

“The trade-off between monetary policy and bank stability” - Discussion of Lamers, Mergaerts, Meuleman and Vander Vennet (2016)

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Overview of the paper

- **Question:**
 - how did the unprecedented MP loosening during the recent crisis and thereafter impinge on financial stability (Euro Area / US) ?
 - Did the response of banks' systemic risk (SRisk) depend on their business model / main balance sheet characteristics?
- **Two step empirical approach (for each country separately):**
 - Identification of daily MP shocks from a macro VAR of market series using « identification through heteroskedasticity » (Rigobon and Sack, 2003, Wright, 2012)
 - Bank-panel regression of a monthly measure of banks' change in sytemic risk (SMV, derived from the MES of Brownlees and Engle, 2012) on estimated MP shocks + MP shocks interacted with banks' BS ratios

Overview (2)

- **Main conclusions:**
 - Expansionary MP has lifted bank profitability but further accomodation may decrease NIM and increase SRisk
 - Riskier banks and banks from the euro area periphery benefited more from MP actions (their SRisk declined more)
- **Topical and stimulating paper:**
 - Intuitive results
 - However, some concerns about the methodology => suggestions

Outline of comments

- Measuring MP expansionary shocks
- Measuring banks' systemic risk
- Alternative approaches
- Minor issues / Econometric nitpicking

Measuring MP accomodation over 2008-2015: several challenges and a proposed solution

- Diversity of conventional and unconventional measures => multiplicity of relevant instruments: which one to choose?
- MP stance to be appreciated against a benchmark: Taylor rate? Natural rate of interest? Shadow rate?

=> Alternative: retrieve MP shocks from a macro VAR and use them as independant variable in bank-level panel regression

Measuring MP accomodation over 2008-2015: several challenges and a proposed solution

- **« Identification-through-heteroskedasticity »**
 - MP shocks revealed by their impact on relevant market prices. Here: relevant for banks' risk-taking (interest rates, stock index, credit spreads...)
 - MP shock is heteroscedastic : high variance on MP announcements days, while other structural shocks keep homoscedastic
 - Akin to standard event study if variance of the non-MP shocks goes down to zero on MP decision days
 - Also equivalent to an IV approach: policy variable instrumented by its variation on specific dates relative to its variation on all other dates (as FOMC/ ECB GovC dates are exogenous).

Measuring MP shocks: concerns

- MP shock estimated **conditionally to VAR information set** and IRFs computed **within** the same set (e.g., [Wright, 2012](#))
- Problem here: no bank-risk variable in macro VAR (bank CDS, stock index for financials...)
 - No feedback of bank risk on the economy: VAR potentially mis-specified (think of « diabolic bank-sovereign loop » in Europe)
 - E.g., CB reacts to perceived changes in (some) banks' SRisk
 - MP « shock » may therefore include some response to bad news on financial stability: **endogeneity issue / banks' SRisk**
- Also: assumes that **all UMP shocks are the same** (LTROs, OMTs, QE, Forward Guidance etc.): is this vindicated? No way to test it here.

Measuring banks' SRisk: concerns

- Measure derived from [Brownlees and Engle \(2012\)](#) dynamic MES, made popular by NYU Stern's « Vlab »:
 - Conditional expected tail loss of bank i when market return is in its left « tail » (NB: -2% per day ~ 5th percentile or even higher)
 - Estimated using asymmetric DCC-GARCH models.
- Main concerns:
 - DCC-GARCH assumes some specific DGP for stock market returns: **is this consistent** with assumptions underlying DGP of stock index returns in VAR model?
 - MES (and derived products: LRMES, SRISK) may be **poor measures of systemic risk-taking** ([Idier, Lamé and Mésonnier, JBF 2014](#))

MES/LRMES: poor predictors of actual equity losses conditionally to a systemic crisis

Table 8

Spearman and Pearson correlation between pre-crisis bank indicators and ex post equity losses over the subprime crisis for a sub-sample of 19 BHCs present in both our initial sample and the VLAB website rankings. SRISK and LRMES variables are taken from the VLab website.

