

# Global Monetary Easing: Spillovers and Lines of defence

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Disclaimer: The views expressed in this paper are those of the authors and do not necessarily represent the views or policy stance of Bank Negara Malaysia.

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# Presentation outline

## 1. Motivation and stylised facts

## 2. Assessment of impact of QE on EMEs

a) Short-term impact on financial markets

b) Medium-term impact on monetary conditions and real economy

## 3. Managing spillovers

a) Line of defence

b) Assessment on impact of capital flow measures

i. Brazil's IOF

ii. Korea

## 4. Conclusion



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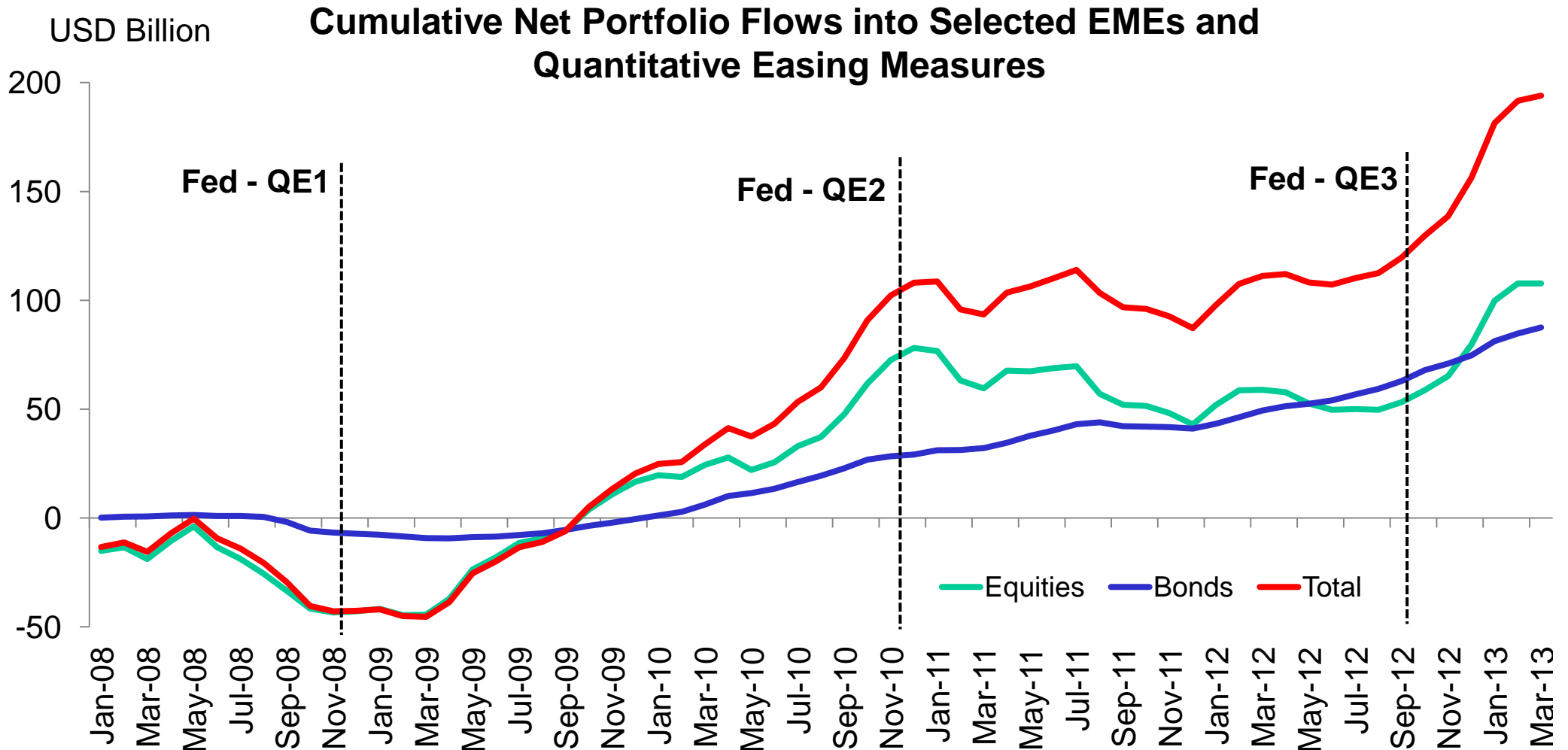
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# Since the introduction of QE, EMEs have experienced unprecedented surges in capital inflows

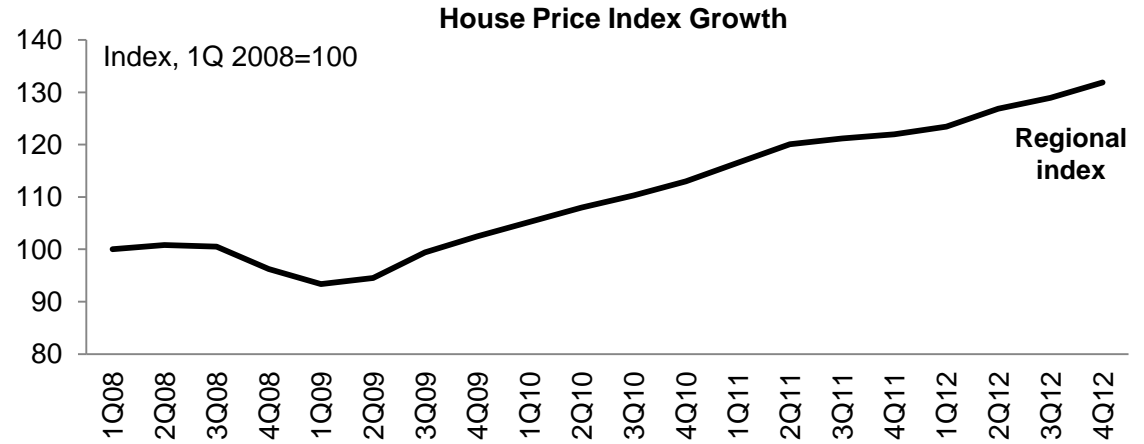
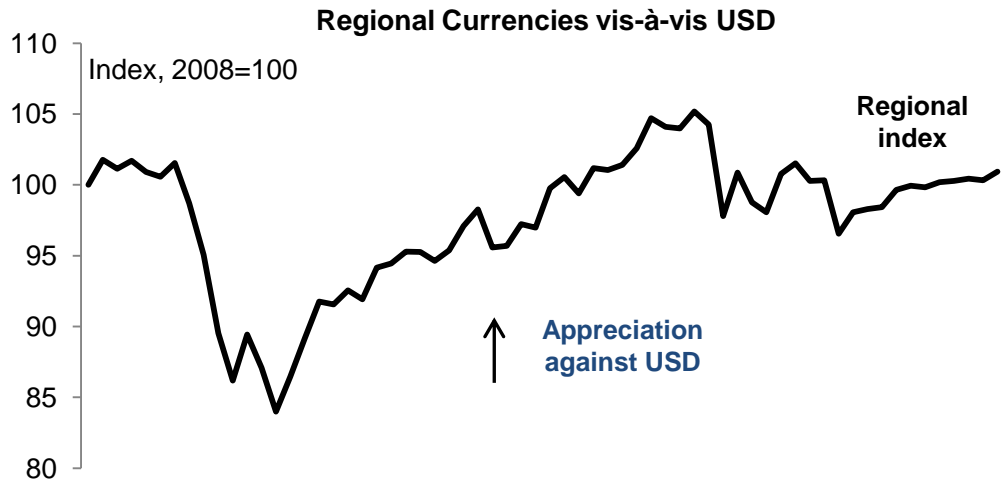


Selected EMEs comprise Brazil, Chinese Taipei, Hong Kong, Indonesia, Malaysia, Mexico, Philippines, PR China, Singapore, South Korea, Thailand

