



China's Footprints on the Global Economy

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Federal Reserve Board

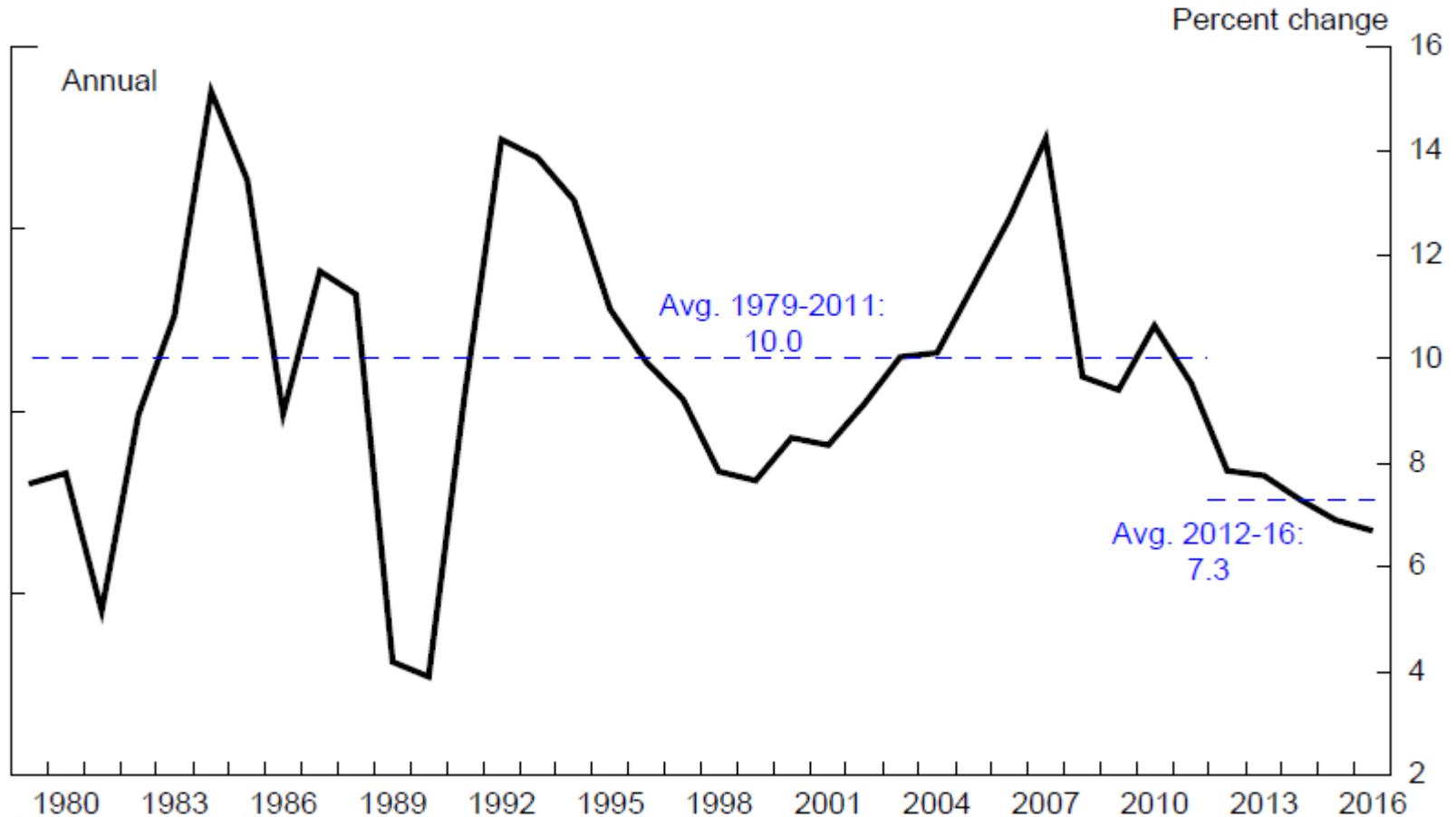
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* The views expressed in this presentation are my own and should not be interpreted as reflecting the views of the Board of Governors of the Federal Reserve System or any other person associated with the Federal Reserve System.

CHINA'S RISE

Double-digit growth for several decades

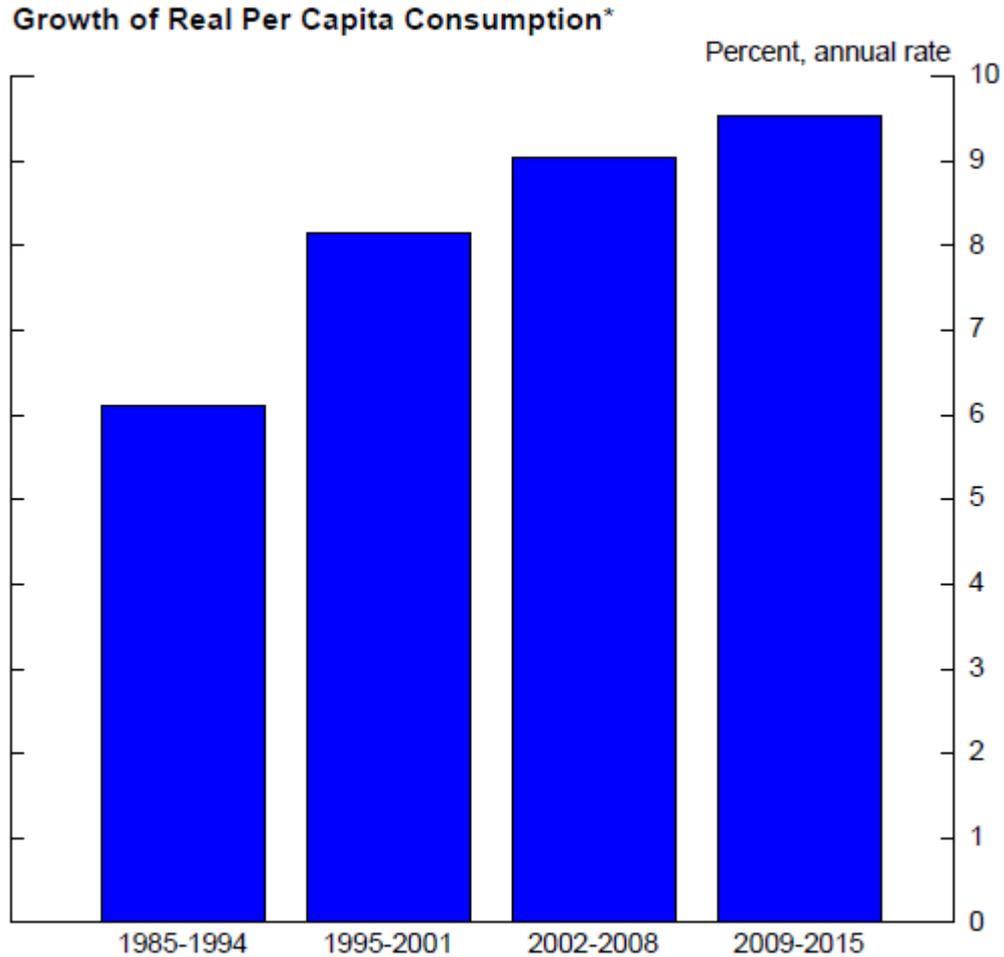
Real GDP Growth



Source: Haver Analytics.

CHINA'S RISE

Increased economic welfare



* Private consumption only.
Source: Haver Analytics.

