THE CROSS-BORDER CREDIT CHANNEL AND LENDING STANDARDS SURVEYS:

IMPLICATIONS FOR THE EFFECTIVENESS OF UNCONVENTIONAL MONETARY POLICIES

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Pre vs Post-Crisis MP

- Pre-crisis: policy rate at the center of the Monetary transmission mechanism
- Post-crisis: UMP, financial repression, Z or ELB contributed to a shift away from a singular focus on the PR
- Interest rate channel was enough. Now there are multiple channels competing for our attention (not all are new just have come back into focus)
  - Risk-taking, bank lending, balance sheet & portfolio, exchange rate, signaling channels

Goals of the Paper

- (Re) Introduce an often neglected indicator of financial conditions
  - Lending surveys (more later)
- Estimate and consider the possibility that changes in <u>lending standards</u>, via their impact on loan supply, combined loan demand, adds another dimension to much discussed spillovers effects of MP

Brief Literature Review I

- Pre-crisis: supply & demand for credit assumed market-clearing via the price mechanism
- Post-crisis: a return of an 'old' idea: frictions matter and there are 'non-price' elements in the development and evolution of credit conditions
  - AE vs EME distinctions always existed but were downplayed or ignored

Brief Literature Review II

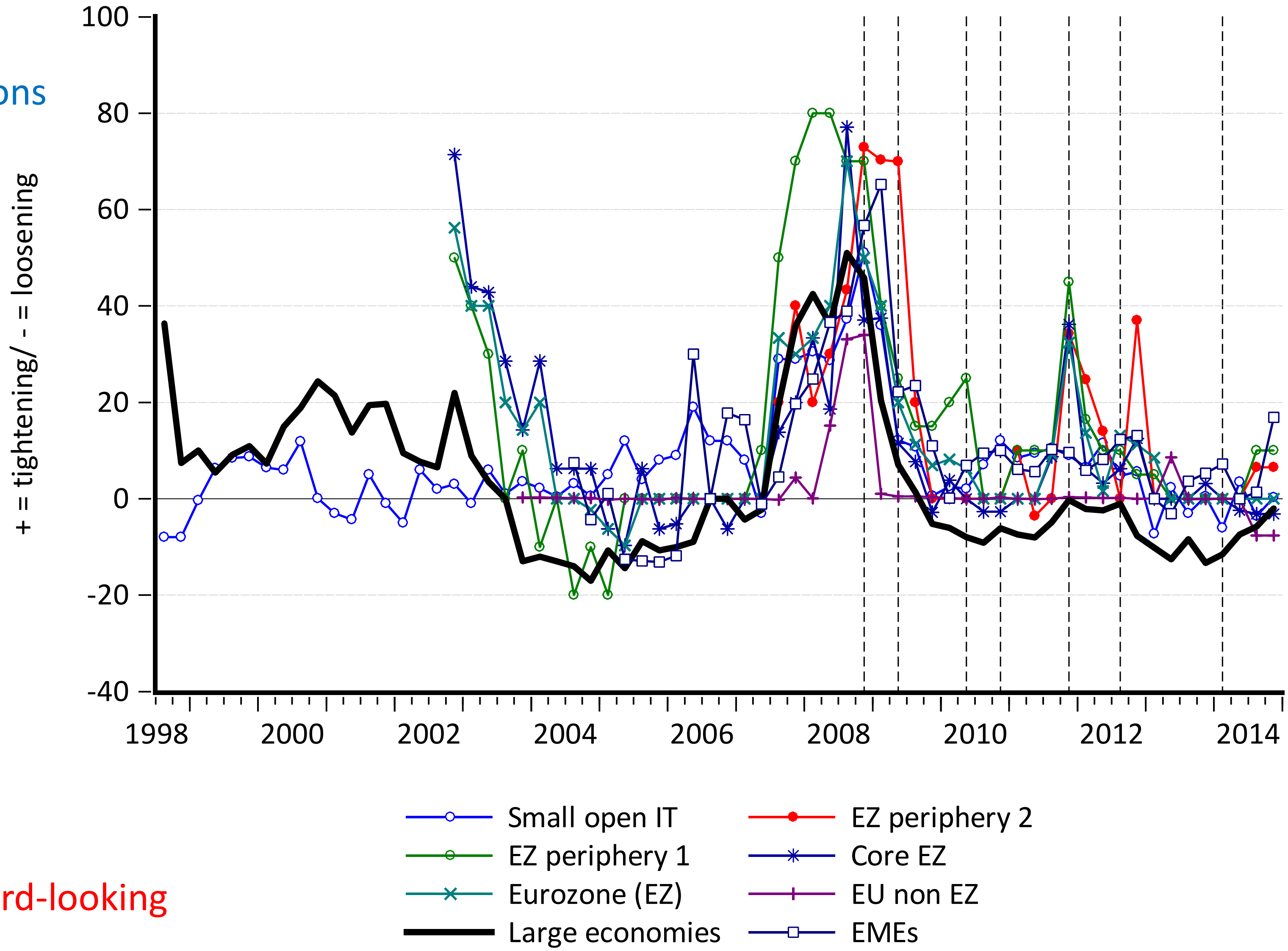
- What's in play?
  - Degree to which credit is determined by commercial banks (Gambacorta et.al. 2014, Beck and Demigüç-Kunt 2009)
  - Globalization of finance and cross-border flows of liquidity (Bruno and Shin 2015, Cetorelli and Goldberg 2011)
  - Since the GFC spillovers of UMP (Chen et. al. 2014, Lombardi et. al. 2016)
- Often ignored but not forgotten
  - Lending standards (Siklos and Lavender 2015 for Canada, Siklos 2015, Bassett et. al. 2014, for the € zone, Bernanke and others for the US)