Stock-taking in Variable	2007 Q2		2006 Q4		2006 Q2	
	Spearman	Pearson	Spearman	Pearson	Spearman	Pearson
SRISK with Simulation (\$ m)	-0.032	-0.026	-0.125	-0.175	-0.039	-0.221
SRISK without Simulation (\$ m)	-0.035	0.046	0.024	0.019	-0.207	0.267
LRMES	-0.011	0.001	0.074	0.053	-0.028	0.015
MES VLAB without simulation	-0.393	-0.431*	-0.268	-0.321	-0.637***	-0.610***
ROA	0.094	0.157	0.046	-0.153	0.111	0.231
CAR	0.197	0.153	0.163	0.190	0.188	0.194
CARTIER1	-0.629***	-0.544**	-0.486**	-0.528**	-0.481**	-0.509**
NPL	0.560**	0.643***	0.535**	0.534**	0.553**	0.477**
WFUND	0.201	0.237	0.077	-0.098	0.265	0.128
CIL	0.389	0.335	0.449*	0.384	0.416*	0.364
HOL	0.348	0.416*	0.421*	0.456**	0.430*	0.456**
LIQ	-0.340	-0.488**	-0.412*	-0.543**	-0.351	-0.530**
SIZE	0.193	0.153	0.116	0.148	0.107	0.132

* Denotes significance at the 10% level.

** Denotes significance at the 5% level.

*** Denote significance at the 1% level.

No correlation of ex ante SRISK or LRMES with ex-post equity losses during the crisis (19 US large BHCs scored in Vlab)

MES/LRMES: poor predictors of actual equity losses conditionally to a systemic crisis

Table 6

Rankings of the worst 10 stock return performers during the crisis according to various pre-crisis indicators as measured in 2007 Q2. The (dynamic BE) MES are estimated using information up to 2007 Q2 only (ex ante view).

Bank/variable	Loss	MES	CARTIER1	NPL	WFUND	HOL	CIL	LIQ	SIZE
Corus Bankshares	1	13	57	2*	58	35	57	34	47
Colonial Bancgroup	2	41	25	48	41	2*	53	46	25
Citizens Republic Bancorp	3	35	23	5*	28	15	43	1*	35
South Financial Group	4	51	45	42	39	20	16	21	34
Citigroup	5	7*	6*	9*	7*	55	49	55	1*
UCBH Holdings	6	19	47	37	25	10*	19	35	43
Pacific Capital Bancorp	7	34	38	45	21	4*	38	41	58
Doral Financial Corporation	8	1*	20	1*	1*	29	56	56	41
Regions Financial Corporation	9	15	8*	18	34	16	36	22	8*
Marshall & Isley Corporation	10	12	1*	12	6*	21	10*	19	17
Success ratio		20%	30%	40%	30%	30%	10%	10%	20%

* Denotes a bank correctly identified ex ante as incurring one of the top-10 losses.

MES as of 2007 Q2 ranks correctly ex ante only 2 of the ex post 10 worst performing banks over 2007 Q2-2009 Q2

What can be done?

- Keep it simple and give a first pass:
 - run event-style regressions of preferred bank risk daily indicator on dummies for (different) MP decision days
- More sophisticated event-study: [Gürkaynak, Sack and Swansson \(IJC](#)[B 2005\)](#), [Jardet and Monks \(2014\)](#)
 - PCA of changes in spot and forward ST interest rates on decision days using HF/intraday data: « target/jump » and « slope/path » factors
 - Regression of bank risk on extracted MP factors on decision days
- Include banks' risk measures in FAVAR as in [Buch, Eickmeier and Prieto \(JEDC, 2014\)](#): plot median IRF for various groupings of banks (small/large, core/periphery)

Minor comments

- VAR 1: daily market data are very volatile => winsorize outliers?
- Panel regression 1: symmetric effects of MP tightening vs loosening shocks?
- Panel regression 2: MP shock is generated regressor => bootstrapped SD required ?
- Panel regression 3: SD corrected for clustering require at least 50 clustering units => pb when only 20/30 banks (tab. 4).