



Discussion of Commodity Price shocks and Monetary Policy, by Silvana Tenreyro

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- The authors raise the key question of how EMEs monetary policy should deal with external shocks that affect Risk Premiums.
- They do so in a particular way: Firms in EMEs face a borrowing constraint that depends on commodity prices.
 - Commodity booms (busts) loosen constraints for exporters (importers), amplifying the initial shock.
 - A key model feature is the negative correlation between risk premiums and commodity prices for exporters, and a positive correlation for importers.
- **Policy responses for EMEs:**
 - **Exporter:** Some inflation target is preferred. Efforts to stabilize the exchange rate can exacerbate the cycle, whereas a depreciated currency is necessary to cushion the impact of adverse commodity shocks.
 - **Importer:** exchange rate stabilization may be beneficial: A devaluation after an energy shock amplifies the effects on inflation and a higher risk premium makes it worse. IT warrants MP tightening, amplifying the real effects.

Some of them discussed in Drechsel, McLeay and Tenreyro (2019).

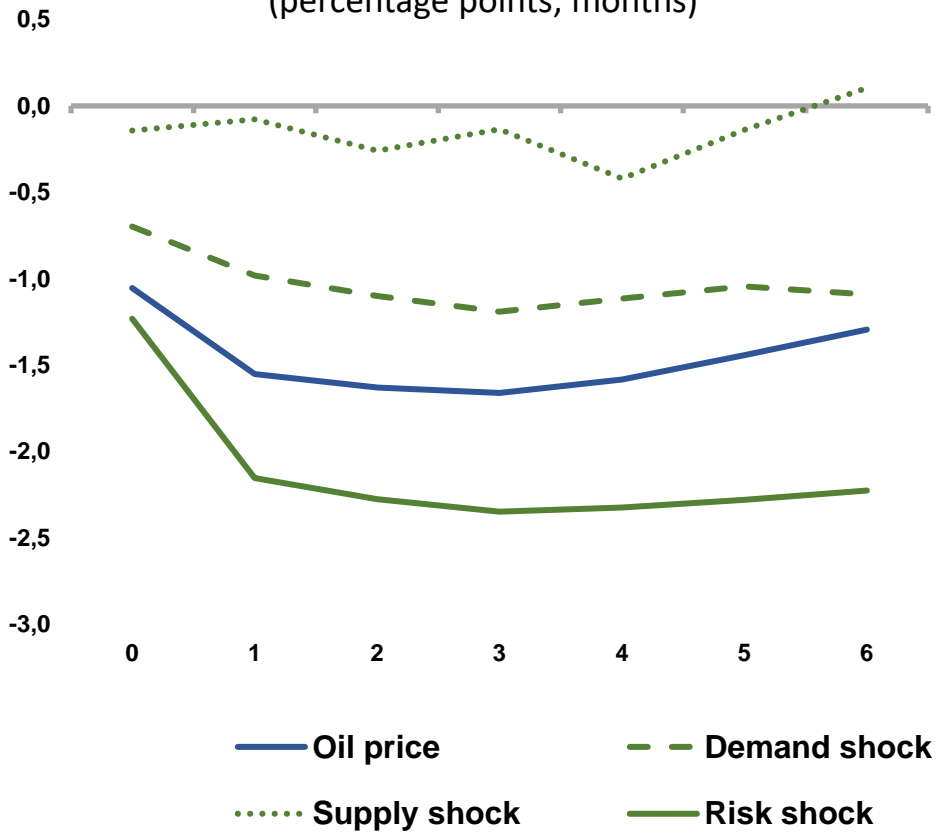
1. **Not all commodity price shocks are alike**, underscoring the significance of analyzing risk premiums dynamics.
2. **The perceived persistence** of the shock can affect macroeconomic outcomes.
3. **Non-linearities** (size of the shock, phase of the cycle, etc) may play an important role too.
4. **The role of inflation expectations, CB credibility and the Monetary Policy framework:** A credible medium-term inflation target may mitigate the volatility associated with short-term stabilization efforts.
5. The importance of **local capital markets** as a buffer against external shocks.

Exporters' exchange rate response to a "price shock" (1/2)

Shock origin matters: Demand and global risk shocks tend to amplify risk premiums.

IRF of oil exporters' Nominal Exchange Rates to oil shocks (1)

(percentage points; months)



- **For exporters, this distinction likely holds minimal relevance within the model:**
 - Useful for calibrating the financial restriction?
 - The parameter governing the financial restriction endogenous to the shock type?
- **Still relevant for policy makers to tailor an adequate reaction.**

- For importers, this affects the positive correlation $P_{comm} \rightarrow RP$:**
- Reverse causality –from risk to P_{comm} — generates negative correlation.
 - Risk appetite fluctuations affect both commodity prices and, potentially more importantly, risk premiums.

[Methodology](#) [Responses by country](#)

(1) Impulse Response Function estimated via local projection (Jordà, 2005). The dependent variable is the delta log of the nominal exchange rates, where an increase indicates depreciation of the local currency. Shocks from an internal model of oil, more details in Annex. Average between Brazil, Mexico and Colombia. (2) Panel regression for Brazil, Mexico, Colombia and Chile. Source: own elaboration.

Exporters' exchange rate response to a "price shock" (2/2)

Shock origin matters: Demand and global risk shocks tend to amplify risk premiums.

Commodity prices and Emerging Economies Spread (2) (Basis Points)

	(1)	(2)	
		EMBI	
Commodities	-47.6 *** (7.5)	-33.5 *** (6.2)	-30%
Output growth	-0.39 (1.69)	-1.51** (0.63)	
Trade Balance	-3.8 (2.7)	-2.8 (2.2)	
Debt-to-GDP	-0.57 (1.69)	0.19 (1.38)	
Constant	1.99 (2.31)	2.81 (1.93)	
Risk-Common global		80.3 *** (12.97)	
Risk – EMEs		131.2 *** (18.0)	
Risk - US Hedge		60.39 *** (15.18)	
Observations	224	224	
R-squared	0.17	0.48	

Standard errors in parentheses
 *** p < 0.01, ** p < 0.05, * < p 0.1

[Methodology](#)

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Shock's expected persistence (1/2)

Market expectations about the shock persistence may be a key driver of the macroeconomic effects.