Data

- Lending standards are being collected by a growing number of countries but data challenges remain
  - 17 economies so far but only advanced economies included at this stage
  - EMEs include Philippines, Thailand, and others (left out of estimation due to small sample)
  - Questions differ, coverage differs (i.e., all loans or certain types of loans [consumer credit, mortgage lending, commercial loans), whether loan supply & demand conditions are surveyed
  - ALL are intended to answer the question: have credit conditions or will credit conditions TIGHTEN or LOOSEN

Survey of Lending Standards In a Selection of Economies

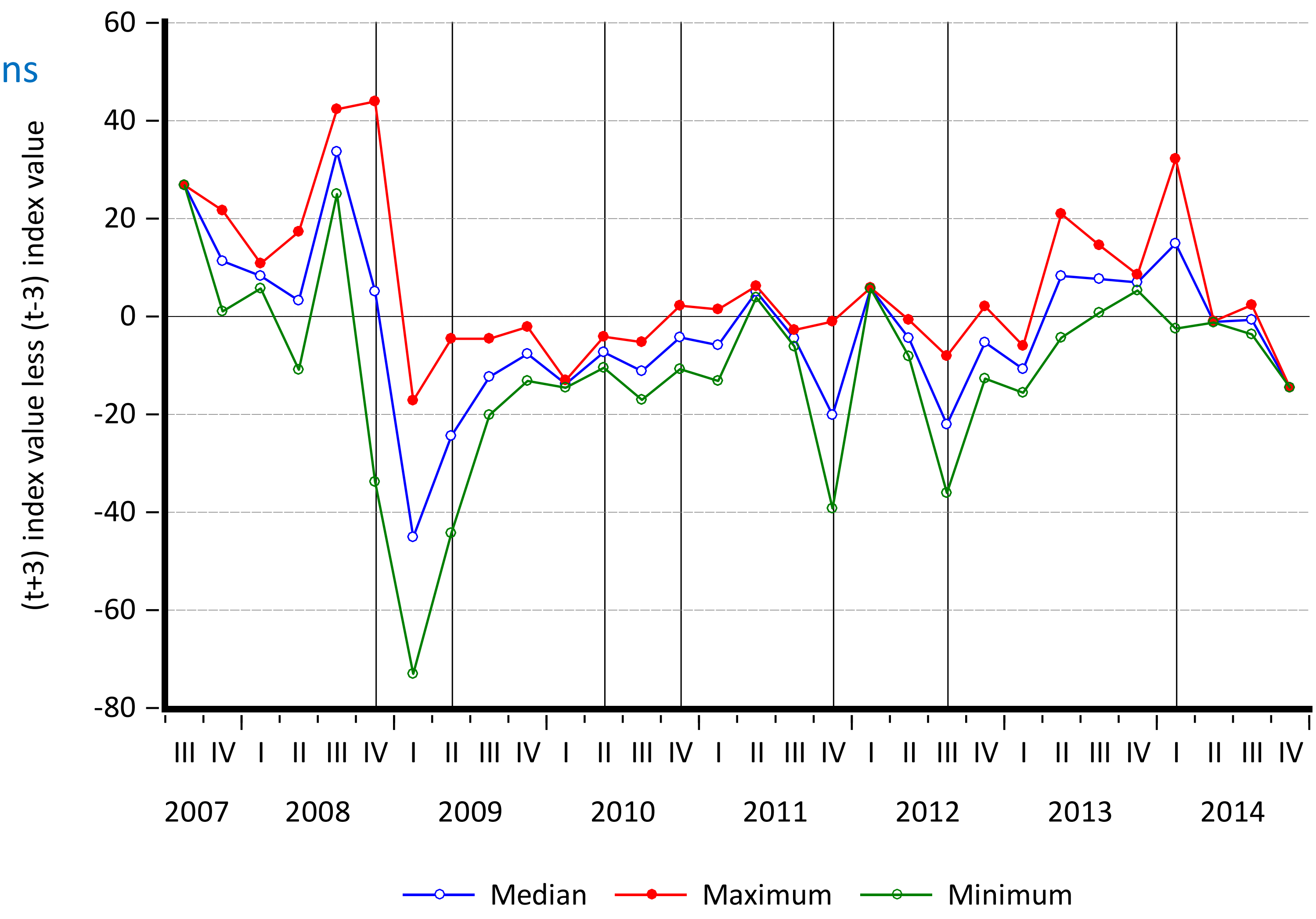
SUPPLY conditions



Backward-looking

Expected Movements in Lending Standards – Emerging Market Economies

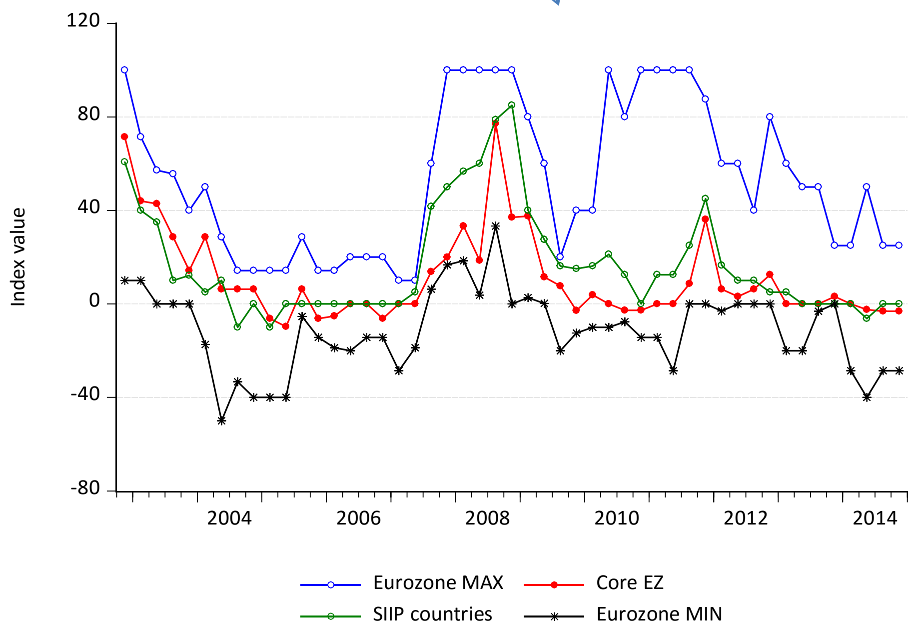
SUPPLY conditions

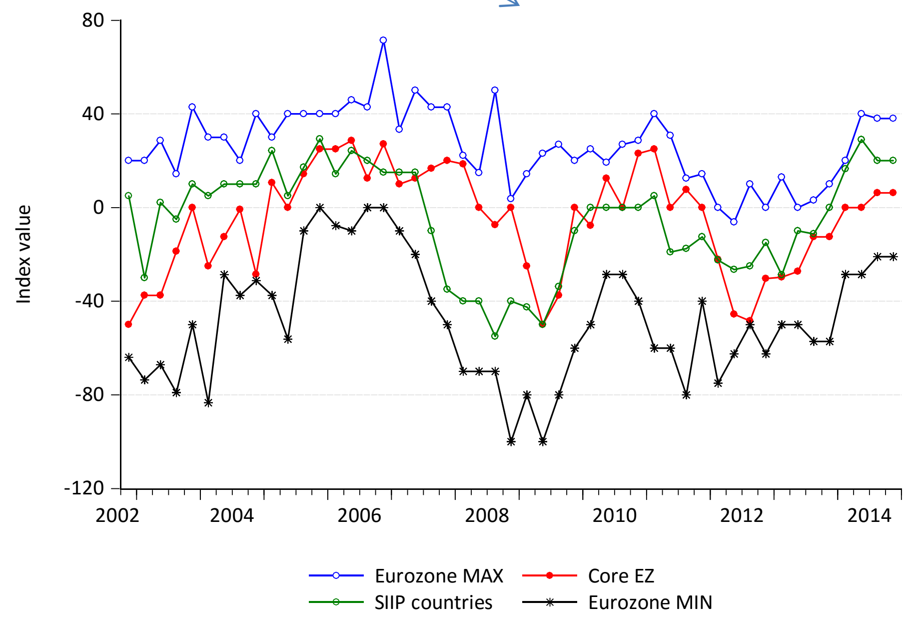