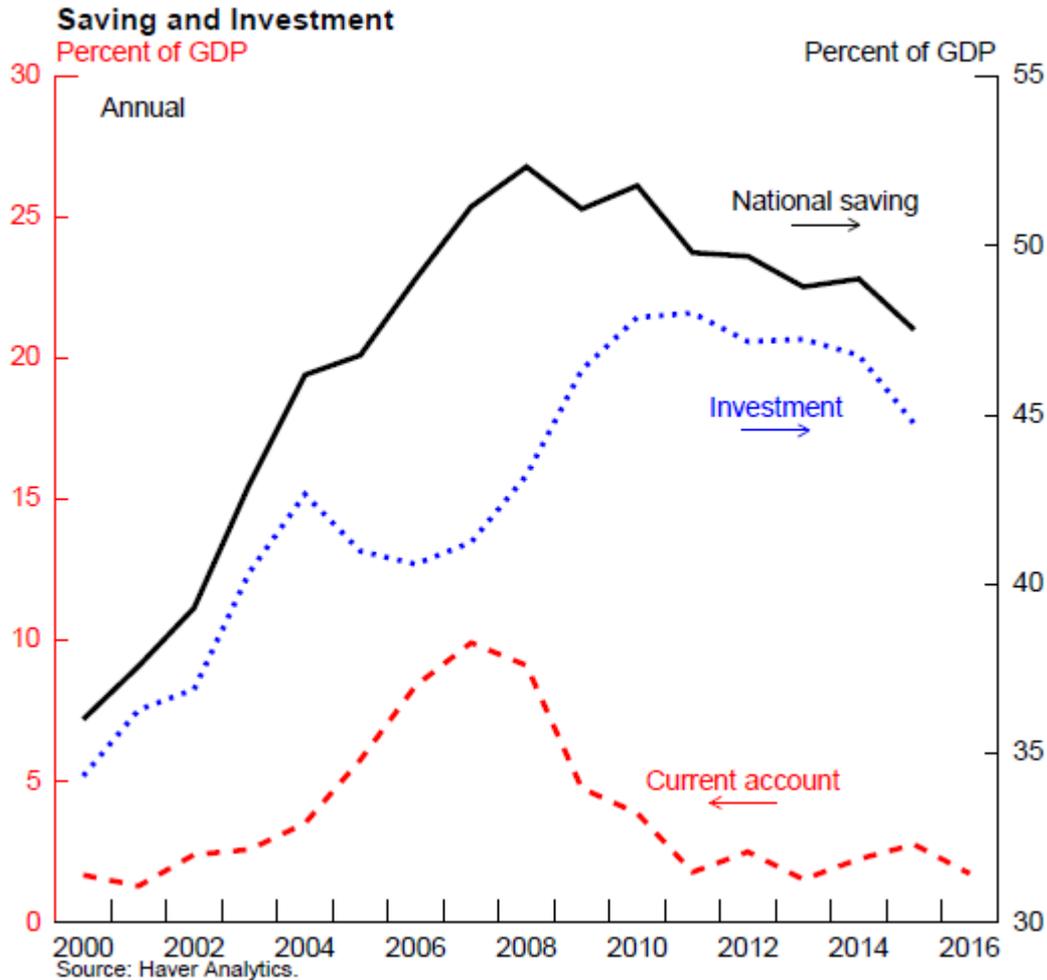
CHINA'S RISE

Strong export growth supported by export-led investment



CHINA'S RISE

Exports outpaced imports; buildup of large current account surplus



CHINA'S RISE

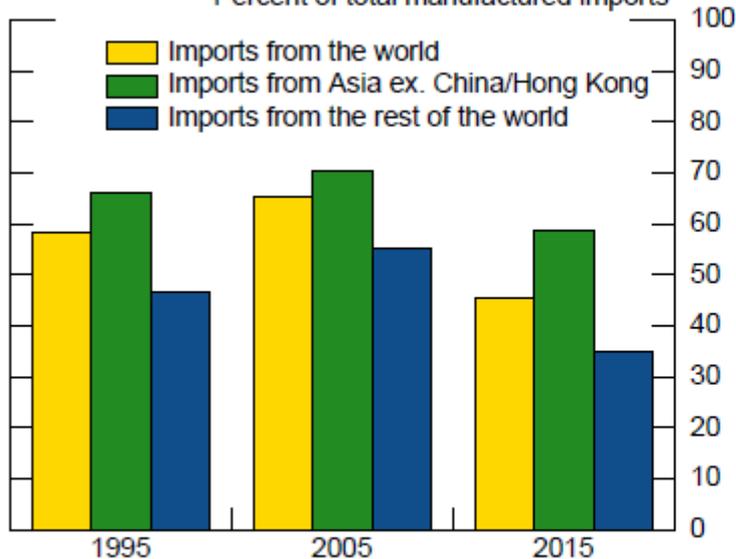
Lower consumption share of GDP than other EMEs



CHINA'S RISE: SPILLOVERS

China: Endpoint of a giant Asian supply chain

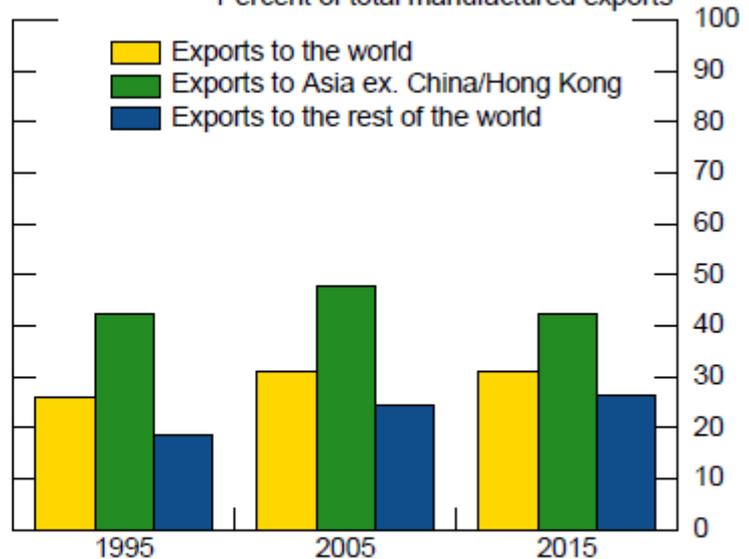
China*: Imports of Parts and Components
Percent of total manufactured imports



* Includes Hong Kong.

Source: FRB staff estimates based on United Nations Comtrade data. Updated using the methodology of Haltmaier et. al (2007). Asia ex. China includes following selection in Comtrade: India, Indonesia, Japan, Malaysia, Philippines, Singapore, South Korea, Thailand, Vietnam, and Other Asia.

China*: Exports of Parts and Components
Percent of total manufactured exports



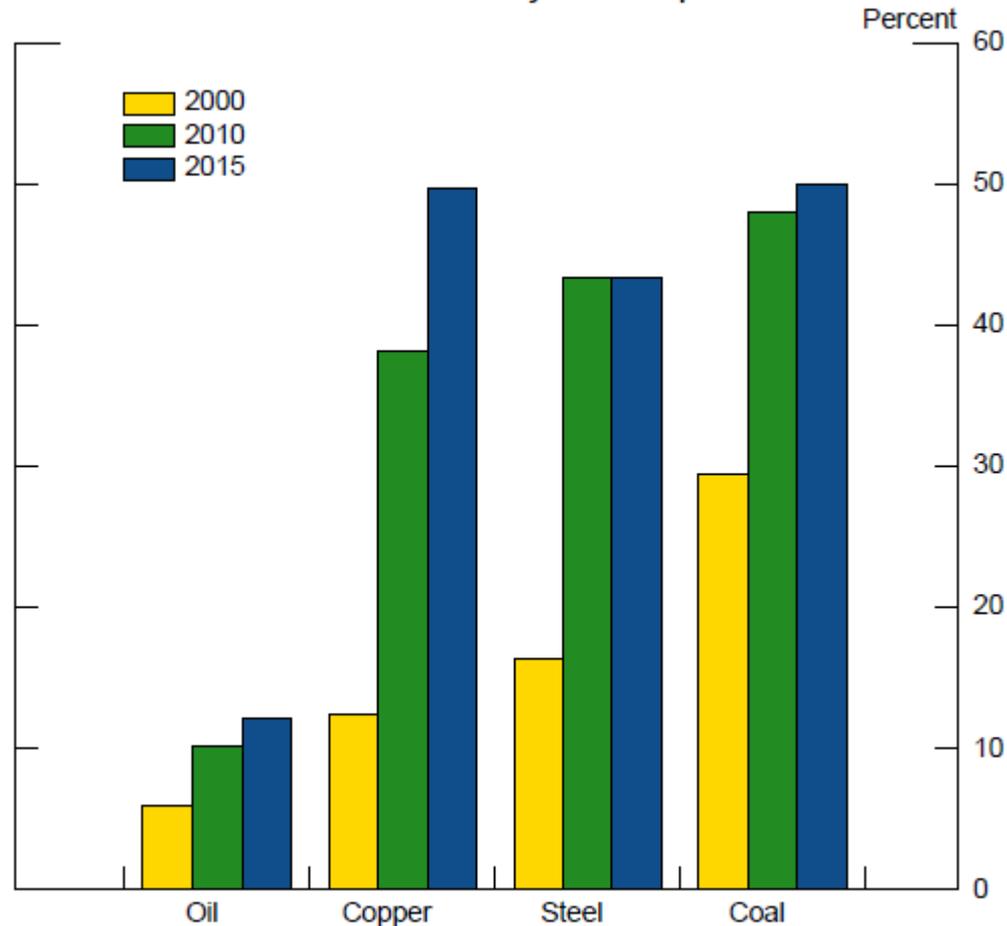
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CHINA'S RISE: SPILLOVERS

