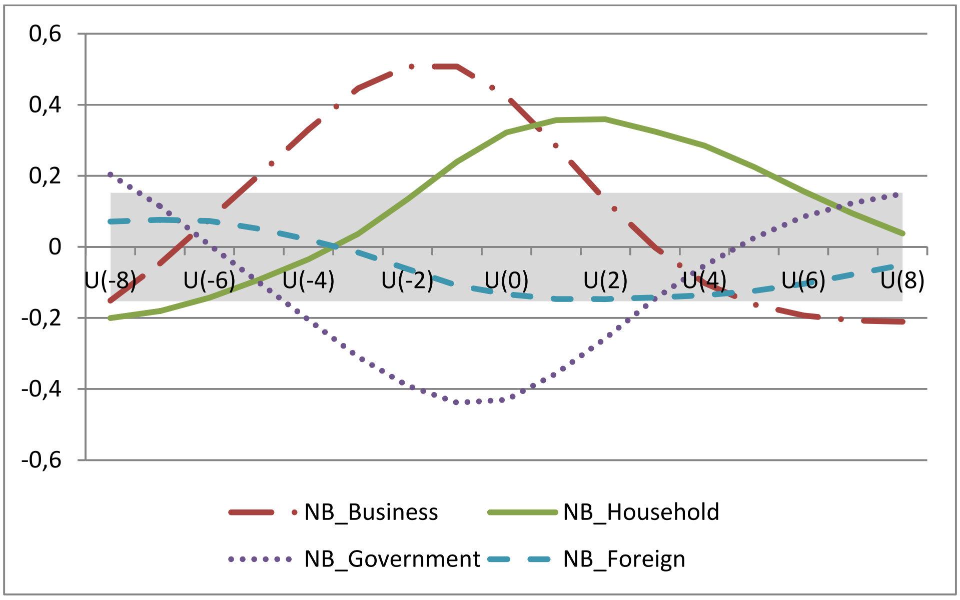

Figure 3: Correlations between business, household, government, and foreign net borrowing as shares of GDP and dated levels of capacity utilization U(t) with a shaded error band indicating 99% significance

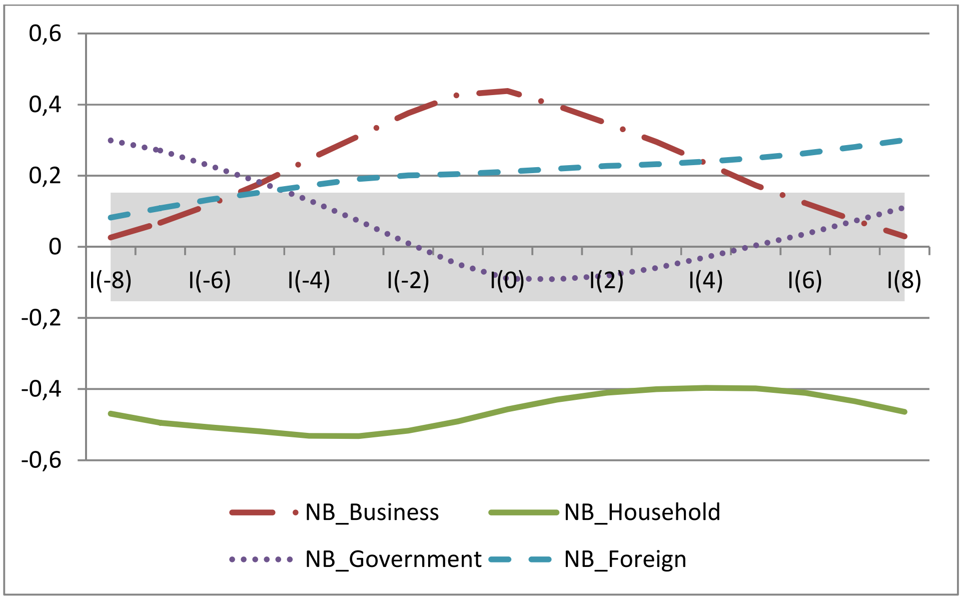

Figure 4: Correlations between business, household, government, and foreign net borrowing as shares of GDP and dated levels of the 1-yr interest rate I(t) with a shaded error band indicating 99% significance