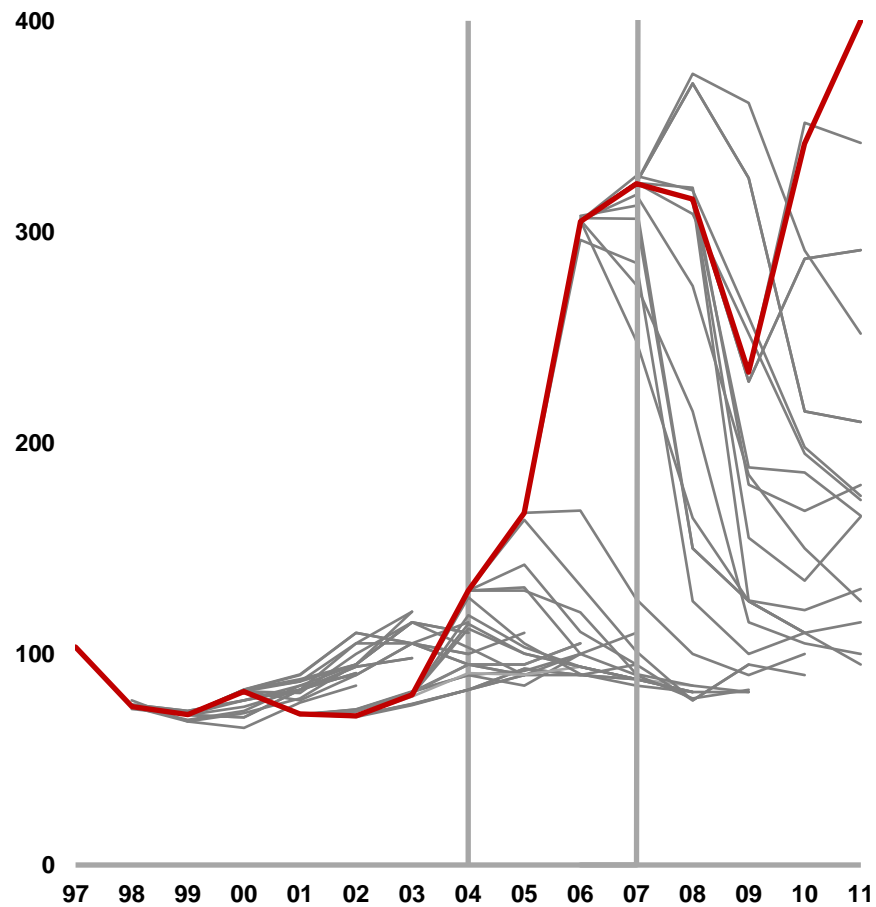
- Effects of commodity shocks depend on its perceived persistence (Obstfeld, 1982; Svensson and Razin, 1983) ⇒
- There's a role for imperfect information and learning (Fornero and Kirchner, 2018).
- Especially important for cases with adjustment costs and time-to-build frictions (mining).
- In case of persistent shocks, the commodity boom may take a couple of years to peak.
- Transitory shocks have very short-lived effects and almost no real impact.

Shock's expected persistence (2/2)

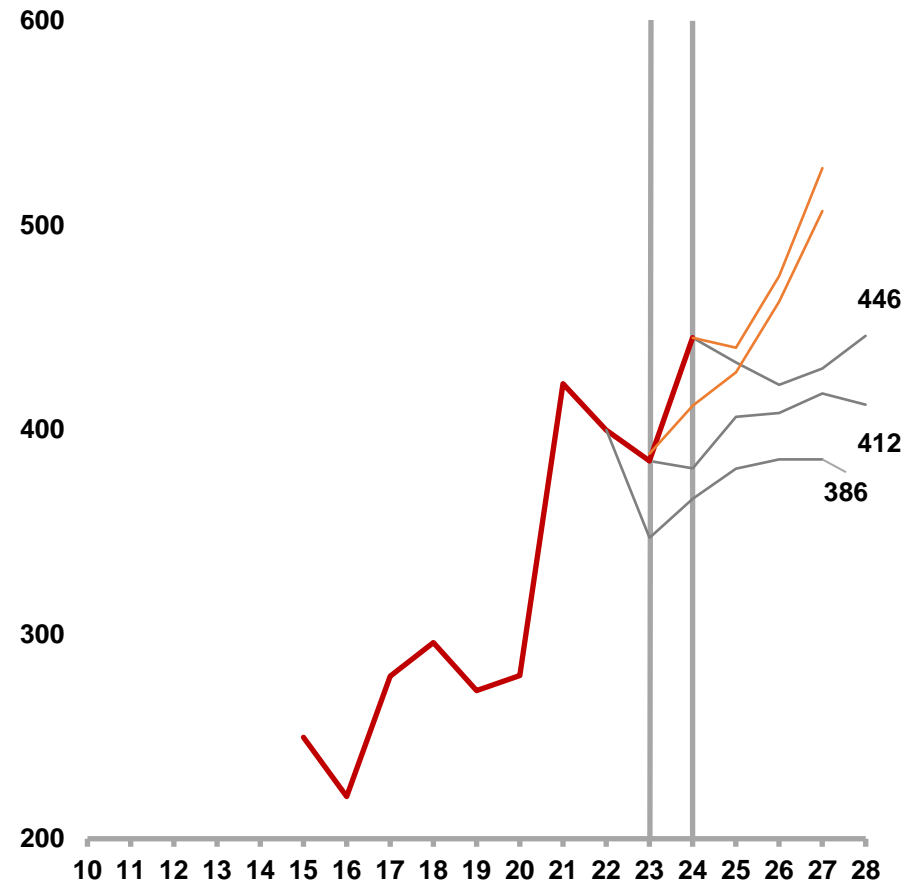
A comparison of two copper price shocks.