China's voracious appetite for commodities

China's Share of Global Commodity Consumption

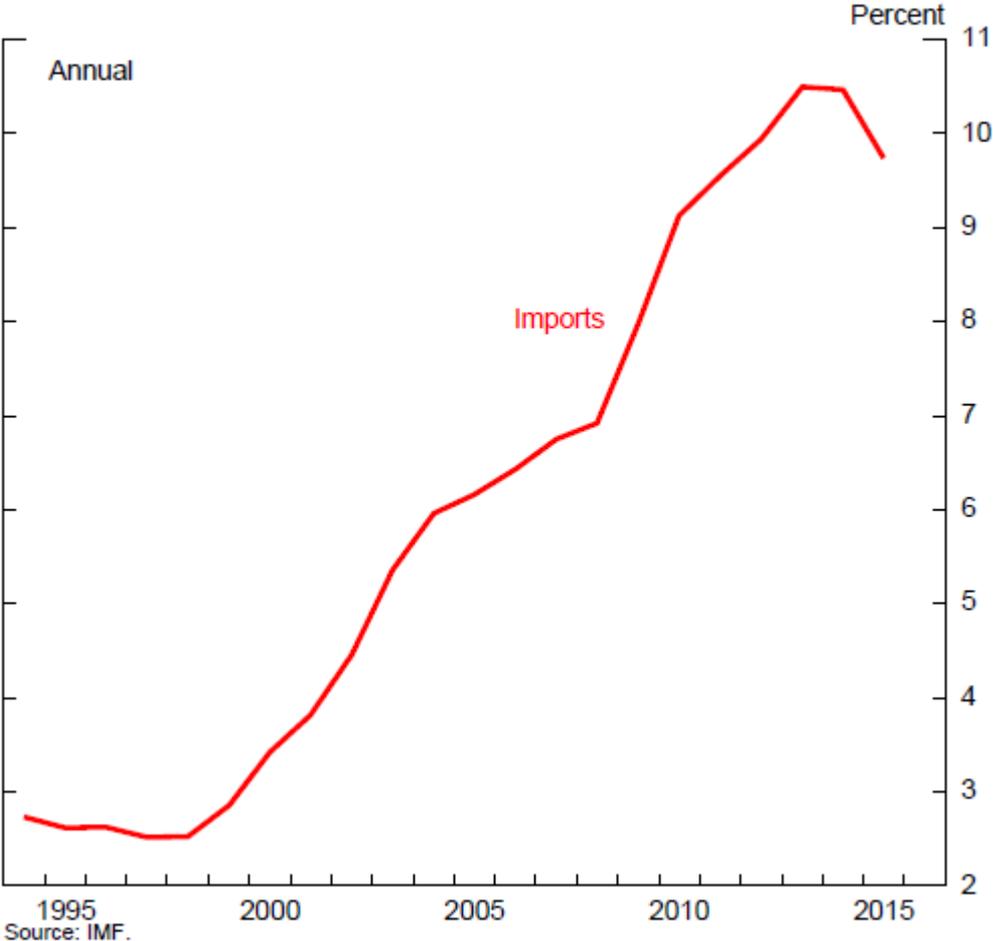


Source: Oil from International Energy Association, copper from Bloomberg, steel from Worldsteel Association's Steel Statistical Yearbook 2016, and coal from BP Statistical Review of World Energy, June 2016.