Source: EPFR Global

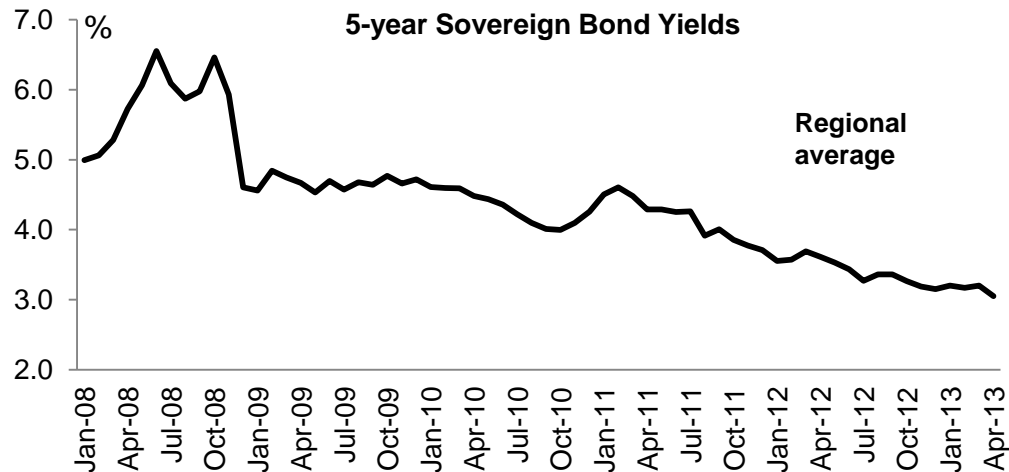


# Inflows coincided with FX appreciation, sustained expansion in asset prices and declining yield spreads in EMEs

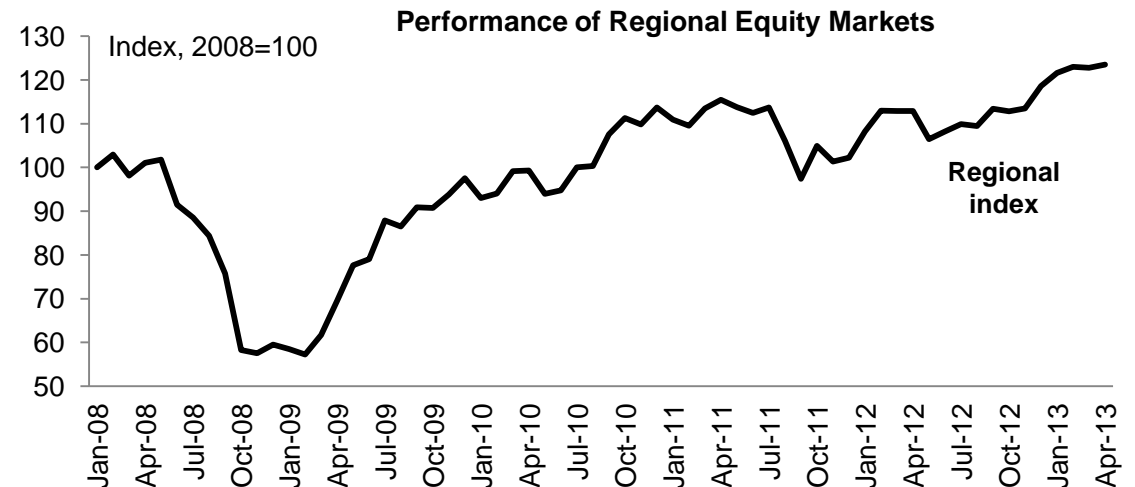


Note: Regional index includes HPI of (Hong Kong, Indonesia, Malaysia, Singapore, South Korea)

Sources: Bloomberg, CEIC, national sources and staff calculations



Regional average is simple average of bond yields of Brazil, Chinese Taipei, Hong Kong, Indonesia, Malaysia, Mexico, Philippines, PR China, Singapore, South Korea, Thailand)  
Source: Bloomberg



Note: Regional index includes main indices of Brazil, Chinese Taipei, Hong Kong, Indonesia, Malaysia, Mexico, Philippines, PR China, Singapore, South Korea, Thailand  
Source: Bloomberg and staff calculations



# There are several channels through which QE could affect EMEs

## Portfolio balance

Yield compression due to large purchases of treasury and agency securities forces investors to venture into alternative assets, especially in EMEs given the higher risk-adjusted return

## Signaling

Confidence building effect of QE and Fed's commitment to keep US interest rate low for extended periods provides investors with unlimited time frame to invest in EMEs financial markets

## Excess liquidity and search for yield

Abundant liquidity and lack of investment opportunities domestically generate greater incentives for yield-seeking investment into EMEs



# Motivation

The paper seeks to add to the discussion on

- The spillover effects of QE on EMEs by assessing its short-term and medium-term impacts
- Responses of EMEs in dealing with the surges in capital flows and potential reversal
- The extent to which the announcements of capital flows management measures (CFMs) have helped to ease these spillover effects



# Methodology

## 1. Event-study (average cumulative impact)

- Using a two-day window periods around QE announcement dates
- Dates include both the releases of FOMC statements and speeches by the Fed Chairman that provided forward looking indication of further easing by the Fed

## 2. Global VAR

- Generalised impulse response functions from a GVAR model, which produces the impact of US liquidity shocks on EMEs
- Examine the impact of changes in US M2 growth on real GDP, inflation, credit, equity prices, house prices and exchange market pressure



