

Spillovers of Unconventional Monetary Policy: Evidence and Policy Implications

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MP Spillover Channels

- Foreign currencies appreciate
 - Reduce foreign exports
- Domestic spending increases
 - Increase foreign exports
- Direct financial linkages
 - Boost foreign spending
- Foreign monetary policy response
 - Boost foreign spending

Spillovers of US MP in Daily Data

- Regression Jan 2006 – Jul 2015
 - Mainly during US UMP period
- X is foreign variable
- Y is US 10-year Treasury yield
- FOMC denotes policy announcement day

$$\begin{aligned} \Delta X_t = & (\beta_0 + \gamma_0 FOMC_t) \Delta Y_t \\ & + (\beta_1 + \gamma_1 FOMC_{t-1}) \Delta Y_{t-1} \\ & + (\beta_2 + \gamma_2 FOMC_{t-2}) \Delta Y_{t-2} \end{aligned}$$

- Bayoumi, Gagnon, Londono, Saborowski, and Sapriza, International Spillovers of Large-Scale Official Purchases of Bonds and Foreign Exchange, forthcoming for the 2015 IMF Jacques Polak Annual Research Conference

Interpretation of Regression

- Higher US bond yield on non-FOMC day reflects good economic news for US or world
 - More aggregate demand (spending)
- Higher US bond yield on FOMC day reflects
 - Tighter US MP
 - “Inside information” at Fed on more spending
 - Other news of more spending

US Yield Effect on Foreign Yields

(January 2006 to July 2015, daily)

Country	Non-FOMC Days	FOMC Days
Czech Republic	0.81	0.71
United Kingdom	0.68	0.52
Hong Kong	0.67	0.52
Canada	0.66	0.58
Australia	0.64	0.61
Euro Area	0.63	0.55
Germany	0.63	0.54
Sweden	0.60	0.52
Netherlands	0.57	0.49
Finland	0.57	0.50
Norway	0.54	0.53
Denmark	0.51	0.35
New Zealand	0.51	0.51
France	0.50	0.51
Switzerland	0.43	0.41
Belgium	0.40	0.49
Singapore	0.35	0.39
South Korea	0.29	0.42
Spain	0.28	0.53
Thailand	0.28	0.51

US Yield Effect on Foreign Yields (cont'd)

(January 2006 to July 2015, daily)

Country	Non-FOMC Days	FOMC Days
Italy	0.26	0.38
Chile	0.25	-0.33
Mexico	0.25	0.64
South Africa	0.22	0.16
Malaysia	0.19	0.38
Poland	0.16	0.10
Ireland	0.16	0.22
Japan	0.16	0.10
Colombia	0.16	0.80
Turkey	0.13	0.38
Brazil	0.12	0.64
Taiwan	0.09	0.11
China	0.06	0.06
Portugal	-0.03	0.24
Pakistan	-0.04	-0.12
Philippines	-0.13	0.02
Indonesia	-0.14	0.78
Hungary	-0.14	0.09
Russia	-0.25	-0.27
Greece	-0.90	0.09

Comments

- Yields more positively correlated when
 - Financial development is high
 - Capital mobility is high
 - Exchange rate is fixed
- Co-movements are lower on FOMC days
 - Exception: countries viewed as risky have higher co-movements on FOMC days

US Yield Effect on Foreign Currencies

(January 2006 to July 2015, daily, no lags)

Country	Non-FOMC Days	FOMC Days
Brazil	-3.0	-2.8
South Africa	-3.0	-2.5
Turkey	-2.6	-0.7
Hungary	-2.5	-0.8
Australia	-2.4	-2.1
Poland	-2.2	-0.3
Mexico	-2.0	-0.7
Russia	-2.0	-1.0
New Zealand	-2.0	-2.0
Norway	-1.9	-2.2
Canada	-1.9	-1.6
Sweden	-1.8	-2.2
Colombia	-1.7	-0.6
South Korea	-1.6	-0.3
Chile	-1.4	-1.2
Czech Republic	-1.4	0.2
United Kingdom	-0.9	-1.8
Malaysia	-0.8	-0.9
Singapore	-0.7	-0.8
Indonesia	-0.7	-1.4

US Yield Effect on Foreign Currencies (cont'd)

(January 2006 to July 2015, daily, no lags)