CHINA'S RISE: SPILLOVERS

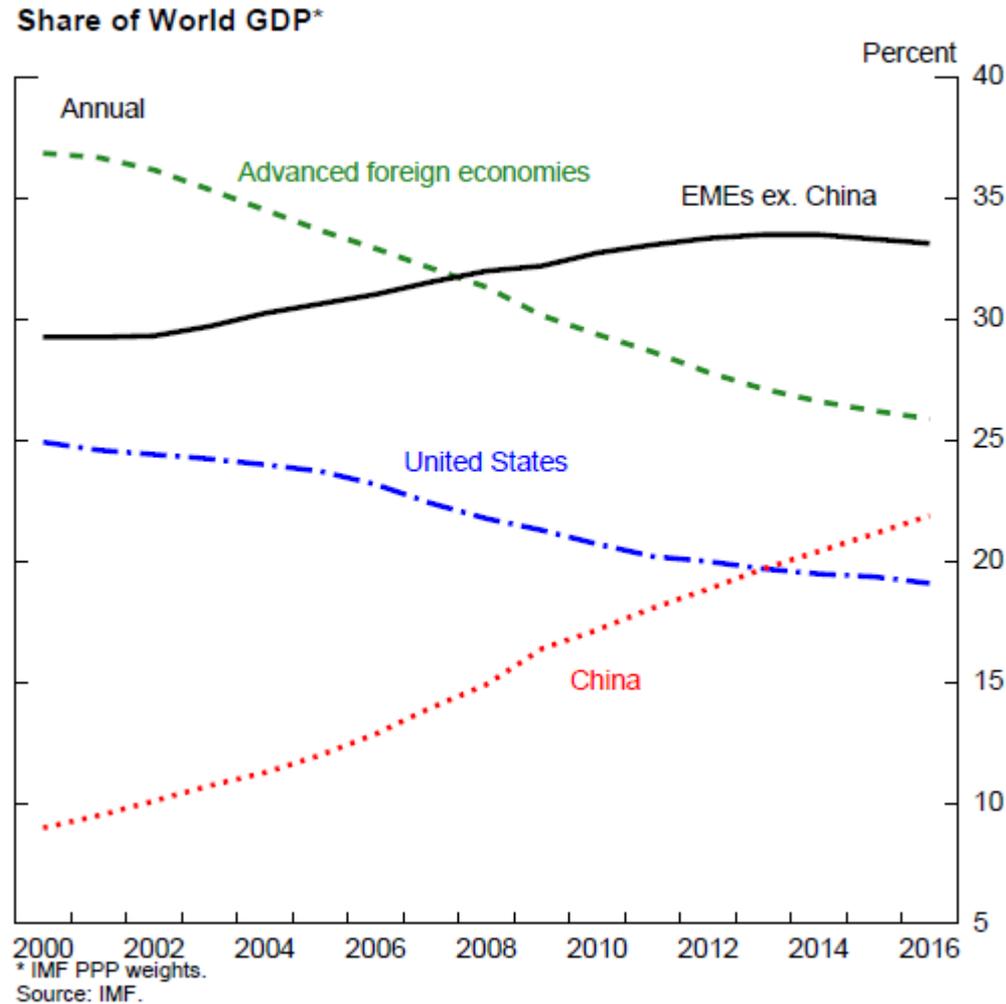
Double-digit share of world trade now

China's Share of World Trade



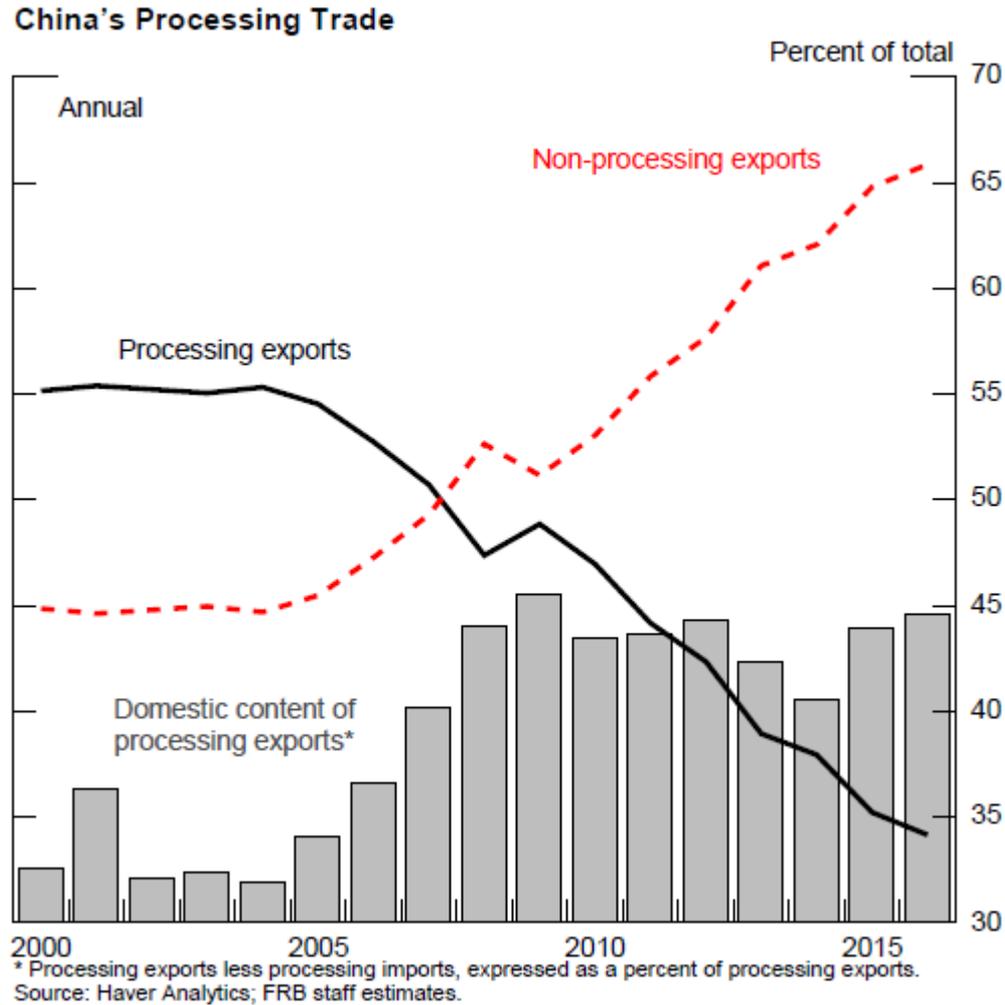
CHINA'S RISE: SPILLOVERS

China + other EMEs now account for more than ½ of world GDP



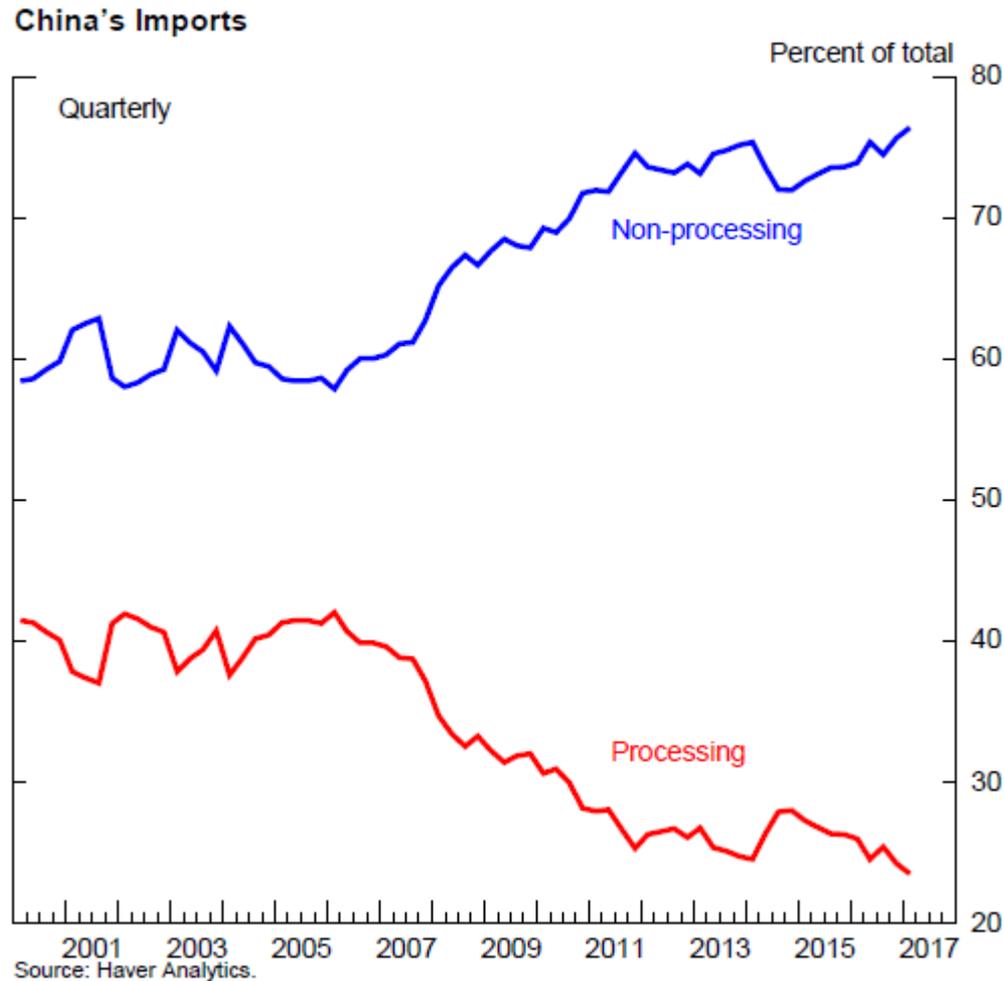
CHINA'S RISE: SPILLOVERS

Declining import content in Chinese exports. . .



CHINA'S RISE: SPILLOVERS

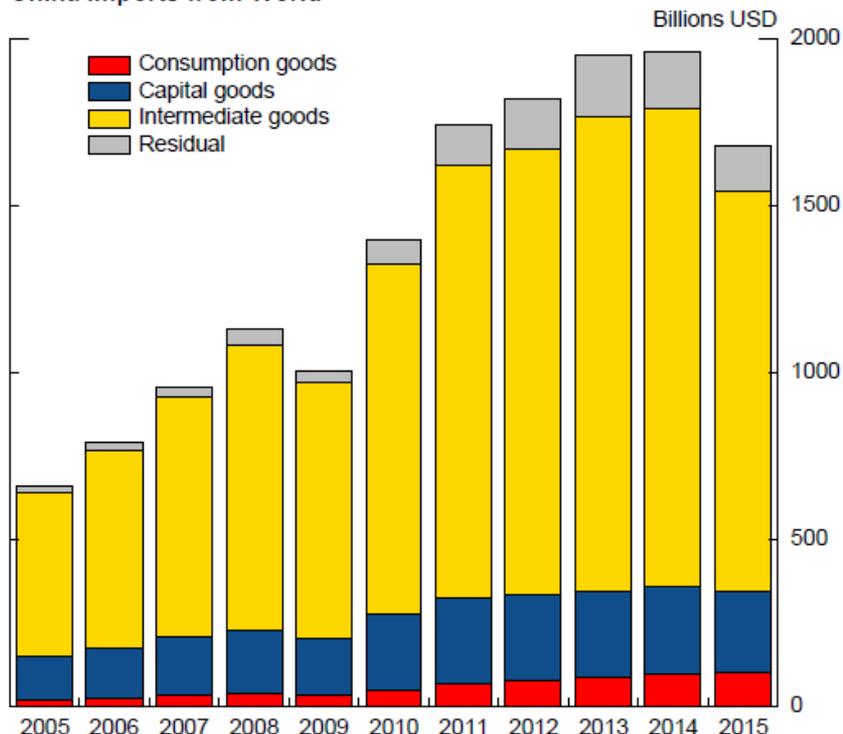
...Is reflected also in the changing nature of Chinese imports



CHINA'S RISE: SPILLOVERS

Rising share of consumption goods in imports but from low base

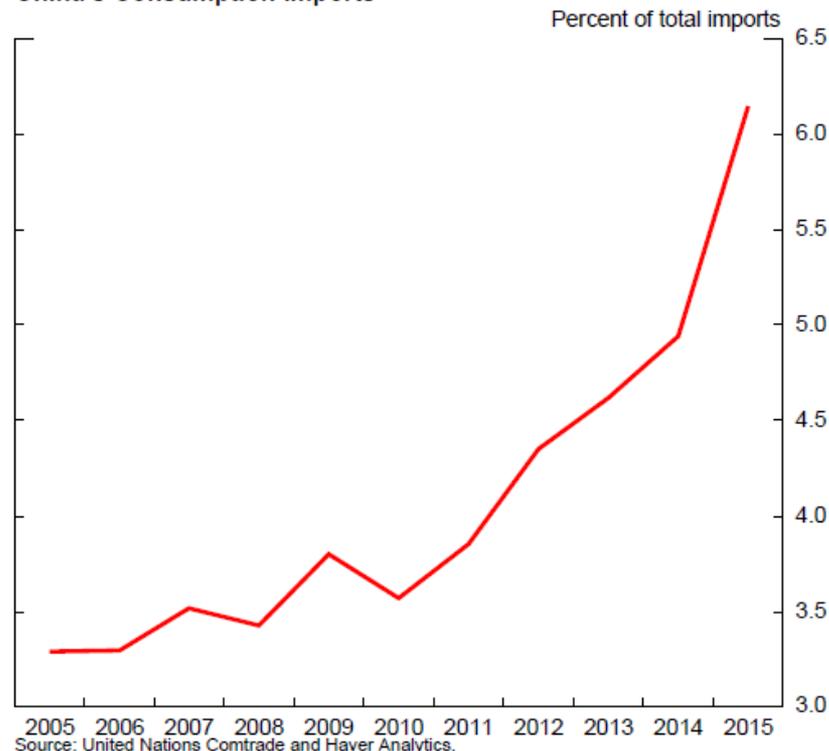
China Imports from World*



* Imports are classified into consumption, capital, and intermediate goods according to the UN Broad Economic Categories classification system (Rev. 4). Consumption goods include the following: primary and processed food and beverages for household consumption, non-industrial transport equipment and parts and accessories, and durable and semi- and non-durable consumer goods not elsewhere specified.

Source: United Nations Comtrade.

China's Consumption Imports

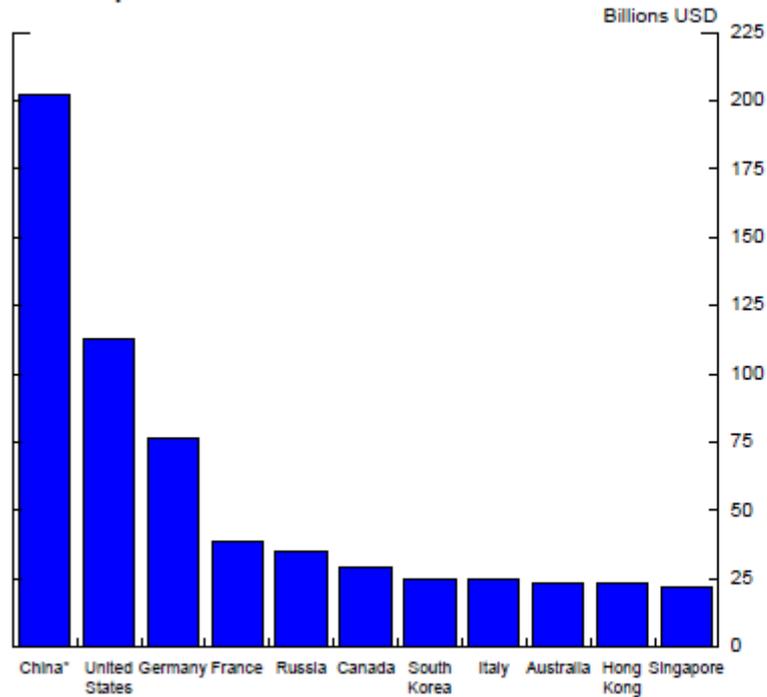


Source: United Nations Comtrade and Haver Analytics.