Forward-looking

EMEs are Turkey, Thailand, and Philippines

Loan Supply & Demand in the € Zone





Methodology: GVAR

Preceded by Uroot & CI testing

VAR E1

VAR N

VAR N+1

Endogenous
+ Weakly exogenous
+ Global (exogenous)
+constant & Deterministic Variables

Stacked and linked via matrices – trade /finance

$$Gx_t = a_0 + a_1 t + Hx_{t-1} + u_t$$

Designed to avoid the 'curse of dimensionality' while capturing interdependence On a global scale

Can be tested

Can be 'special'

Linking Matrix

Weight Matrix (based on fixed weights)							
Country	AUSTRALIA	CANADA	EURO	JAPAN	SWEDEN	UK	USA
AUSTRALIA	0	0.005149	0.023959	0.098911	0.014487	0.017532	0.020146
CANADA	0.027563	0	0.031242	0.046646	0.013269	0.024904	0.415328
EURO	**0.263835**	**0.070908**	**0**	**0.276731**	**0.687465**	**0.734288**	**0.312627**
JAPAN	0.342921	0.036903	0.098914	0	0.032715	0.037214	0.160537
SWEDEN	0.020051	0.004215	0.091319	0.009976	0	0.030561	0.014001
UK	0.098598	0.031979	0.407957	0.054568	0.133229	0	0.077362
USA	**0.247031**	**0.850847**	**0.346608**	**0.513168**	**0.118835**	**0.155502**	0

GVAR

- 16 countries (10 in the € zone): USA, CAN, JPN, GBR, SWE, AUS)
- 1 lag
- [<u>real GDP</u>, <u>inflation</u>, real equity prices, *real exchange rate*, *cross-border claims*, credit standards (D&S), total credit, short-term interest rate (<u>term spread</u>)] are endogenous… several variants were examined
- Oil enters as global exogenous variable
- US is different:
  - no real exchange rate, foreign real equity or short-term interest rate but includes VIX
  - Its VAR is structured via a specific ordering

(Selected) Results

- Main shocks examined:
  - Positive lending standards shock from US (and € zone)
  - Negative loan demand shock

