The Global Financial Cycle after Lehman

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US Monetary Policy and the Global Financial Cycle

- ▶ Global financial cycle (Rey (2013)): comovements of risky asset prices, capital flows, credit growth, leverage of intermediaries on a global scale.

- ▶ Role of monetary policy of the hegemon in driving the global financial cycle.

- ▶ How does US monetary policy relate to global banks' risk taking behavior? (see Jugulum et al (2020) for M&A)

- ▶ Miranda-Agrippino and Rey (2015) provide a pre-2009 analysis. We revisit the issue post 2009 (question similar to Burcu et al. (2020)).

US Monetary Policy and the Global Financial Cycle

▶ Miranda-Agrippino and Rey (2015) estimates the joint dynamics of a large set of real variables and international financial variables.

▶ Bayesian VAR (in levels) monthly data: typical set of business cycle variables including industrial production, inflation, global real activity as well as global credit, cross border flows, financial leverage, global asset prices, risk aversion, credit spreads, exchange rate.

▶ Identification of monetary policy shocks: high frequency approach (Gurkaynack et al (2005)). Proxy VAR. (Mertens and Ravn, Gertler and Karadi)

Global Factors for Risky Asset Prices and Capital flows
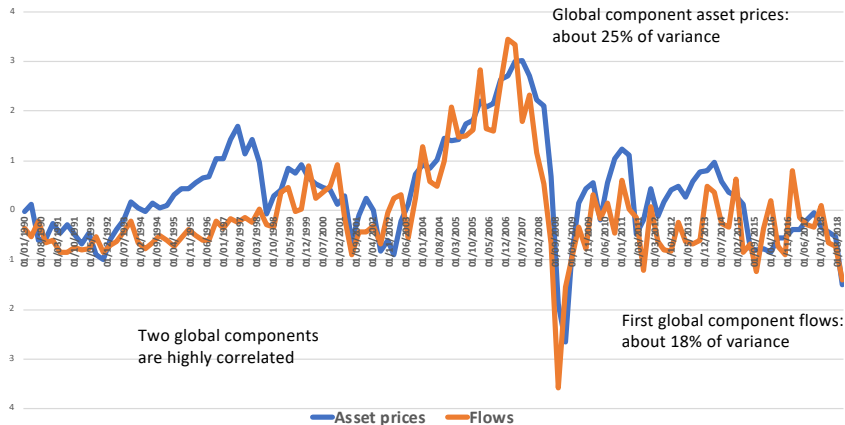

Figure: Source: Miranda-Agrippino, Nenova and Rey (2019)
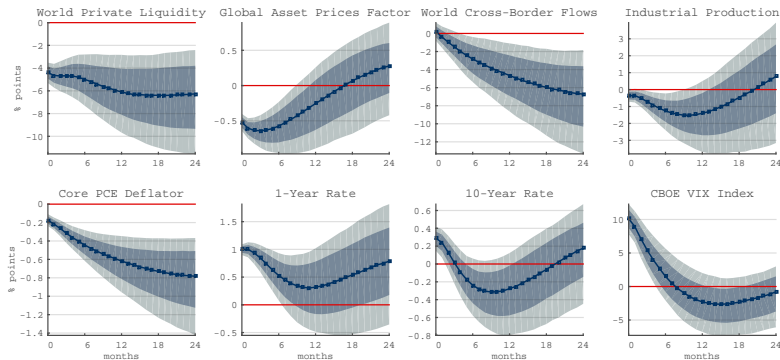
Global Financial Cycle 1980-2009

Figure: Response to a monetary policy shock inducing a 100bp increase in the 1 year treasury rate.

Post Lehman US monetary policy: multidimensional

- Swanson (2017) identifies three factors summarizing movements in the entire term structure of interest rates:
    - *(i)* a federal funds rate factor: loads predominantly on the overnight rate, and dominates in the period until 2009
    - *(ii)* a communication/forward guidance factor: has higher loadings on 1 to 2-year maturity rates, active throughout the entire sample
    - *(iii)* an LSAP factor: summarizes the variation at the long end of the curve (10-year Treasury rates) and is constrained to be negligible in the pre-ZLB sample by construction.