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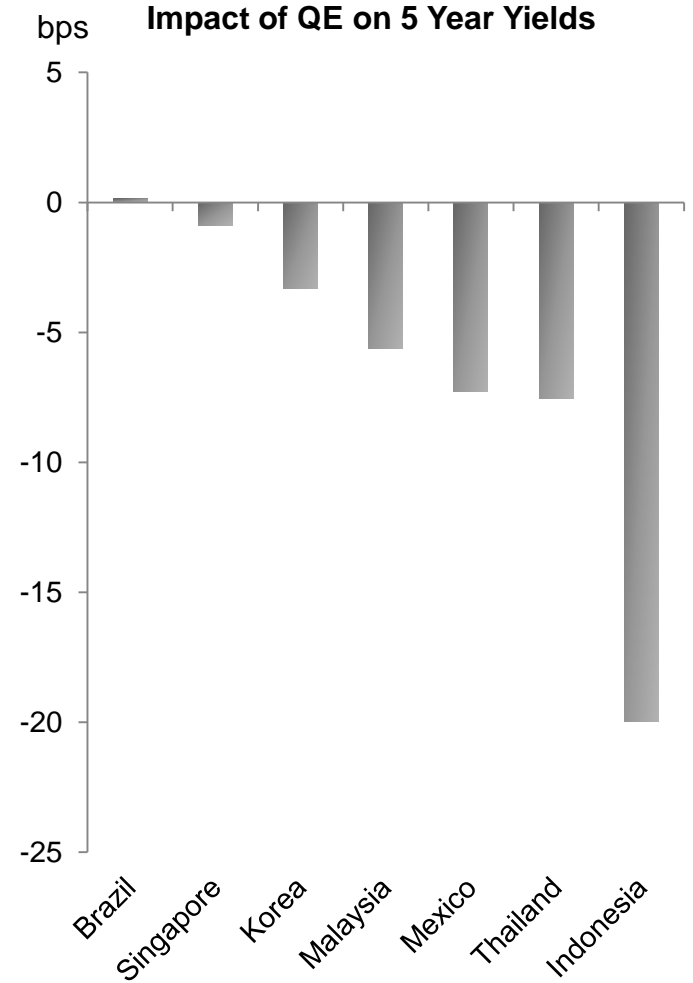
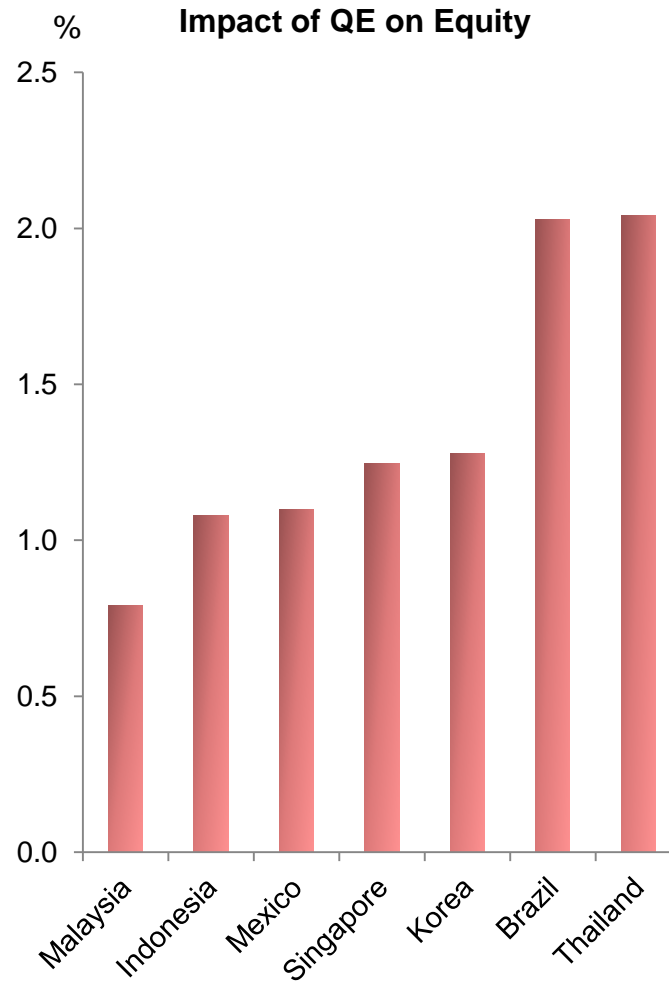
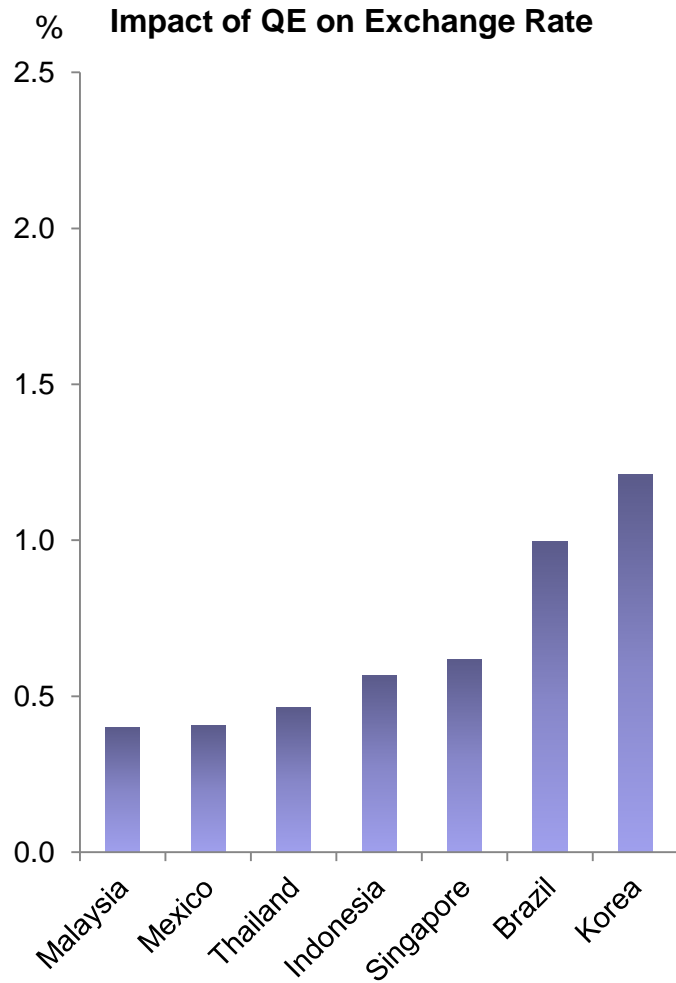
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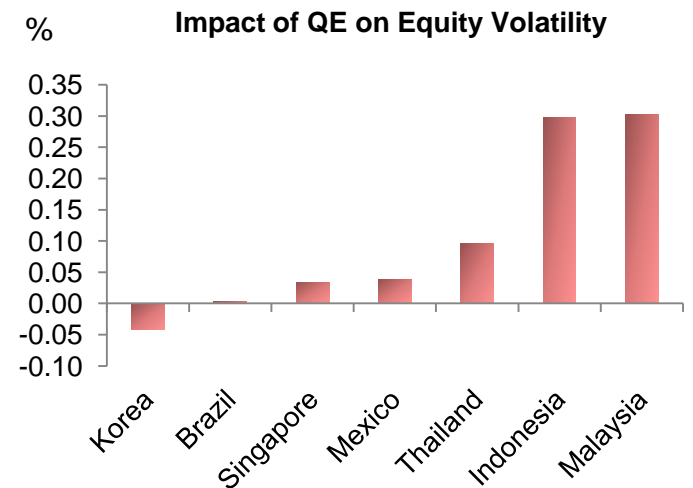
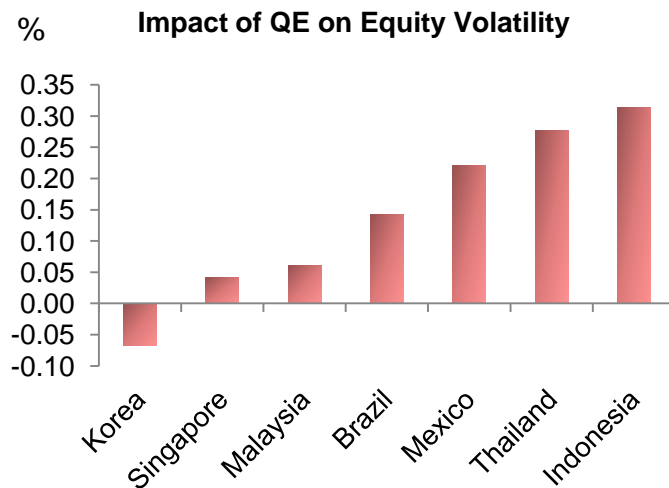
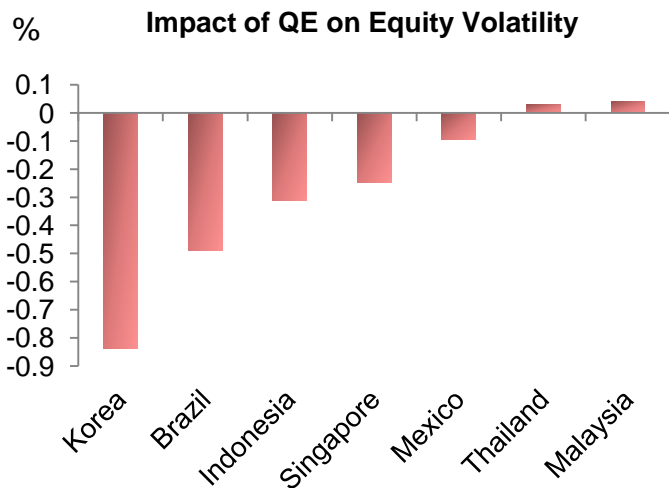
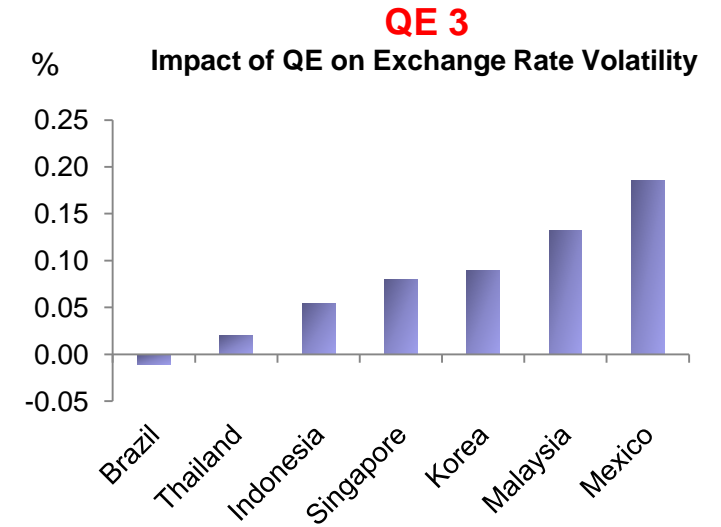
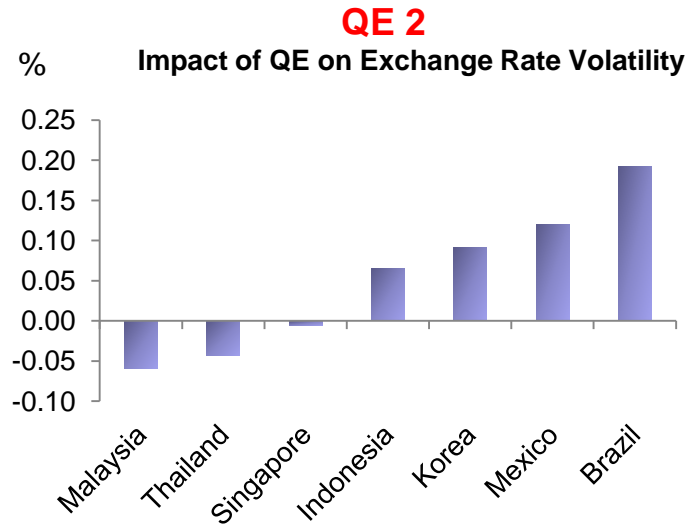
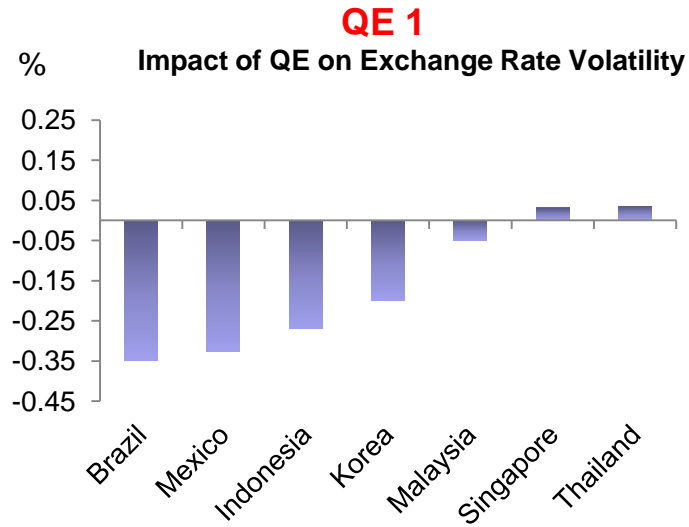