Summary of Findings

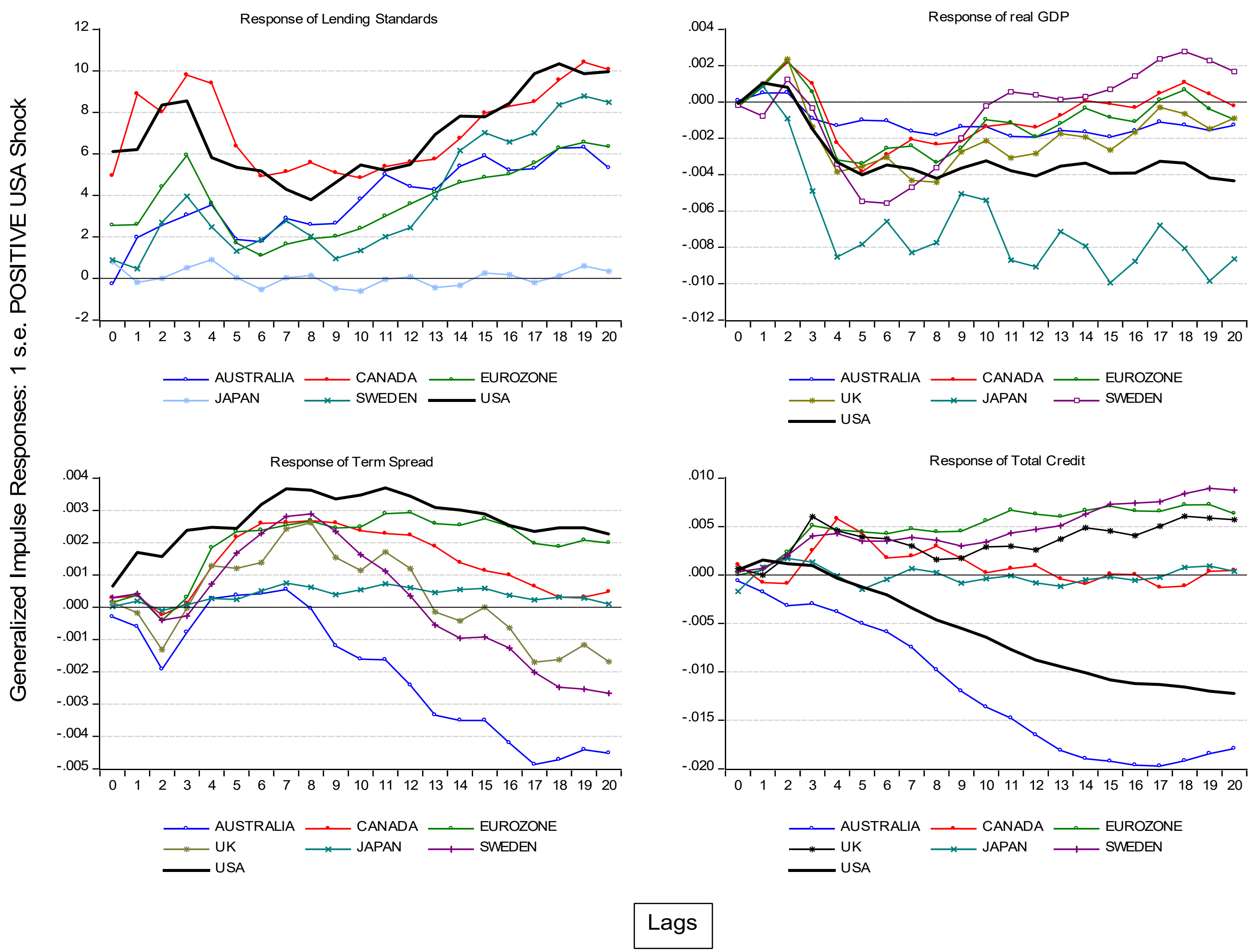
Positive lending standards

- Loan supply tightens domestically
- Spills over to other economies, except Japan
- May be an indication of another type of global financial shock
- Shock is globally contractionary but diminishes like MP except for US where it has a permanent effect
- ***Size of some Eurozone shock relatively smaller than for US***

Negative loan demand

- Strongly and unambiguously contractionary only for the US & Japan
- ***Eurozone and US responses are similar*** BUT ***is more contractionary for the Eurozone*** (more bank centered?)