CHINA'S RISE: SPILLOVERS

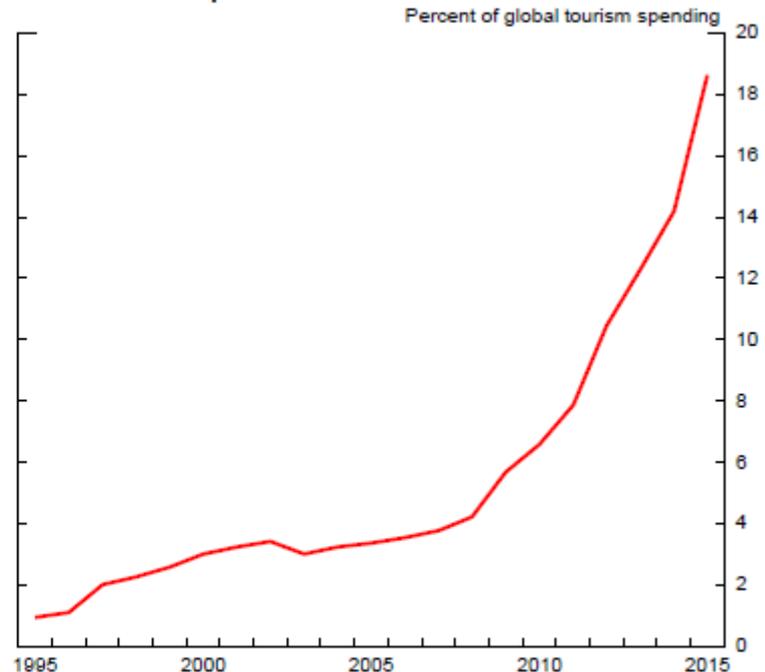
Services Imports: Strong Rise in Tourism

Travel Imports: 2015



* Adjusted for disguised capital outflows (Wong, 2017).
Source: UN World Tourism Organization; FRB Staff Estimate.

China's Travel Imports*



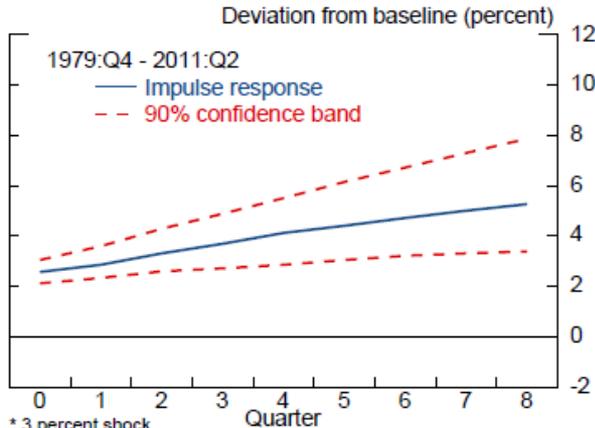
* Adjusted for underreporting before 2013 and disguised capital outflows since 2013 (Wong, 2017).
Source: UN World Tourism Organization; FRB Staff Estimate.

CHINA'S RISE: SPILLOVERS

Effect of 3 percent China real GDP shock: Full sample

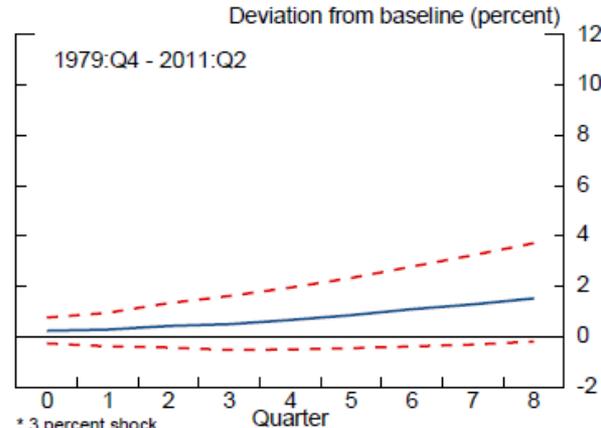
GVAR

Effect of China Shock* on China Growth



* 3 percent shock.
Source: FRB staff estimates.

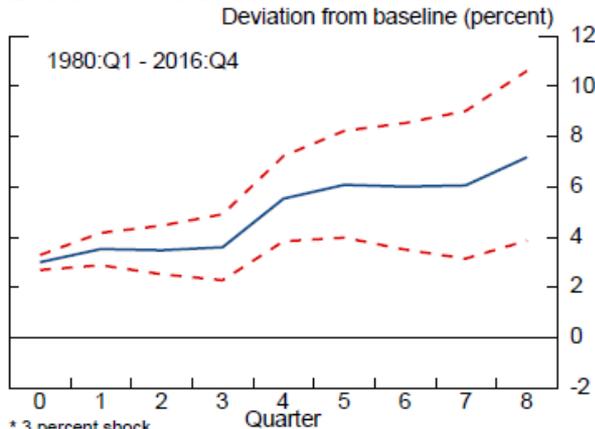
Effect of China Shock* on other EME Growth



* 3 percent shock.
Source: FRB staff estimates.

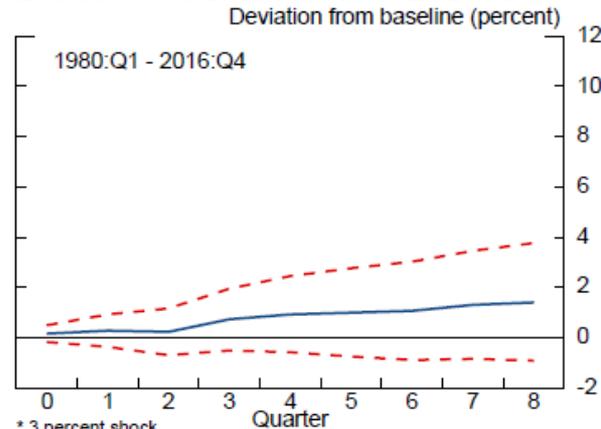
Simple VAR

Effect of China Shock* on China Growth



* 3 percent shock.
Source: FRB staff estimates.

Effect of China Shock* on other EME Growth

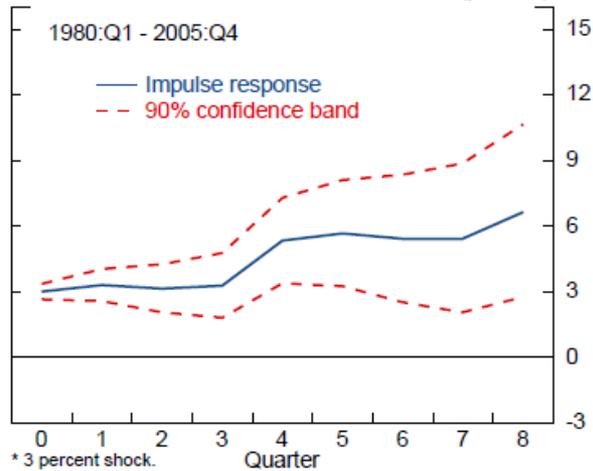


* 3 percent shock.
Source: FRB staff estimates.

CHINA'S RISE: SPILLOVERS

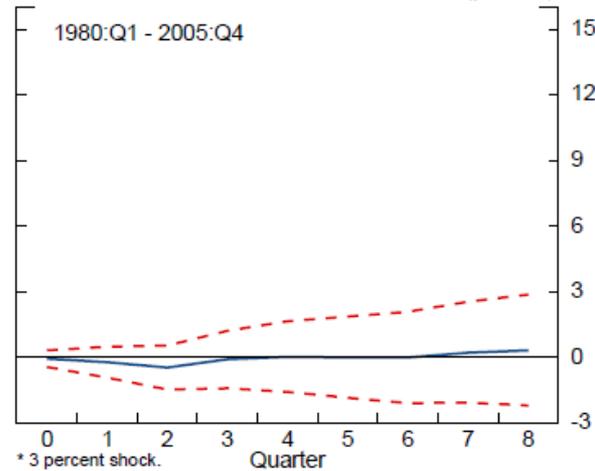
Effect of 3 percent China real GDP shock: Simple VAR

Effect of China Shock* on China Growth
Deviation from baseline (percent)



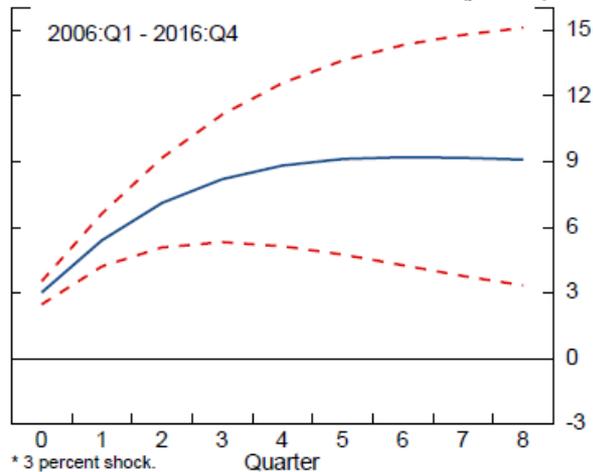
* 3 percent shock.
Source: FRB staff estimates.