Observed Price and market forecasts

(US\$/lb; annual; nominal)



(US\$/lb; three months; nominal)

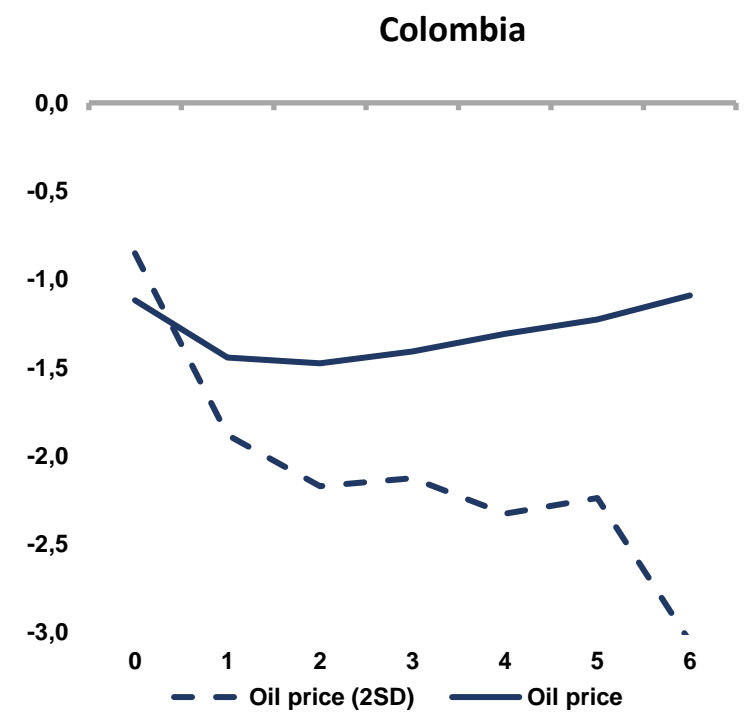
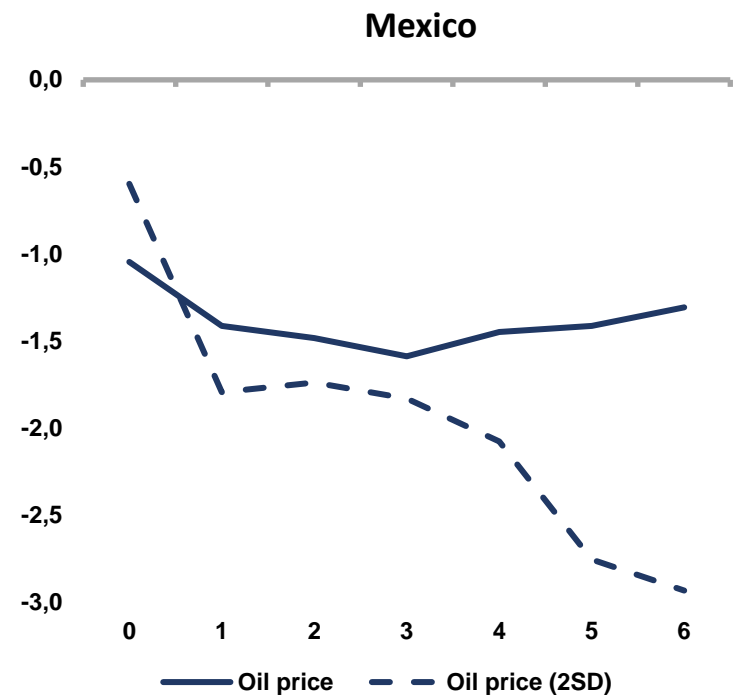
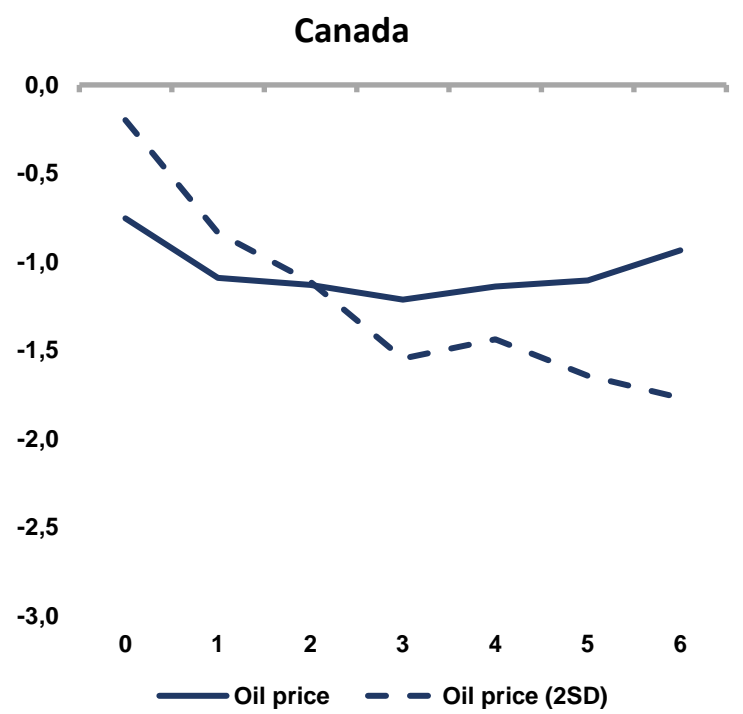


Source: own elaboration based on CRU forecasts

Non – linearities

Size of the shock may matter too. Large shocks can provoke disproportionately large responses, potentially calling for a different policy reaction.