- High-frequency reactions are recorded in a 30-minute window bracketing each FOMC announcement between July 1991 and June 2019. Use of a variety of asset prices that cover the entire maturity spectrum to distill the information content of each FOMC.
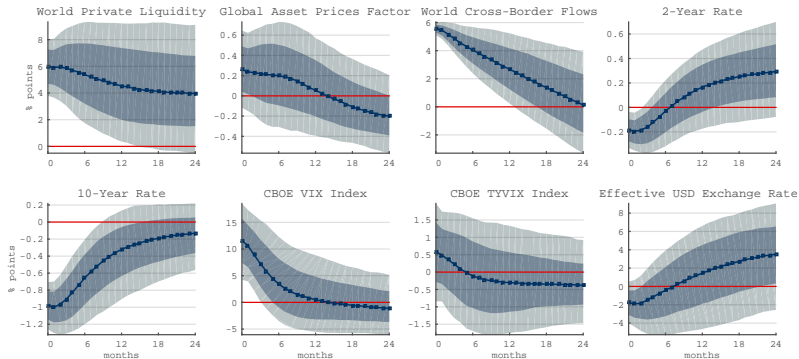
Global Financial Cycle: 2009-2019 (short end)

Figure: IRFs to a US Term-Structure Shock: Short End. Median impulse response functions. Shock normalized to induce a 1% decline in the 10-year rate. Shaded areas denote 90% and 68% posterior coverage bands.

Global Financial Cycle: 2009-2019 (short end)

- ▶ Impact the domestic and GFC variables similarly to the pre-2009 conventional monetary policy.

- ▶ Expansionary monetary policy stimulates domestic inflation (not reported), but also boosts global risky asset prices, and increases world private liquidity and global cross-border flows.

- ▶ It depreciates the US dollar against foreign currencies, and does not have significant effects on bond market volatility, as measured by the TYVIX index.

- ▶ Main difference is the VIX. Link to Forbes and Warnock (2019)?
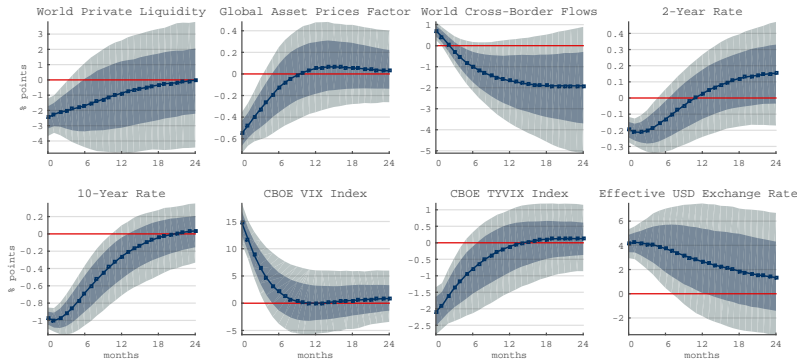
Global Financial Cycle: 2009-2019 (long end)

Figure: IRFs to a US Term-Structure Shock: Long End. Median impulse response functions. Shock normalized to induce a 1% decline in the 10-year rate. Shaded areas denote 90% and 68% posterior coverage bands.

Global Financial Cycle: 2009-2019 (long end)

- ▶ Strong central bank information effect: signals to market participants deteriorating economic conditions ahead. Flight into 10-year US Treasuries

- ▶ World private liquidity decreases, and so do global risky asset prices and cross-border flows.

- ▶ Perceived risk (VIX) rises, and the US dollar appreciates sharply (flight to quality).

Conclusions

▶ Caution as we assume that 2009 is a break date, and perform our analysis on the entire 2009-2019 period which includes the North Atlantic financial crisis, the Euro Area sovereign debt crisis, and the post-crisis period.

▶ Transmission of US monetary policy to the variables that characterize the Global Financial Cycle – world liquidity, cross-border flows, and global asset prices – has remained similar before and after 2009 (except for VIX)

▶ Existence of a very powerful information effect of monetary policy that mostly impacted on longer terms interest rates in the years after 2009

▶ Information effect associated with a decline in the global factor in asset prices, a sharp increase in the VIX, a decrease in liquidity and a strong appreciation of the US dollar.

▶ Flight to safety into US Treasuries during global crisis can rationalize these last sets of results (see Stavrakeva and Tang (2019))