Effect of China Shock* on other EME Growth
Deviation from baseline (percent)



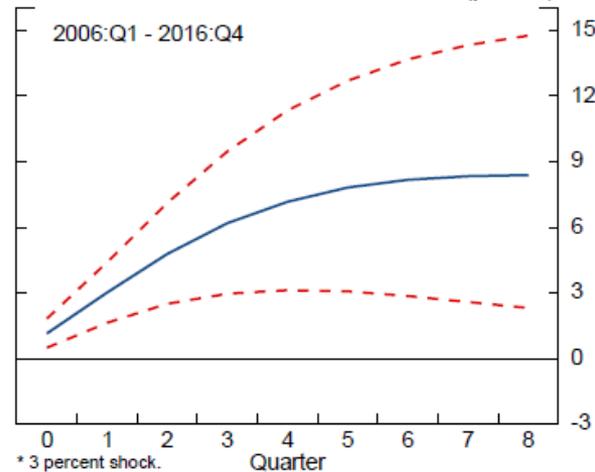
* 3 percent shock.
Source: FRB staff estimates.

Effect of China Shock* on China Growth
Deviation from baseline (percent)



* 3 percent shock.
Source: FRB staff estimates.

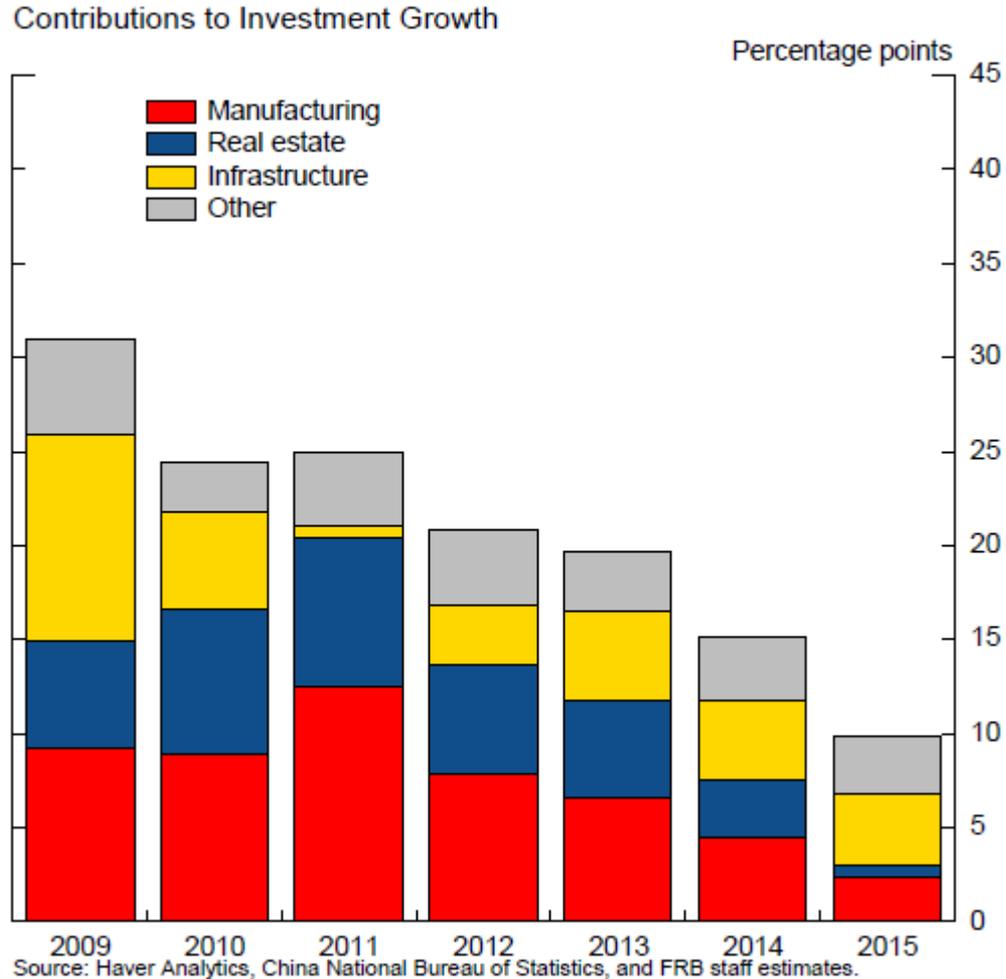
Effect of China Shock* on other EME Growth
Deviation from baseline (percent)



* 3 percent shock.
Source: FRB staff estimates.