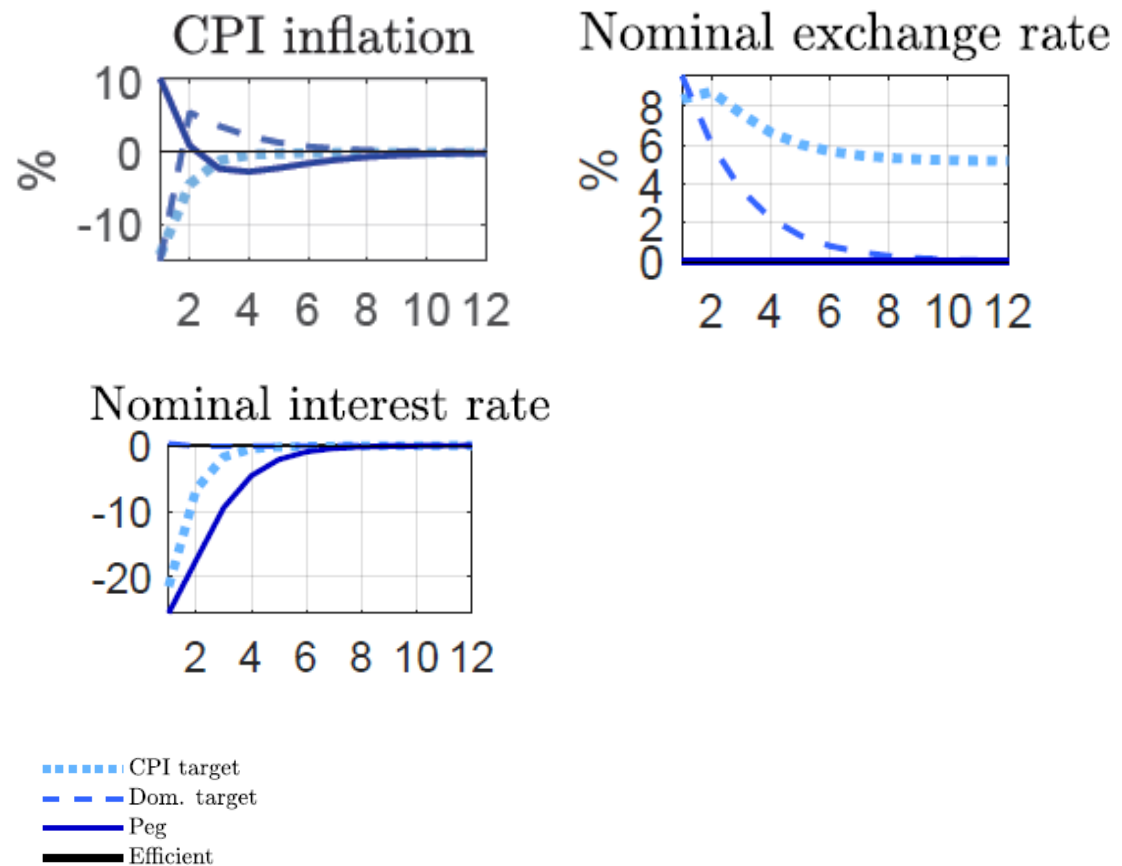
IRF of oil exporters' Nominal Exchange Rates to oil shocks (*)
(percentage points; months)



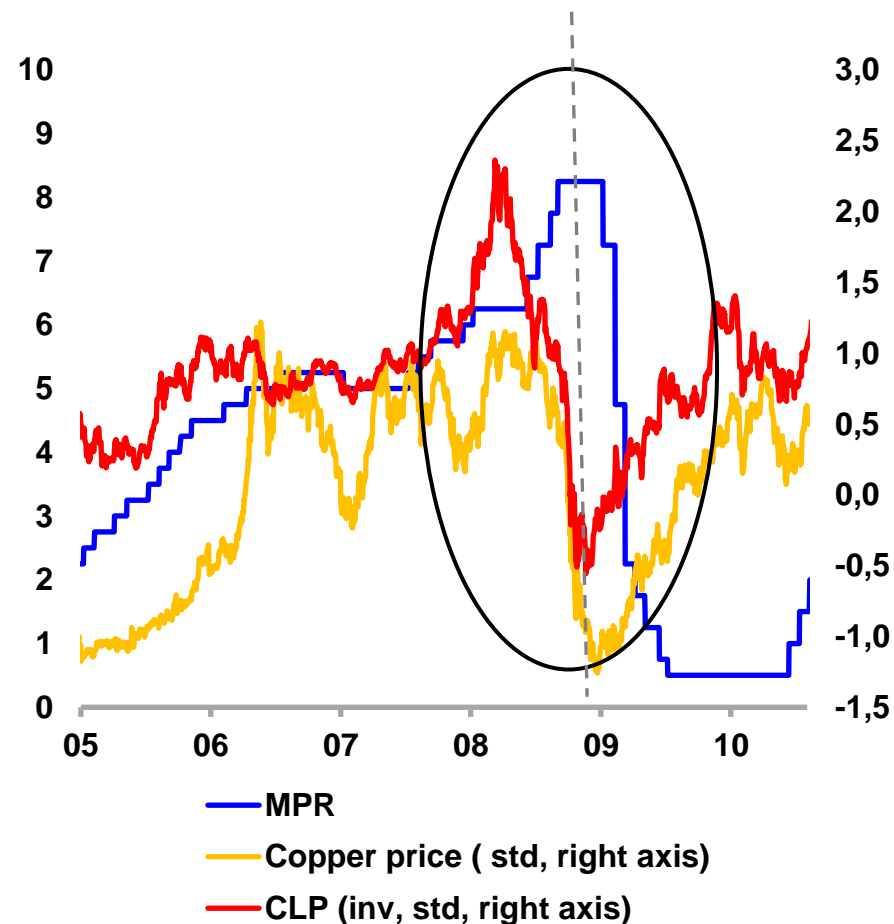
(*) Impulse Response Function estimated vial local projection (Jordà, 2005). The dependent variable is de delta log of the nominal exchange rates, where an increase indicates depreciation of the local currency. Shocks from an internal model of oil, more details in Annex. Source: own elaboration.

A credible central bank with a medium-term policy horizon may look through initial inflationary/deflationary effects a commodity shock.

IRFS to commodity price shock in EME exporter



Monetary Policy Rate, copper Price and nominal Exchange rate (percent points; copper price and CLP standardized)



[Detailed IRFs](#)

[Correlated commodity shocks](#)

- The authors highlight the crucial question of how monetary policy should respond to external shocks impacting emerging markets' risk premiums.
- Empirical evidence I showed suggests that tailoring monetary policy responses requires a deep understanding of the shock type, especially for importers facing risk appetite shifts.
- A credible central bank with a medium-term inflation target can mitigate pro-cyclical responses to commodity and risk premium shocks.
- Deep local capital markets can serve as a buffer against risk premium shocks.



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Sign restriction Matrix

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		Crecimiento US	MP US	Riesgo Global	Hedge US	Riesgo EME	Crecimiento Global
US	2y	1	1	1	-1	0	NaN
	10y	1	1	1	-1	0	NaN
	Eq	1	-1	-1	-1	0	NaN
Dev	2y	NaN	NaN	1	NaN	0	1
	10y	NaN	NaN	1	NaN	0	1
	Eq	1	-1	-1	-1	0	1
	FX	1	1	1	NaN	0	-1
EME	2y	NaN	NaN	1	NaN	1	1
	10y	NaN	1	1	NaN	1	1
	Eq	1	-1	-1	-1	-1	1
	FX	1	1	1	1	1	-1
OIL		1	-1	-1	-1	NaN	1
COOPER		1	-1	-1	-1	NaN	1

Restricciones *between* Variables:

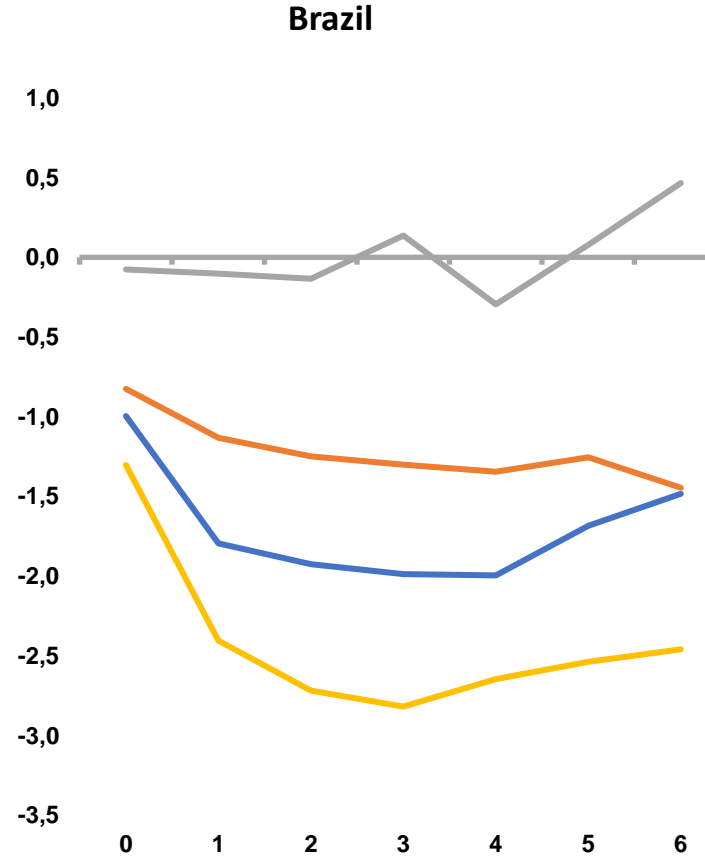
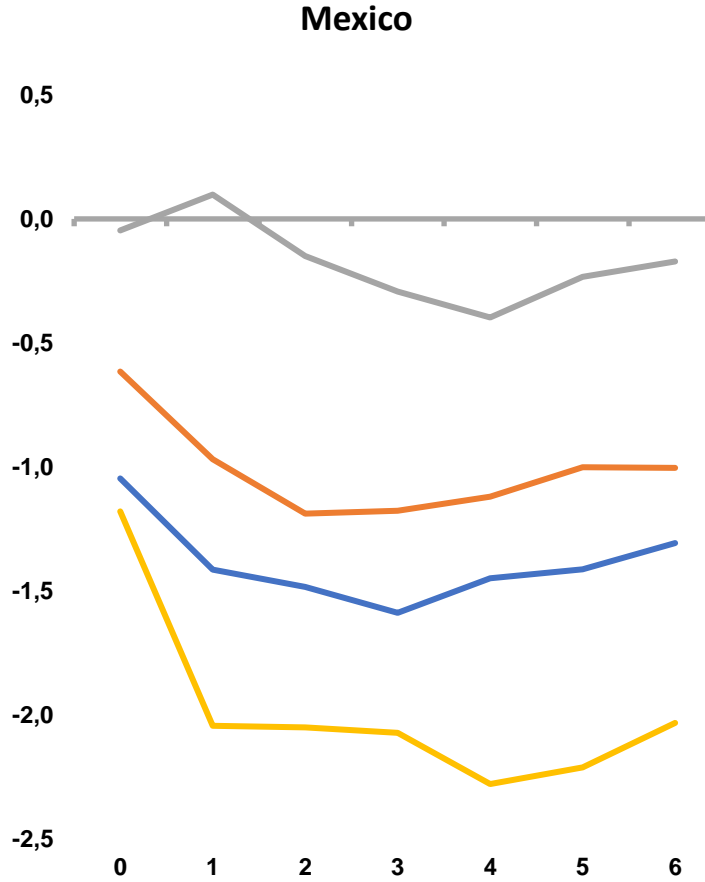
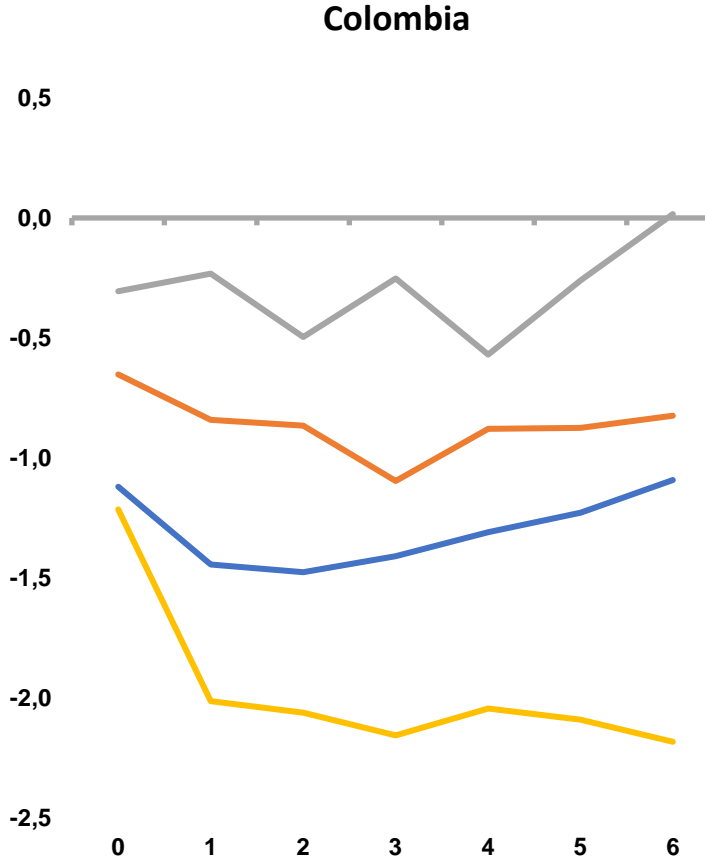
1. Growth US: 2y US > 10y US
2. PM US: 2y US > 10y US
3. Risk-Premium Global: 10y US > 2y US ; 10y DEV > 2y DEV ; 10y EME > 2y EME
4. Risk-off Global: |10y US| > |2y US|
5. Risk-Premium EME: 10y EME > 2y EME
6. Growth Global: 2y DEV > 10y DEV ; 2y EME > 10y EME

Restricciones *within* variables:

1. 2y US: |growth US| + |PM us| > |PRP global| + |Risk-off Global|
2. 10y US: |growth US| + |PM us| < |PRP global| + |Risk-off Global|

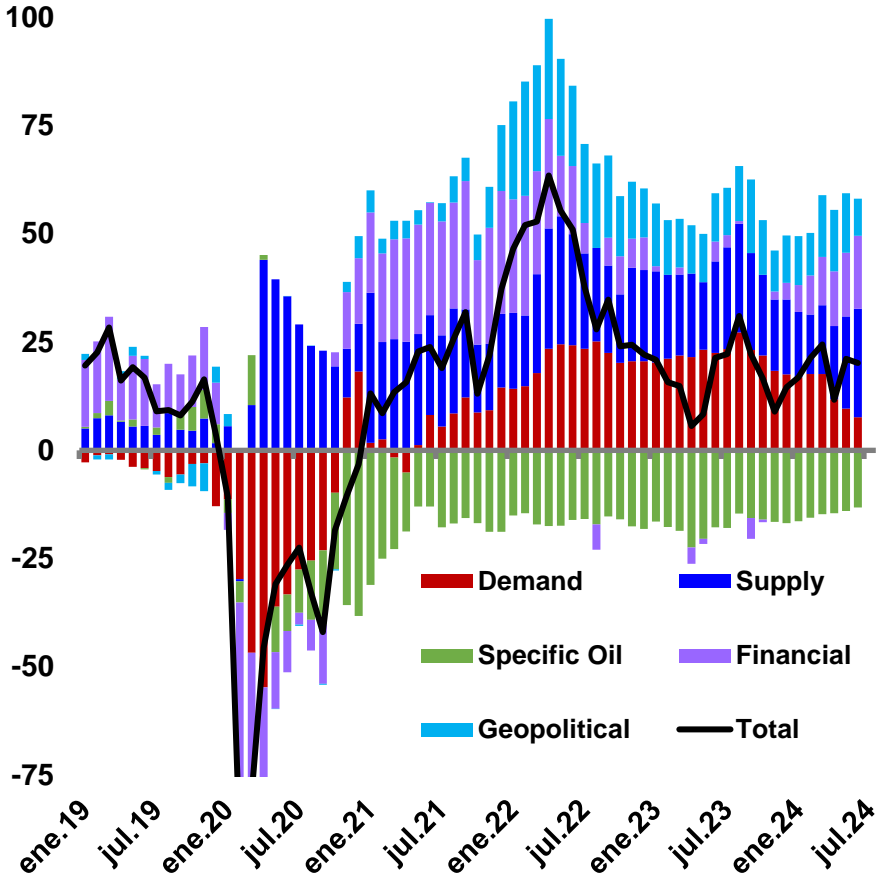
Response of Nominal Exchange Rates to shocks (*) (standard deviation; months)

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Historical decomposition
(Percent, cumulative change since 2019)



Sign restriction Matrix

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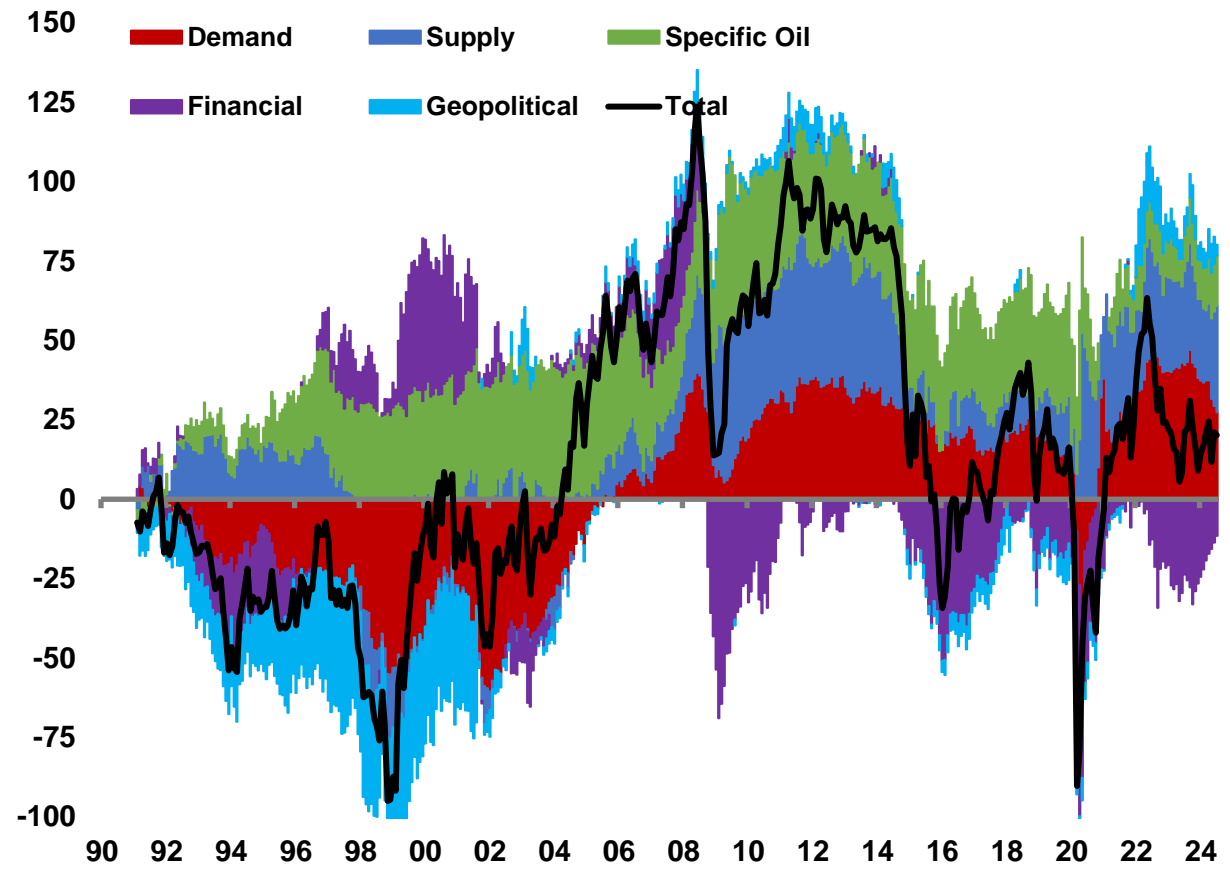
	Demand	Supply	Specific Oil	Risk	GEO
Brent_real	+	+	+	+	+
Ind_prod	+	-	-		
Oil_prod	+	-	+		
Dow_jones			0	+	-
Geo			0	0	+

Source: Own elaboration

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Historical decomposition

(Percent, cumulative change since 1990)



Source: Own elaboration

The role of inflation expectations, CB credibility and the Monetary Policy Framework (1/2)

Risk premium reactions to risk-off episodes are influenced by macroeconomic stability and central bank credibility.