# Monetary easing by the Fed has led to significant pressure on financial markets in the EMEs

- Korean and Brazilian currencies and equity markets were most affected by monetary easing in the US
- The impact was broadly consistent across all three rounds of QE



# With the exception of QE1, QE announcements have also amplified the volatility of exchange rates and equity prices



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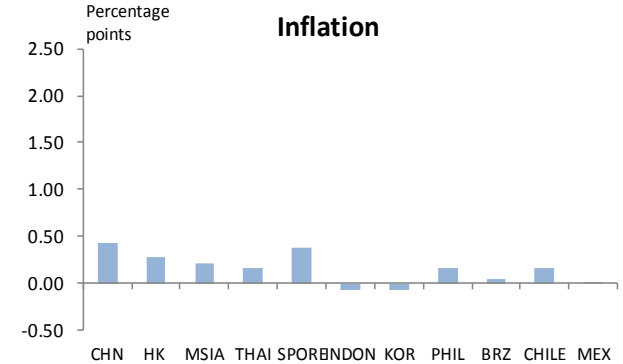
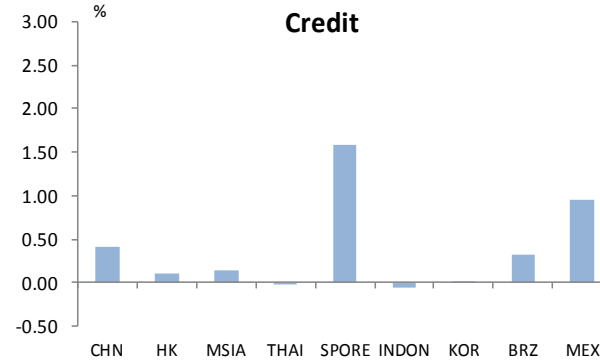
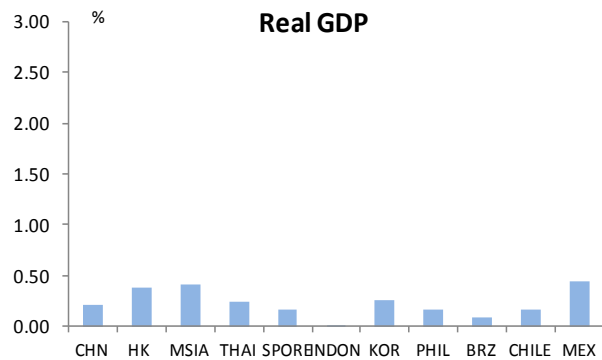


# GVAR model: QE exerted upward pressure on EMEs financial markets and the real sector

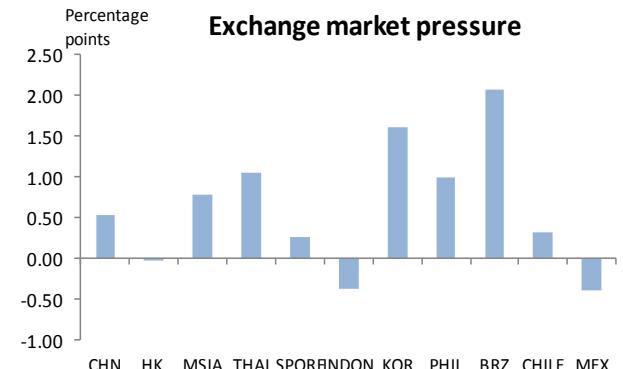
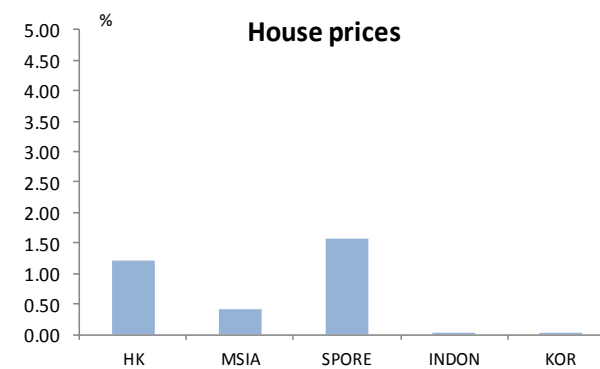
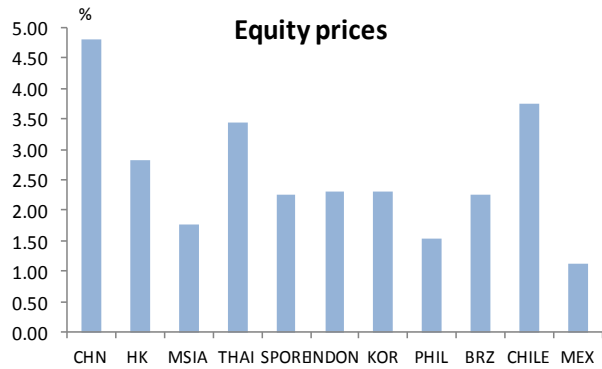
- A liquidity shock in the US has a larger and significant impact on financial variables compared to the real sector or monetary conditions

Maximum of impulse response functions to a 1-std deviation shock to US M2 growth\*