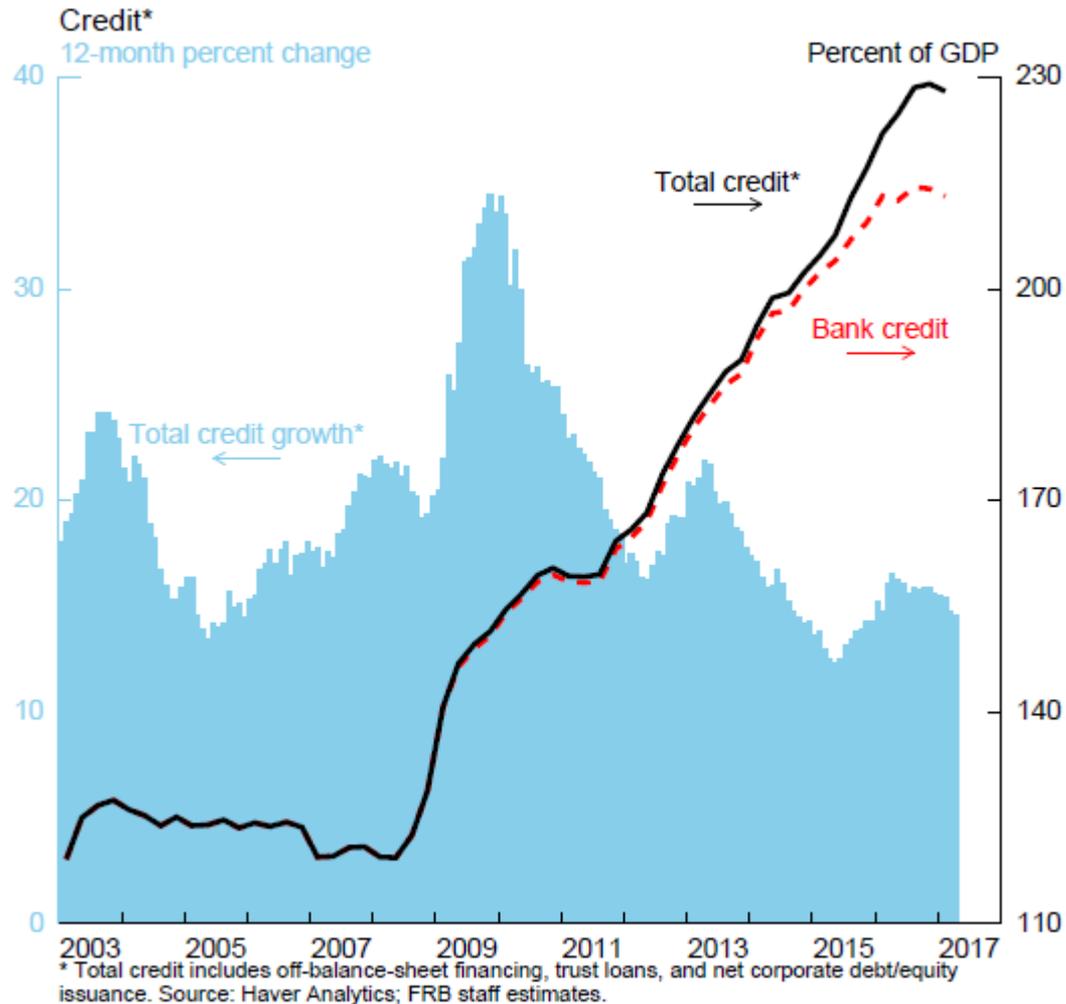
CHINA AT A CROSSROADS: RISKS

Overinvestment and excess capacity



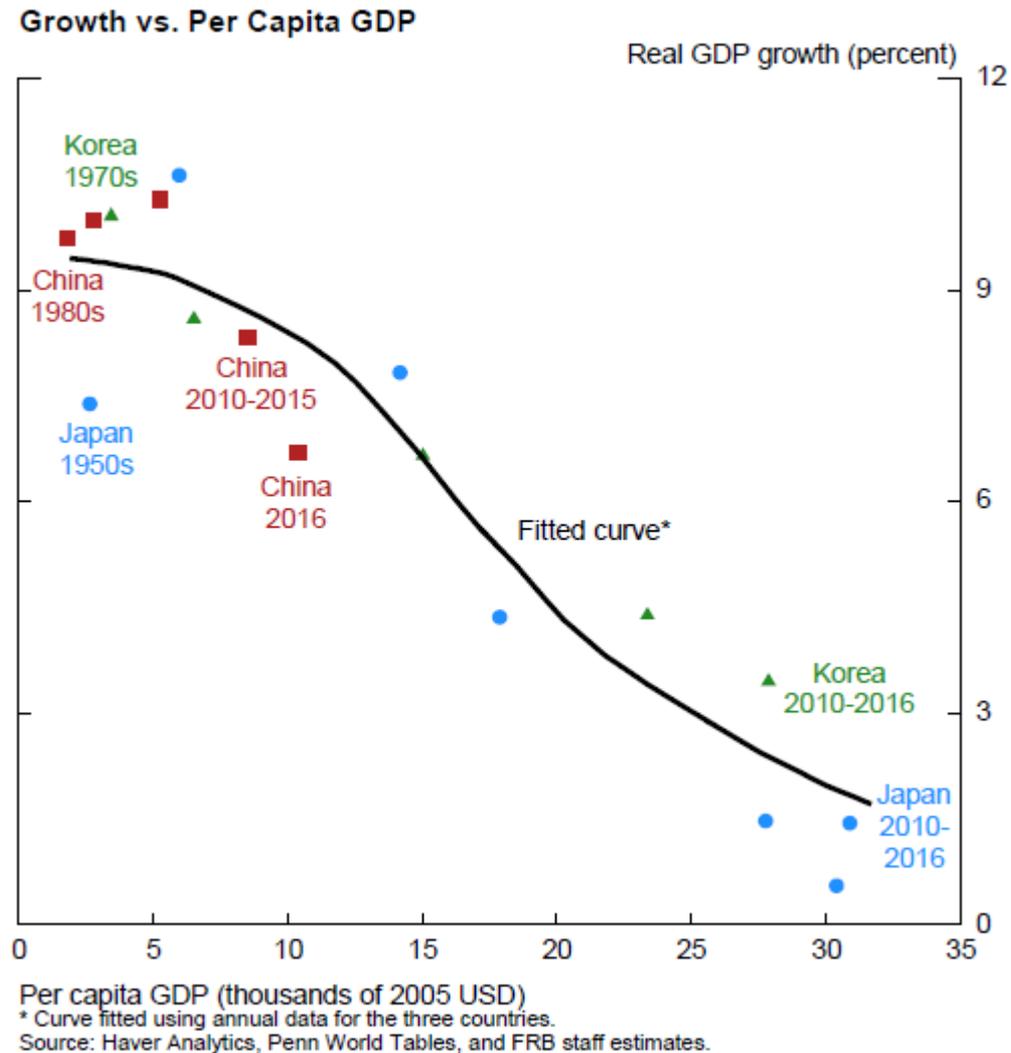
CHINA AT A CROSSROADS: RISKS

Massive credit boom, fueled increasingly by nontraditional credit



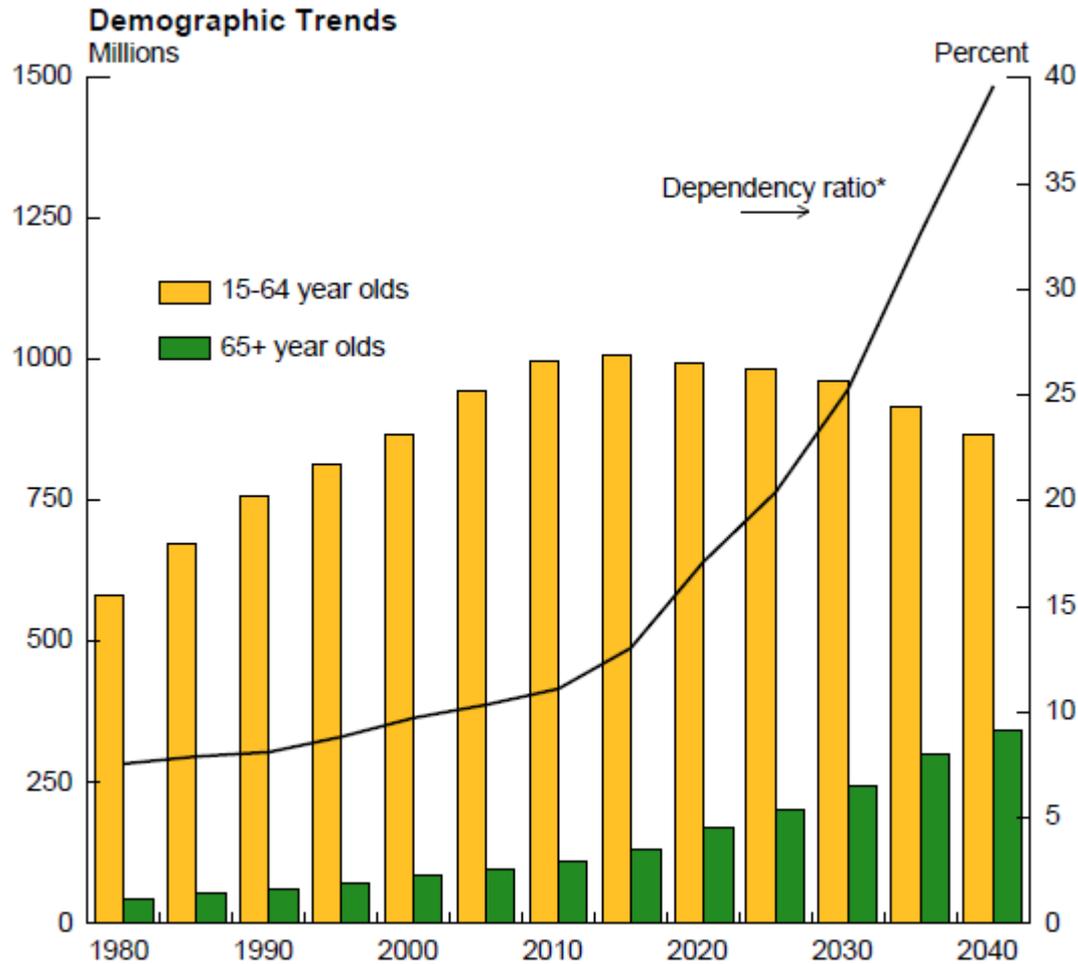
CHINA AT A CROSSROADS: CHALLENGES

Slowing potential growth, but partly a result of catching up



CHINA AT A CROSSROADS: CHALLENGES

Slowing potential: Headwinds from demographic changes



* 65+ as share of adult population.
Source: UN World Population Prospects.

CHINA SLOWDOWN: GLOBAL EFFECTS

FRB SIGMA Model + VAR results to quantify effects of China shock

- Some key features of SIGMA:
 - Open economy, GE model
 - Monetary policy follows Taylor rule (but with ZLB constraint)
- SIGMA consists of three blocks, calibrated to the U.S. economy, advanced foreign economies (AFEs), and EMEs
- To quantify China slowdown effects, need impact on other EMEs
 - Use VAR results to characterize spillovers through “standard” (mainly trade) channels = $\frac{1}{2}$ the China response

CHINA SLOWDOWN: GLOBAL EFFECTS

Three scenarios examined

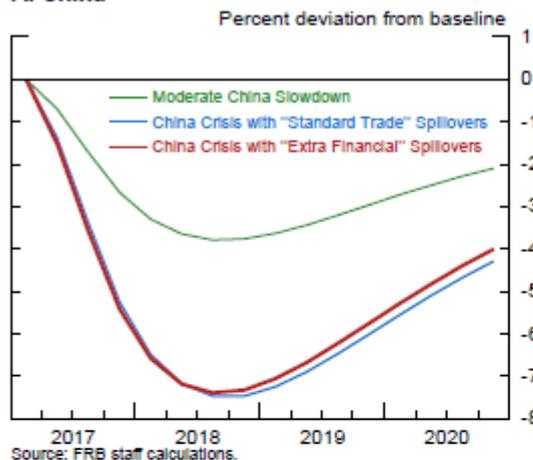
- Scenarios generated in SIGMA through shocks to exchange risk premium, confidence, corporate spreads, and interest rates
- Scenario 1: Moderate China slowdown with “standard trade” spillovers
- Scenario 2: China crisis also with “standard trade” spillovers:
- Scenario 3: China crisis with “extra financial” spillovers
 - EME response 1-to-1, rather than $\frac{1}{2}$

CHINA SLOWDOWN: GLOBAL EFFECTS

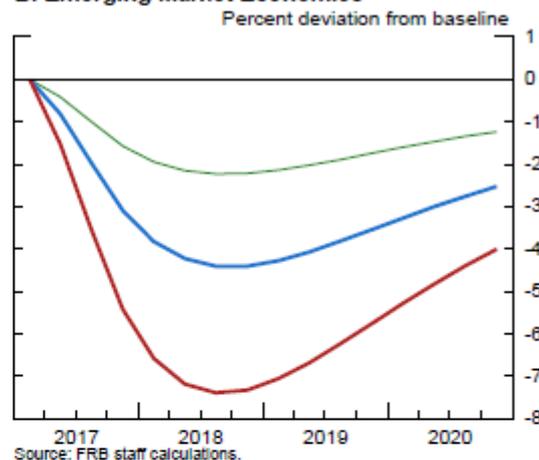
China crisis would hit EMEs and AFEs hard; significant U.S. effect too