Mean effect of a higher trade-tension on 10 years yields (basis points)

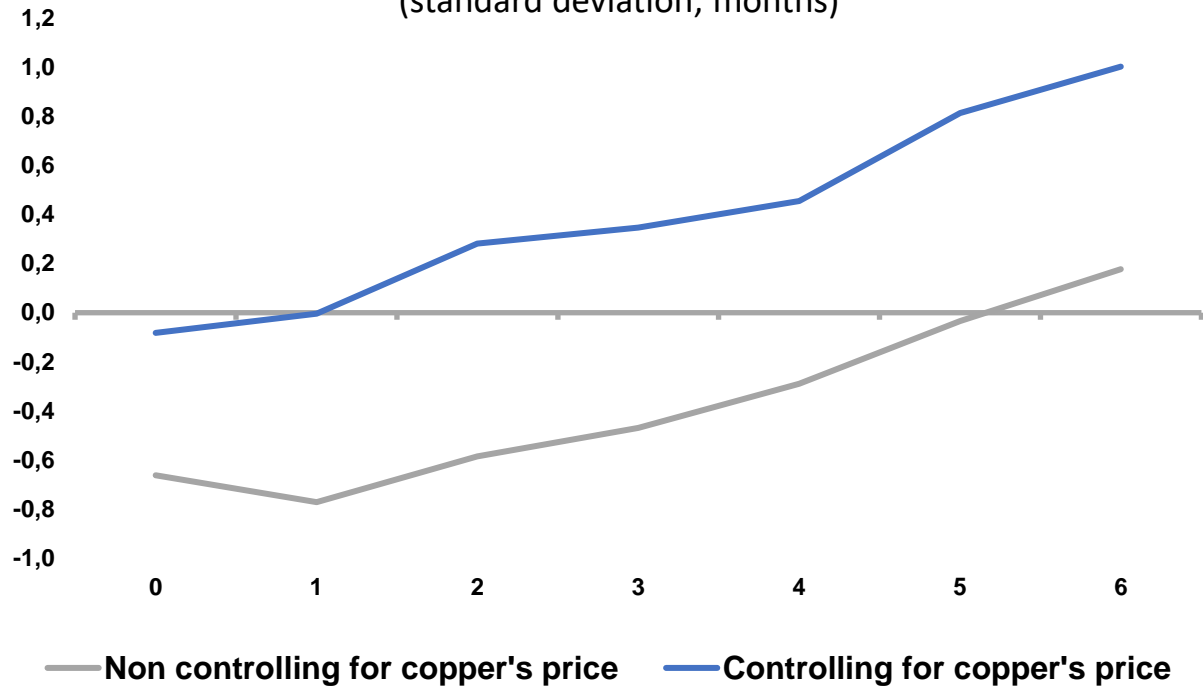
Developed Central		Developed not central		EMEs with investment grade		EMEs without investment grade	
Japan	0.03	Canada	-2.44**	China	-1.79**	Hungary	-0.82
UK	-1.8	Italy	1.18	South Korea	-2.04	South	
Germany	-1.61*	France	-0.92	Czech Rep.	-2.25	Africa	3.74
US	-2.93**	Norway	-2.23**	Chile	-2.56	Brazil	2.23
		Sweden	-1.51	Thailand	-1.34	Vietnam	1.89
		Switzerland	-1.59**	Poland	-2.82	Turkey	2.51
		Hong Kong	-2.02	Mexico	-4.06	Nigeria	--
		Spain	-0.82	Israel	-0.27	Sri Lanka	-2.77
				India	-2.02	Ukraine	3.75
				Indonesia	-3.79*		
				Malaysia	-0.16		
				Colombia	1.92		
				Romania	-1.07		
				Peru	0.45		
				Russia	2.75		
				Croatia	-0.27		
				Bulgaria	1.06*		

Importers' exchange rate response to a "price shock"

ER of some energy oil importers may appreciate after an "oil price shock". This is because oil is correlated with the exported commodity --demand and risk appetite shocks affect all commodities.