Real sector & Monetary conditions



Financial variables



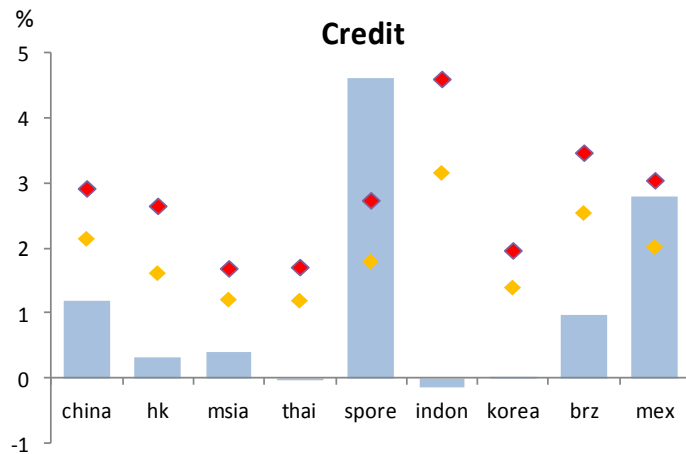
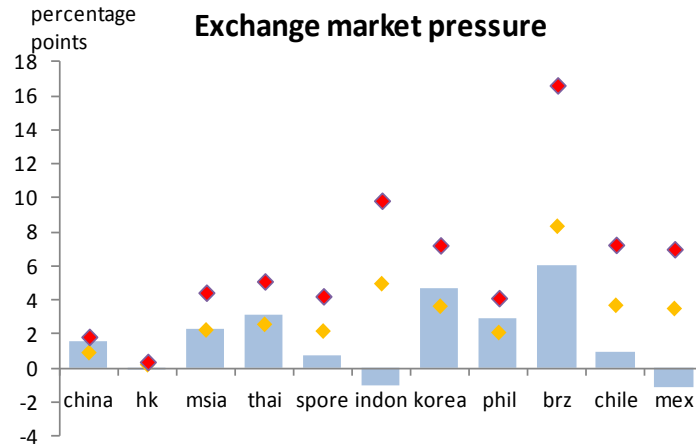
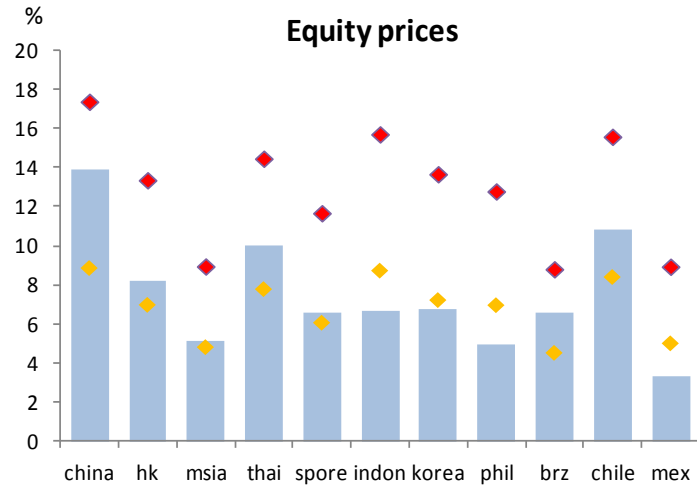
\*Over 24 months



# Increase in liquidity from QE could result in significant deviation of asset prices from trend growth

- QE1 caused an increase in equity prices above its historical average on in most sample countries
- QE1 caused a significant increase in credit and house prices in Singapore

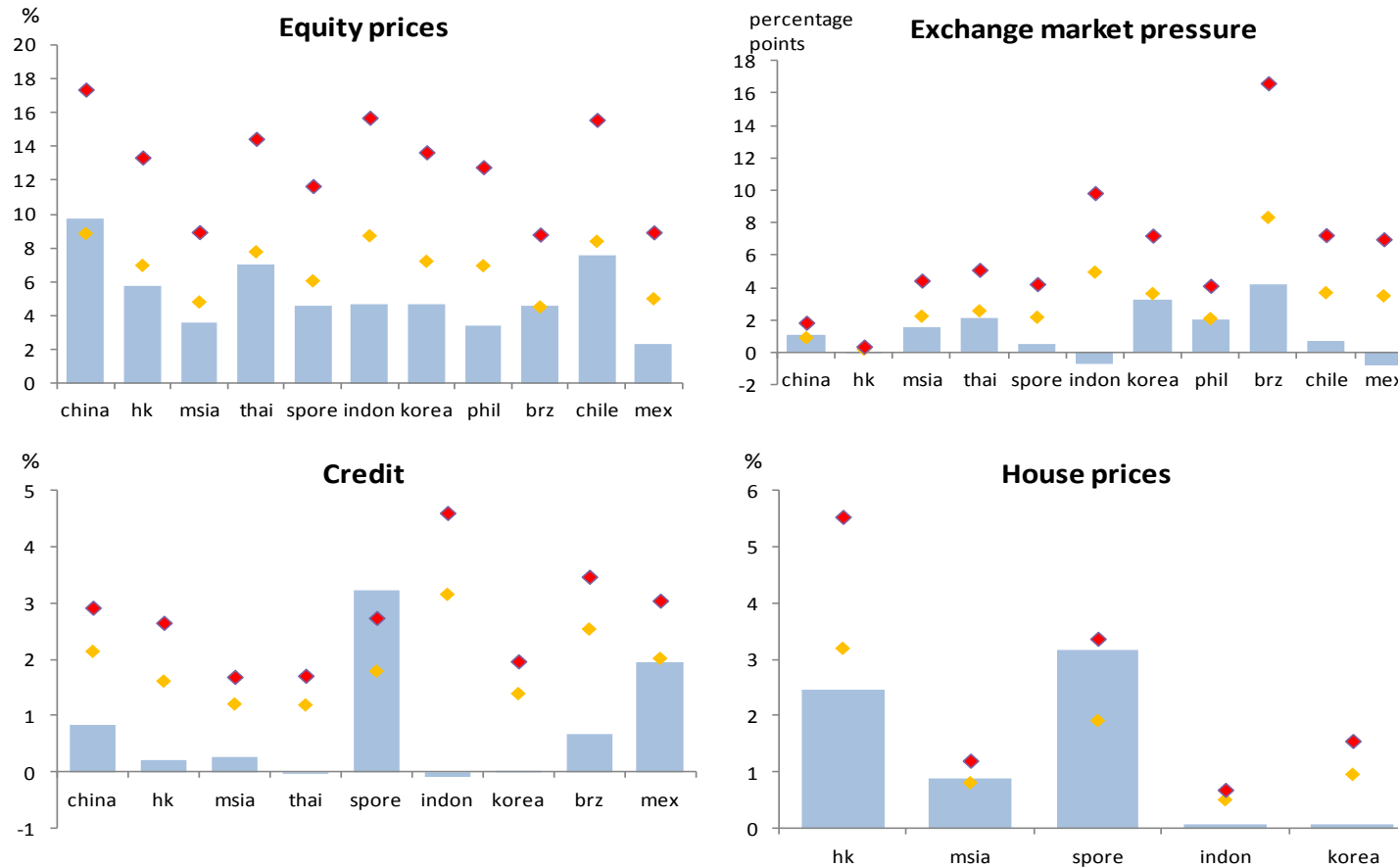
Impact of QE1 liquidity expansion on mom growth in:



# Lesser degree of impact from QE2 compared to QE1

- However, QE2 also caused a significant increase in credit and house prices in Singapore, as observed during QE1

Impact of QE2 liquidity expansion on mom growth in EMEs:



Legend:  Estimated impact  1 std dev above historical average  2 std dev above historical average