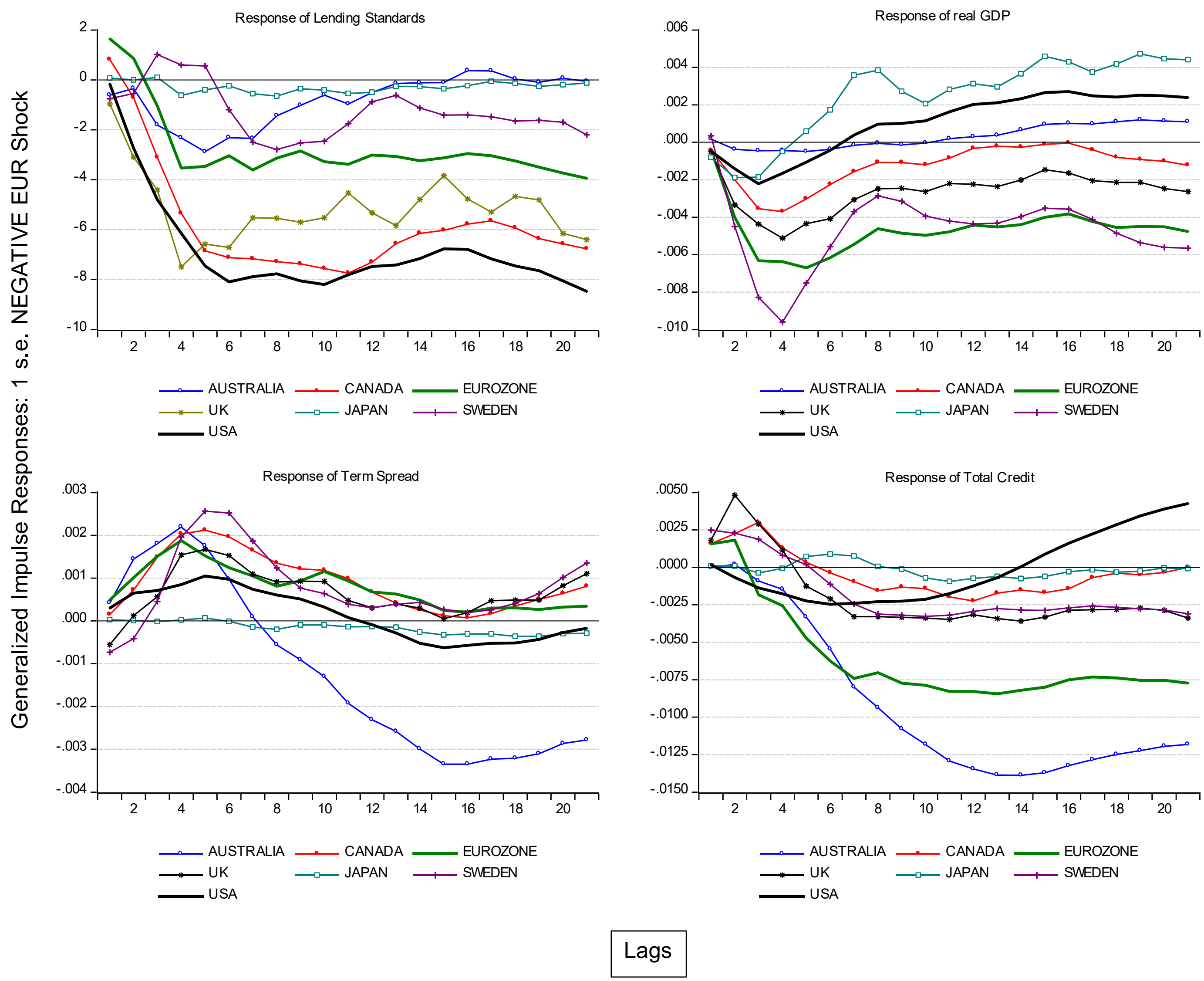
Impulse Responses to a Positive Lending Standards Shock from the US



Impulse Responses to a Negative Loan Demand Shock from the USA

Impulse Responses to a Positive Lending Standards Shock from the Eurozone

Impulse Responses to a Negative Loan Demand Shock from the Eurozone



Conclusions?

- Our analysis can provide insights about why the credit boom and subsequent GFC was felt more keenly in some economies than on others
- Domestic and international credit conditions matter in a manner that usual spreads and loan and credit data cannot adequately capture
- Loan standards help but there are challenges