Real GDP, Level

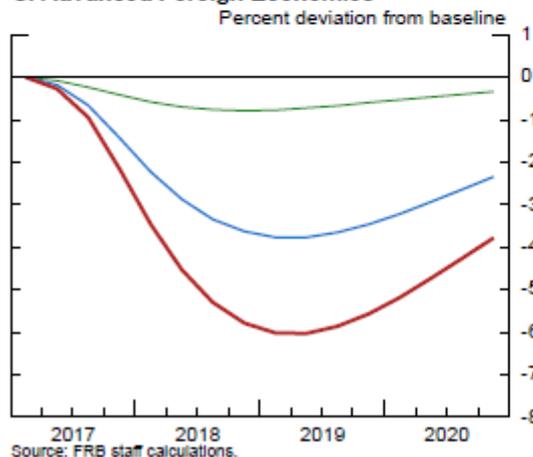
A. China



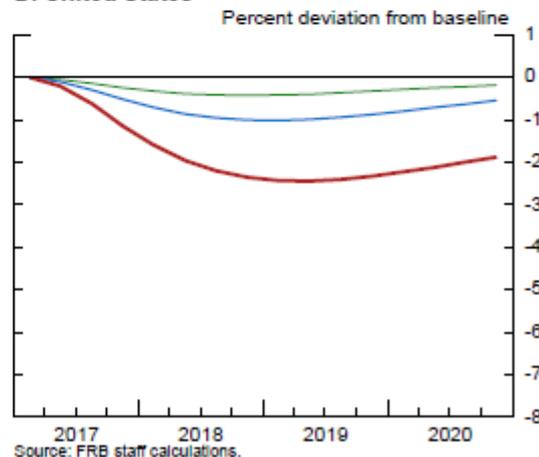
B. Emerging Market Economies



C. Advanced Foreign Economies



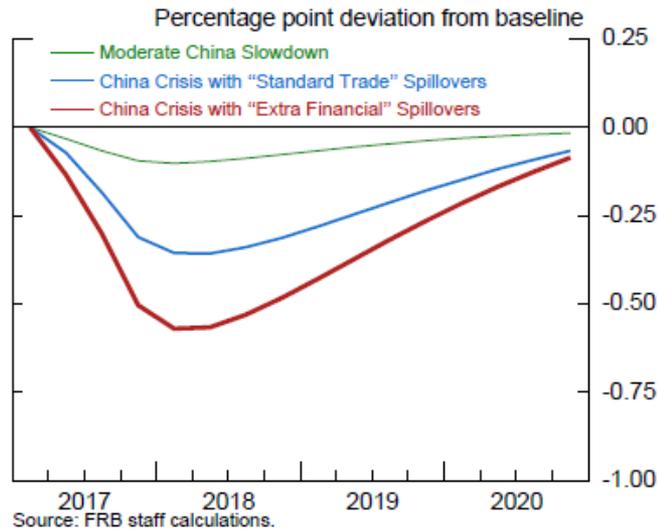
D. United States



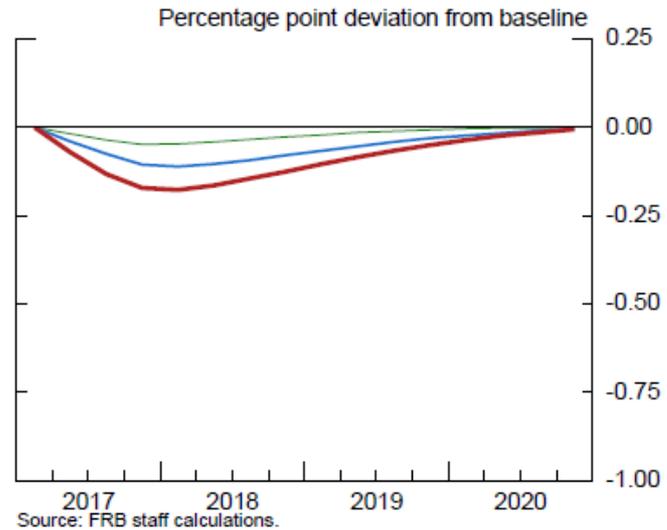
CHINA SLOWDOWN: GLOBAL EFFECTS

Inflation also falls; one key channel of transmission is the dollar

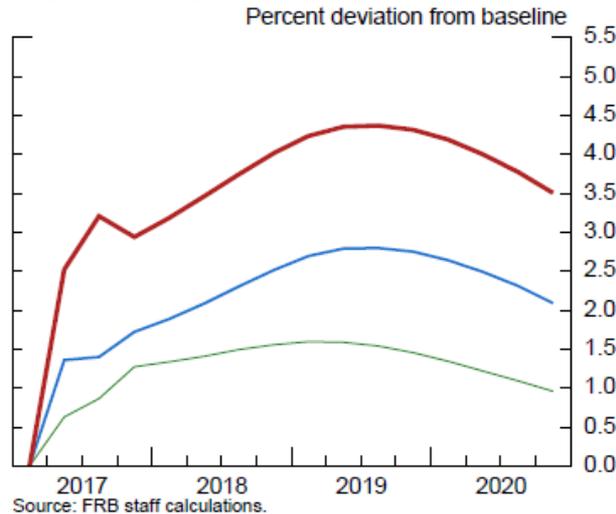
A. AFE Core Inflation



B. United States Core Inflation



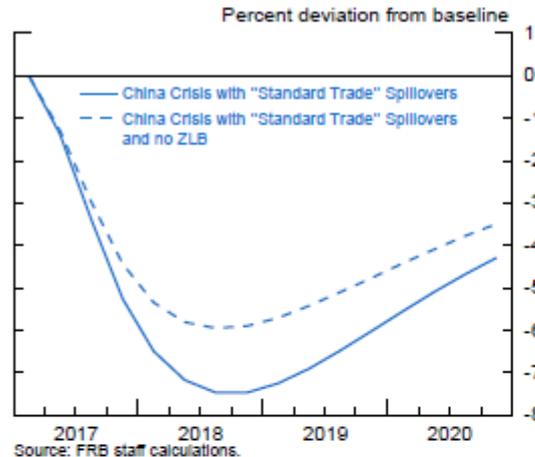
C. Broad Real Dollar



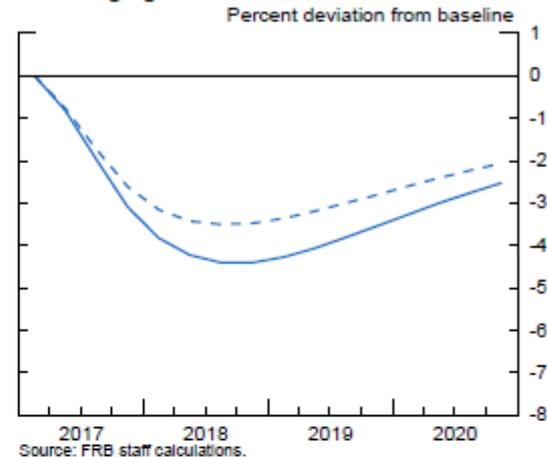
CHINA SLOWDOWN: GLOBAL EFFECTS

AFE effects bigger now—more limited scope for monetary policy

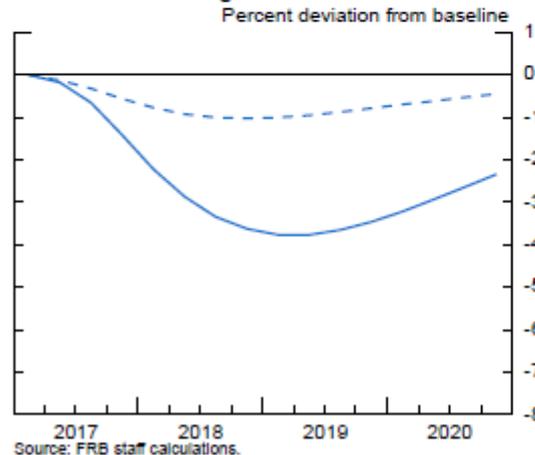
A. China



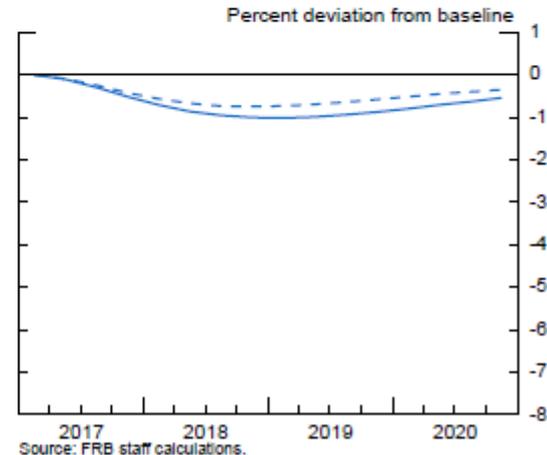
B. Emerging Market Economies



C. Advanced Foreign Economies



D. United States



CHINA: REDUCING VULNERABILITIES

- Policies to reduce economy's saving rate
 - Increased social sector spending to reduce household precautionary savings
 - More dividend payouts by SOEs to reduce business savings
- Less orientation of fiscal policies toward investment
- Reinvigorate the private sector as an engine of growth
 - Reforms of SOEs are crucial
- Continue progress toward exchange rate flexibility