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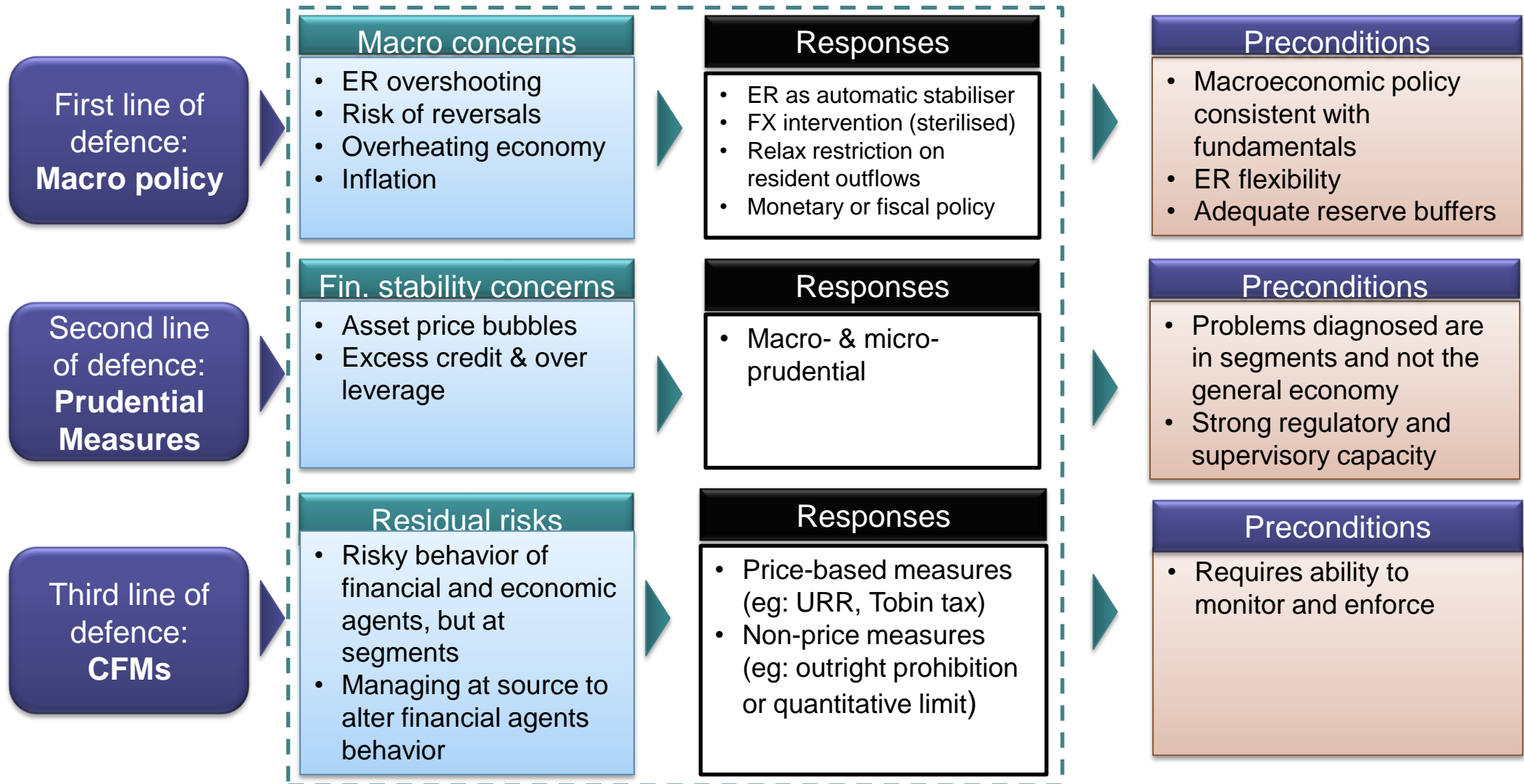
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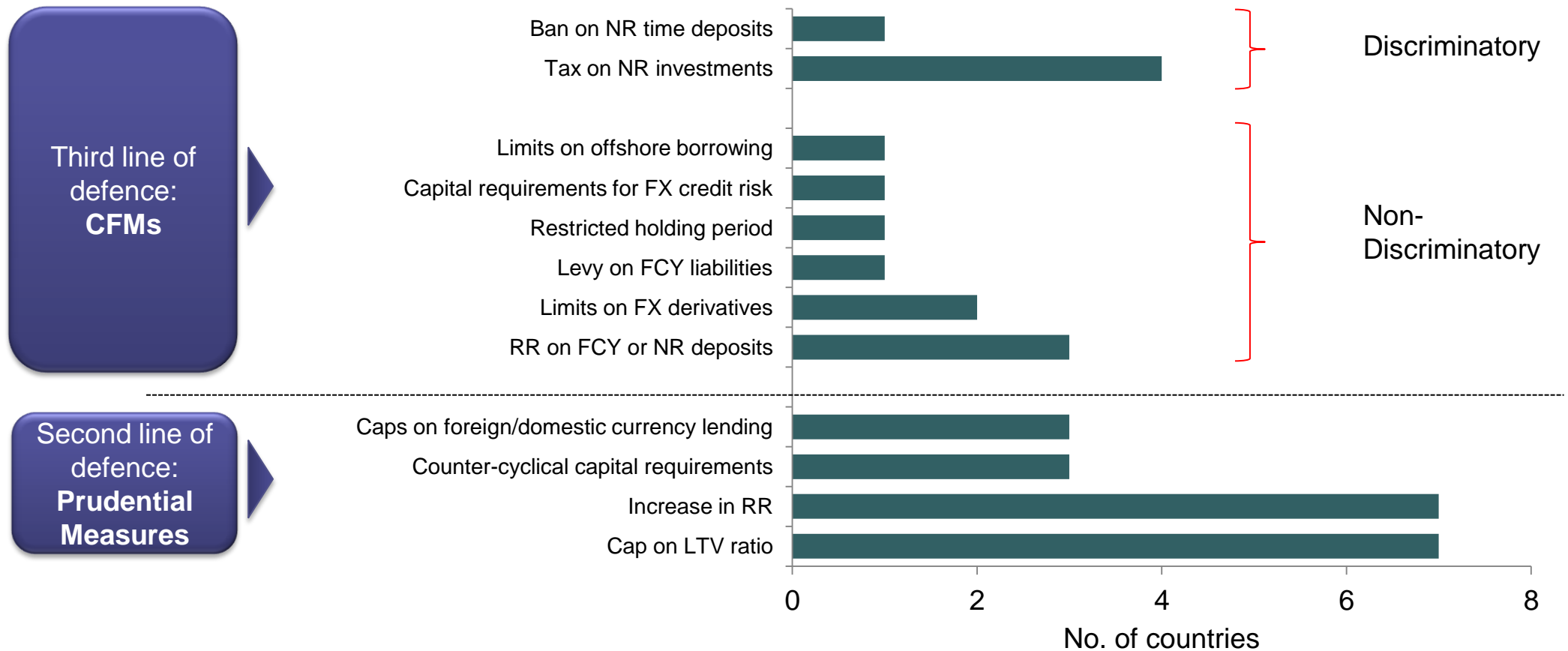
# Three lines of defence in managing spillovers in the EMEs

- Macro policy and prudential measures (PMs) to address macro and financial stability concerns
- Capital flow management measures (CFMs) deployed to manage risks at source



# Survey of measures implemented indicate most EMEs allow capital flow movements but employ PMs as mitigation

- EMEs surveyed broadly allowed appreciation of currencies, with PMs to tackle financial imbalances concerns
- With the exception of Korea, EMEs with less developed financial markets tend to opt for the 3<sup>rd</sup> line of defence
- Those adopted the 3<sup>rd</sup> line of defence tend to opt for measures that do not discriminate investors by residency



Survey based on all EMEs that have implemented some form of measures post-GFC. Countries in the sample include Argentina, Brazil, Chile, India, Indonesia, Malaysia, Mexico, Peru, Philippines, Poland, South Africa, Korea, Taiwan, Thailand, Turkey and Vietnam

# CFMs are more targeted at addressing surges in capital flows but carry significant costs

First line of defence:  
**Macro policy**

## Pros

- Multilateral consistency
- Ensures countries do not use controls as subs. for needed policy adjustments
- Not constrained by international obligations (e.g. FTAs)

## Cons

- Not targeted; policy can have negative repercussions (i.e. reducing interest rates stoke inflation)
- Requires adequate foreign reserves
- FX intervention can be costly
- Loss of policy independence

Second line of defence:  
**Prudential Measures**

- More targeted at specific areas compared to macro policy
- Better at dealing with financial-stability risks
- Able to reduce financial risks without affecting volume of flows

- Ineffective against flows that bypass regulated markets and institutions
- Effectiveness dependent on efficiency of financial sector supervision

Third line of defence:  
**CFMs**

- Flexibility of design; can be broad or targeted
- Allows for independent monetary and fiscal policy

- Potential distortions and spillovers to other countries
- Effectiveness may be temporary due to circumvention
- Policies need to be specifically designed and tailored to different circumstances
- May reduce the “good” flows as well as the “bad”
- Incur costs of monitoring and implementation