Country	Non-FOMC Days	FOMC Days
Denmark	-0.6	-0.2
Belgium	-0.6	-0.2
Euro Area	-0.6	-0.2
Finland	-0.6	-0.2
France	-0.6	-0.2
Germany	-0.6	-0.2
Greece	-0.6	-0.2
Ireland	-0.6	-0.2
Italy	-0.6	-0.2
Netherlands	-0.6	-0.2
Portugal	-0.6	-0.2
Spain	-0.6	-0.2
Philippines	-0.5	-0.3
Thailand	-0.4	-0.8
Taiwan	-0.3	-0.3
Pakistan	-0.1	-0.2
China	-0.1	-0.1
Hong Kong	0.0	0.0
Switzerland	1.2	0.6
Japan	3.5	2.8

Comments

- Currencies more negatively correlated when
 - Financial development is low
 - Capital mobility is low
 - Exchange rate is flexible
- Co-movements similar or smaller on FOMC days
 - Especially in some EMs

Comments

- Currency effects are small relative to yield effects.
 - Median yield coefficient is 0.3 (max 1)
 - Median currency coefficient is 0.6 (max 10)
 - Currencies more volatile than yields
- Interest Rate Parity Condition
 - $\Delta \text{Foreign Yield} + \Delta \text{currency}/10 = \Delta \text{US Yield}$
 - Assuming constant inflation and real equilibration within 10 years

US Yield Effect on Foreign Stock Prices

(January 2006 to July 2015, daily)

Country	Non-FOMC Days	FOMC Days
Russia	12.8	10.0
Greece	10.9	8.3
France	10.6	4.9
Euro Area	10.5	4.4
Italy	10.3	3.5
Finland	10.3	3.6
Spain	10.2	2.7
Brazil	10.2	1.9
Netherlands	10.2	4.6
Germany	10.1	4.5
Ireland	10.1	3.5
Norway	9.9	2.8
Sweden	9.7	2.9
Czech Republic	9.4	3.3
Portugal	9.0	3.8
Japan	8.7	1.3
Denmark	8.7	3.6
Hungary	8.6	1.0
United Kingdom	8.3	2.9
Switzerland	8.3	2.3

US Yield Effect on Foreign Stock Prices (cont'd)

(January 2006 to July 2015, daily)

Country	Non-FOMC Days	FOMC Days
Belgium	8.1	2.6
Mexico	8.0	2.8
Poland	7.8	2.6
Canada	7.1	4.4
Turkey	6.9	3.2
South Africa	6.7	-0.8
South Korea	6.0	1.6
Taiwan	5.7	4.3
Chile	5.4	1.7
Hong Kong	5.3	1.2
Australia	5.0	0.7
Philippines	5.0	-0.4
Colombia	4.9	-0.7
Indonesia	4.2	-2.7
Singapore	4.1	1.5
Thailand	3.1	0.0
Malaysia	3.0	0.1
New Zealand	2.8	1.6
Pakistan	2.5	2.4
China	1.9	-2.5

Comments

- Stock prices more positively correlated when
 - Capital mobility is high
- Co-movements much smaller on FOMC days
 - UMP generally has no significant effect
- Stock prices may reflect GDP expectations
- FOMC days include mixed effects

Other Results

- Cross-country annual regression finds no effect of UMP on the current account balance (at least in countries with high capital mobility, such as US and Japan).
- IMF Spillover Reports (2011 through 2015) and other studies find net positive spillovers to foreign GDP, mainly owing to internal financial conditions (not net capital flows).

Current Account Balances: No UMP Effect



Policy Implications

- Under fixed exchange rates, peripheral countries largely stuck with monetary conditions of the center country.
 - UMP spillovers are unavoidable consequence.
- Under floating exchange rates, some co-movement of monetary policy may be optimal if currency channel dominates demand channel.
 - Easing policy with US UMP reduces negative effect on exports and boosts domestic demand.

Policy Implications

- The results shown here suggest that many countries may be aligning their monetary policies too much with US MP.
 - Excessively stable currencies destabilize real economy.
- Hoffman and Takats (2015) find that short-term interest rates in EMs follow US rates.
- Disyatat and Rungcharoenkitkul (2015) find that EMs have not lost MP independence.
 - Interest rate co-movement is a policy choice not an external constraint.