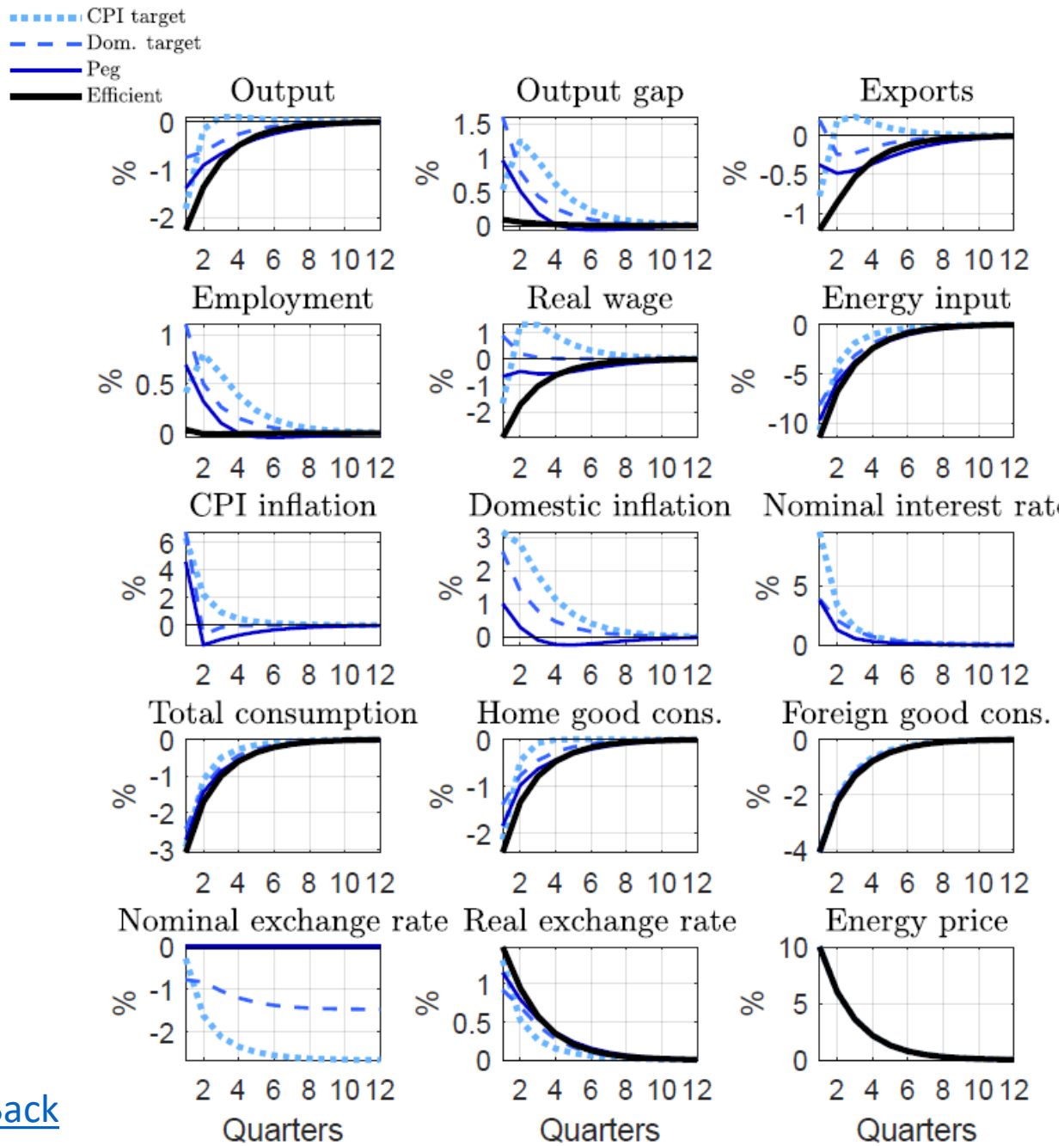
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Response of Nominal Exchange Rates to shocks of import commodity price: Chilean CLP
(standard deviation; months)

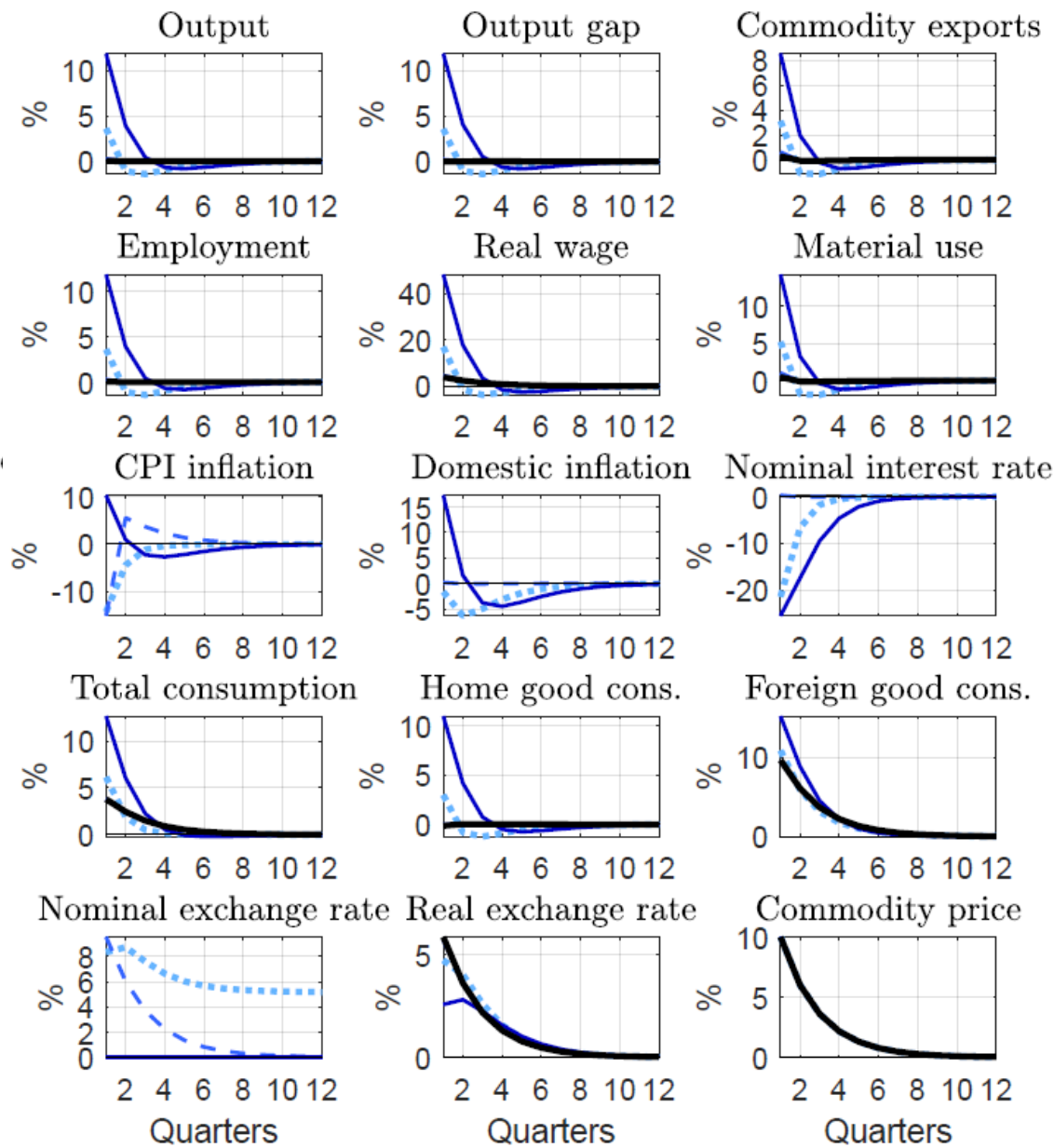


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IRFS to commodity price shock in EME importer



IRFS to commodity price shock in EME exporter



The role of local capital markets

The sensitivity of risk premiums to commodity prices and broader external factors may be influenced by the size and depth of local capital markets.

Chilean Pension fund assets
(% GDP)