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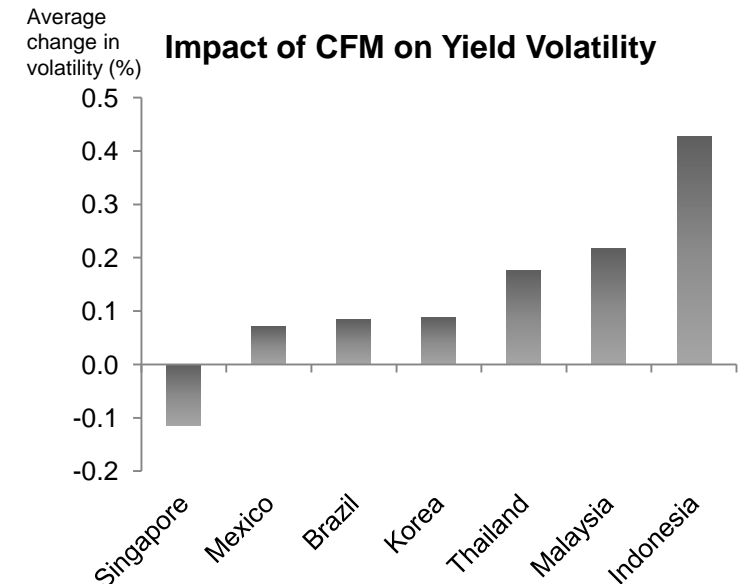
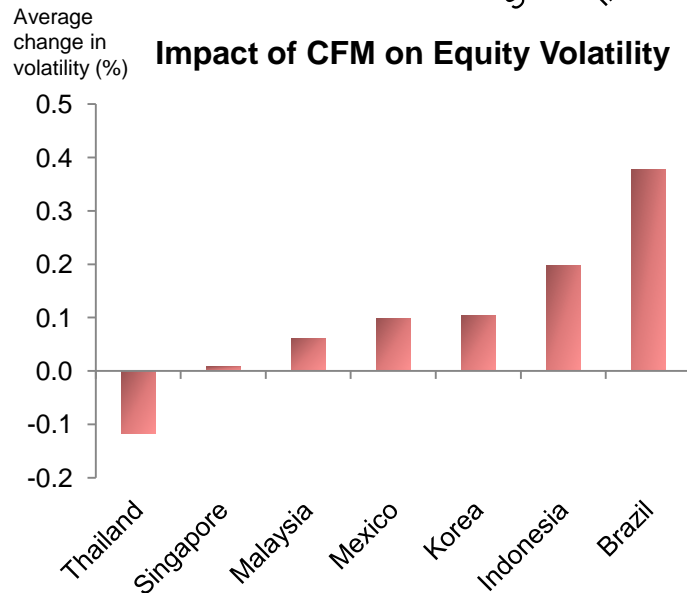
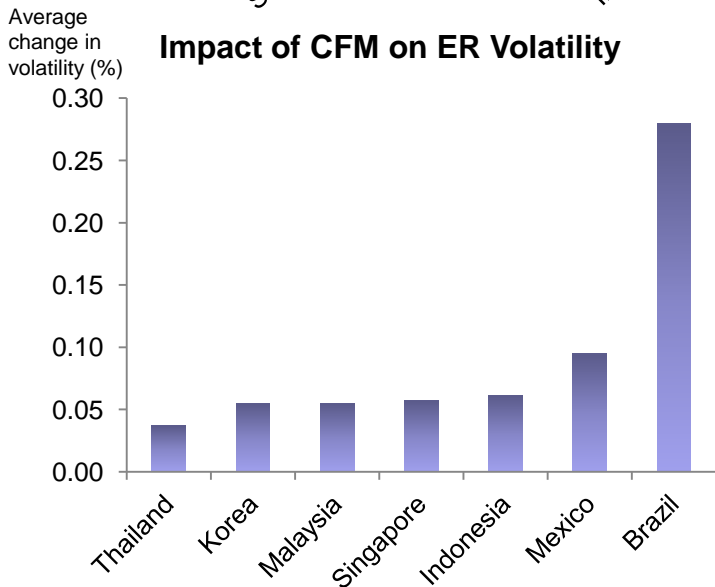
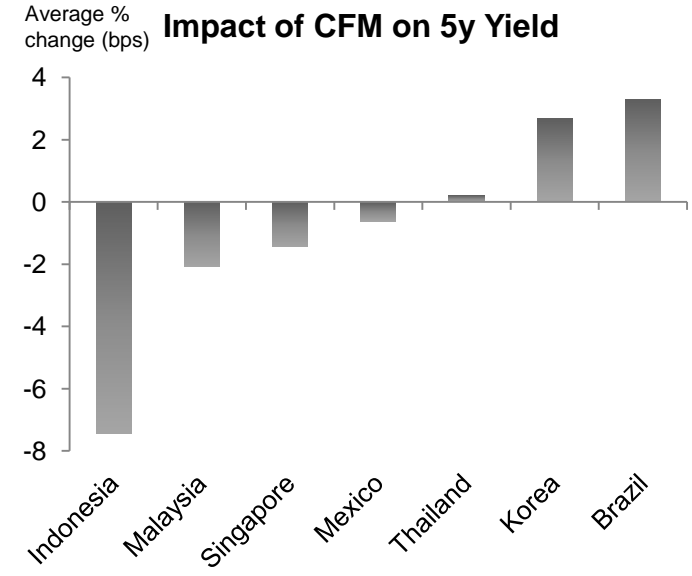
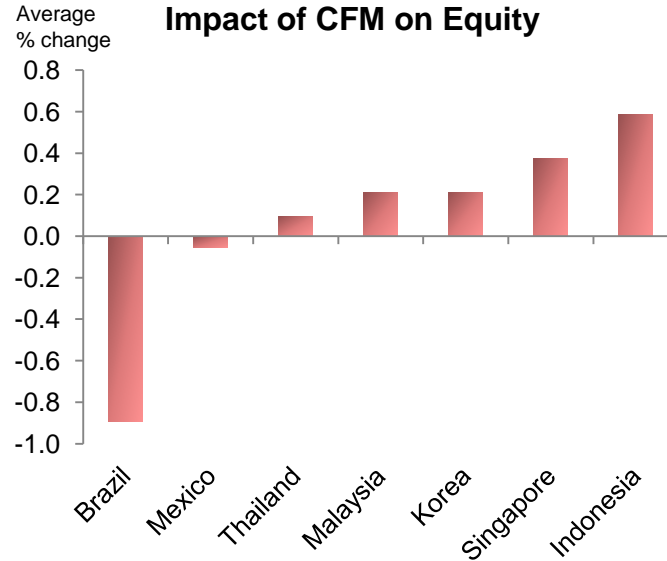
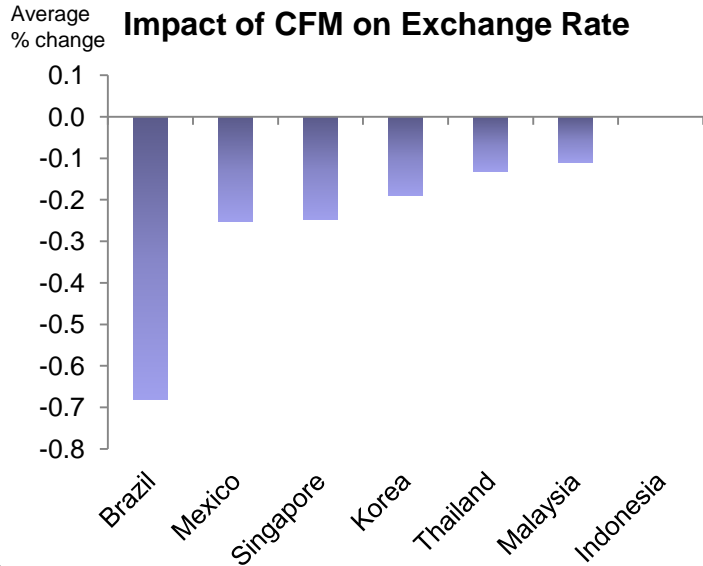
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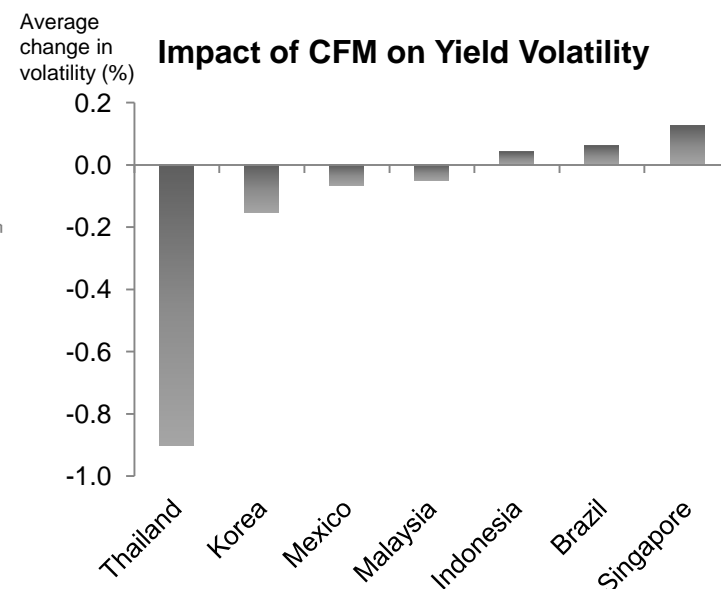
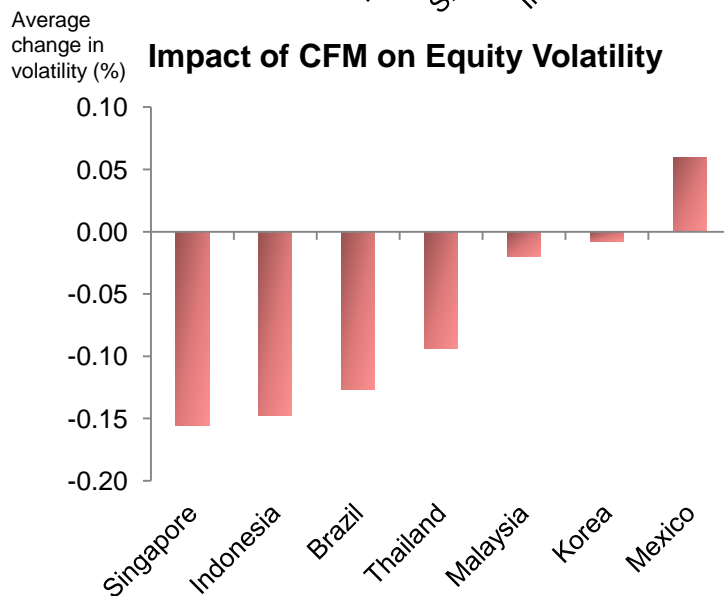
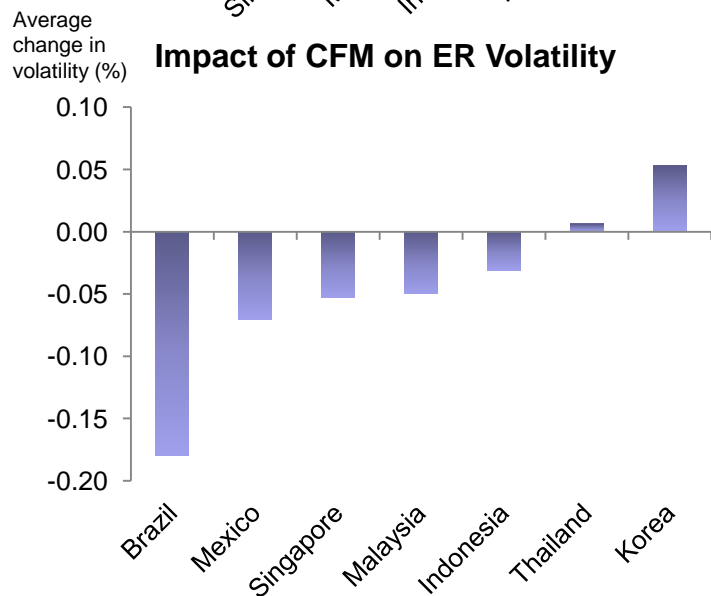
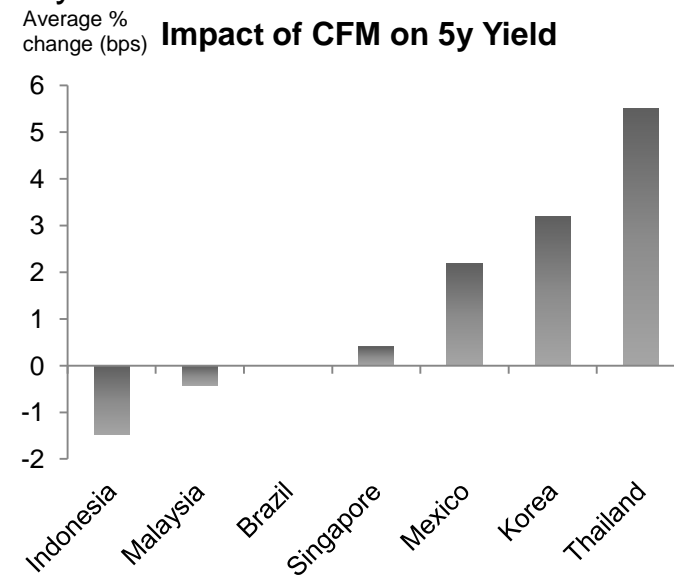
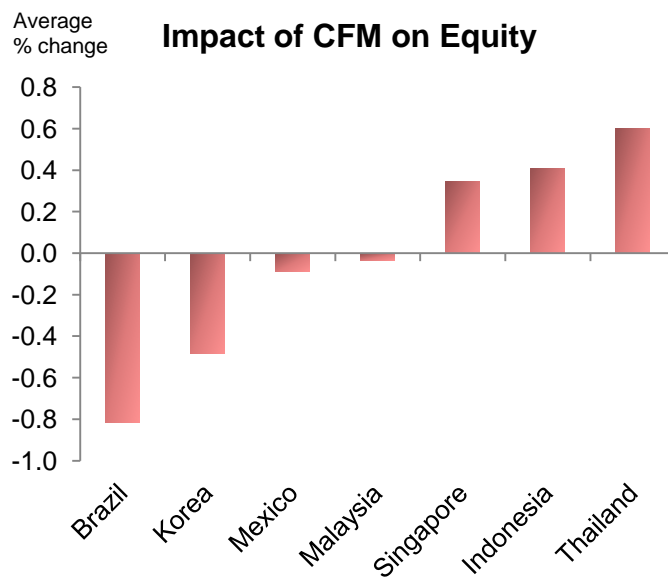
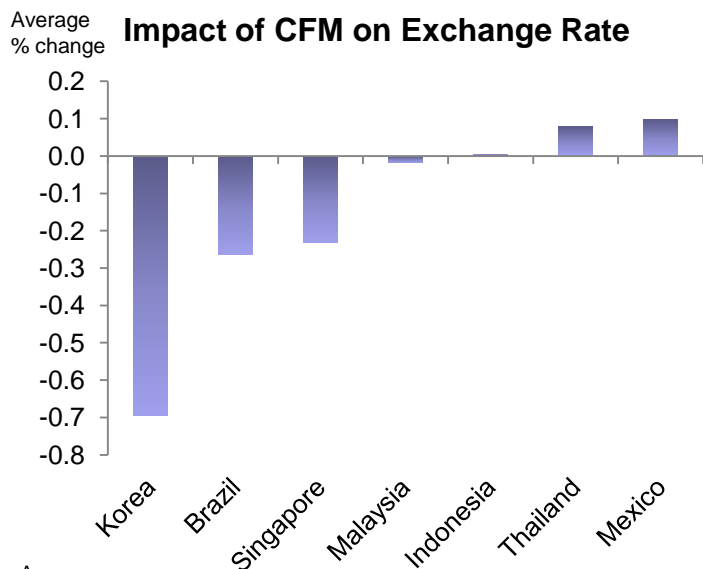
# Brazil's CFMs had clear announcement effects on its financial markets