Sample (adjusted): 1953Q4 2011Q2; Standard errors in ( ) & t-statistics in [ ]								
	LS	U	YIELD01YR	INFL_RATE	NB_HH	NB_BUS	NB_GOV	NB_FOR
LS(-1)	0.77370	0.49821		0.01858	0.05894	-0.05199	-0.24460	-0.05512
	(0.07825)	(0.09425)		(0.00847)	(0.01464)	(0.01533)	(0.05976)	(0.01881)
	[9.88730]	[5.28593]		[2.19410]	[4.02529]	[-3.39213]	[-4.09313]	[-2.93060]
LS(-2)	0.21608	-0.52815					0.22014	0.08702
	(0.07802)	(0.09397)					(0.05670)	(0.01869)
	[2.76953]	[-5.62036]					[3.88218]	[4.65571]
U(-1)	0.09740	1.37283	0.13252	0.062842	0.09814	0.17098	-0.24294	
	(0.05714)	(0.06882)	(0.04293)	(0.01201)	(0.03479)	(0.03732)	(0.04561)	
	[1.70470]	[19.9475]	[3.08697]	[5.23085]	[4.02529]	[4.58195]	[-5.32635]	
U(-2)	0.11602	-0.64880	-0.13144		-0.16149	-0.11582	0.26919	
	(0.06237)	(0.07512)	(0.04305)		(0.03870)	(0.04168)	(0.04814)	
	[1.86018]	[-8.63618]	[-3.05329]		[-2.82051]	[-2.77908]	[5.5916]	
YIELD01YR(-1)			1.07979	-0.01922	-0.04222	0.04004	-0.14940	
			(0.06939)	(0.01114)	(0.01504)	(0.01626)	(0.05981)	
			[15.5608]	[-1.72457]	[-2.80691]	[2.46292]	[-2.49770]	
YIELD01YR(-2)			-0.15640				0.17042	
			(0.06804)				(0.06069)	
			[-2.29870]				[2.80781]	
INFL_RATE(-1)			0.08825	1.33304				
			(0.02908)	(0.06029)				
			[3.03443]	[22.1097]				
INFL_RATE(-2)				-0.34720				
				(0.06196)				
				[-5.60373]				
NB_HH(-1)					0.75638			
					(0.06565)			
					[11.5665]			
NB_HH(-2)					0.18138			
					(0.06582)			
					[2.75574]			
NB_BUS(-1)						0.87140		
						(0.03206)		
						[27.1820]		
NB_GOV (-1)							0.94897	
							(0.01795)	
							[52.8683]	
NB_FOR (-1)								0.98971
								(0.01072)
								[92.3376]
TIME TREND					2.14E-05	2.14E-05		
					(7.33E-06)	(8.08E-06)		
					[2.92512]	[-2.65559]		
C	-0.20321	0.30760		-0.08074				-0.03216
	(0.03628)	(0.04369)		(0.01625)				(0.01028)
	[-5.60183]	[7.03997]		[-4.96824]				[-3.12801]
R-squared	0.92252	0.79737	0.94863	0.97967	0.90703	0.82769	0.93664	0.97462
Adj. R-squared	0.92114	0.79377	0.94772	0.97922	0.90452	0.82385	0.93494	0.97428
S.E. equation	0.00817	0.00984	0.00703	0.00333	0.00602	0.00659	0.00604	0.00322
Durbin-Watson	1.99088	2.08178	1.94178	2.00500	1.94682	2.08389	2.14959	1.93608
Mean dependent	1.04871	0.99969	0.05426	0.03443	-0.02025	0.00285	0.02993	-0.01253
S.D. dependent	0.02908	0.02166	0.03075	0.02309	0.01947	0.01570	0.02368	0.02011
Sum sq. resid	0.01501	0.02177	0.01112	0.00248	0.00807	0.00973	0.00814	0.00235

Table 4: Results for restricted VAR in labor share (ls), output utilization (u), interest rate (yield01yr) and inflation (infl_rate) and sectoral net borrowing scaled to trend GDP (nb_hh, nb_bus, nb_gov, nb_for)