- The Brazilian real and Bovespa underperformed compared to other EMEs following the announcements of CFMs
- However, CFMs resulted in the sharp rise in market volatility



# Similarly, Korea's CFMs had significant impact

- While the trade off of higher volatility was still present, the jump in volatility was significantly less severe than Brazil's
- The lower volatility could be due to the different communication strategies employed by Brazilian and Korean authorities



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# Conclusion

- Non-trivial financial spillovers from QEs to EMEs
  - QE contributed to financial risks and potential vulnerabilities in EMEs
- EMEs responded using multitude of measures to manage the risks
  - Necessitate much thinking by policymakers on clarity in terms choices of policy, managing tradeoffs and potential leakages or regulatory arbitrage
- CFMs could attenuate the magnitude of capital flows through short-term announcement effects, but these effects may not last
  - CFMs could even heighten financial markets volatility
  - Transparent and anticipatory communication could mitigate the resulting side effect in the form of market volatility



# Moving the conversation forward

- Prolonged sub-par growth in advanced economies imply extended period of monetary easing and hence sustained financial spillovers to EMEs
  - Managing policy tradeoffs could be more challenging
  - Would forward guidance on measures with implications on capital flows help anchor expectations and ensure orderly global financial markets adjustments?
- What does the unwinding of QE imply?
  - A potential sharp and significant reversals of capital flows?
  - Reinforce the existing lines of defence?

