



The Economics of Fluid Power

2018 CFPA AGM

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Powering Business Worldwide

Agenda

1. Introduction

2. The global economy

3. Fluid power markets and their drivers

4. Conclusion

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1. Introduction
- 2. The global economy**
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What I told you last year:

Global economic growth has improved

- Commodity prices have grown significantly Y/Y
 - YTD growth rates are up double-digits for many metals
- Central banks have started to raise rates
 - Policy still remains highly accommodative
- Developed markets have seen improved growth
 - U.S. GDP growth has remained solid while EU GDP growth has picked up
- Developing markets' outlooks have improved
 - China saw strong growth in Q1 and Brazil seems likely to exit recession

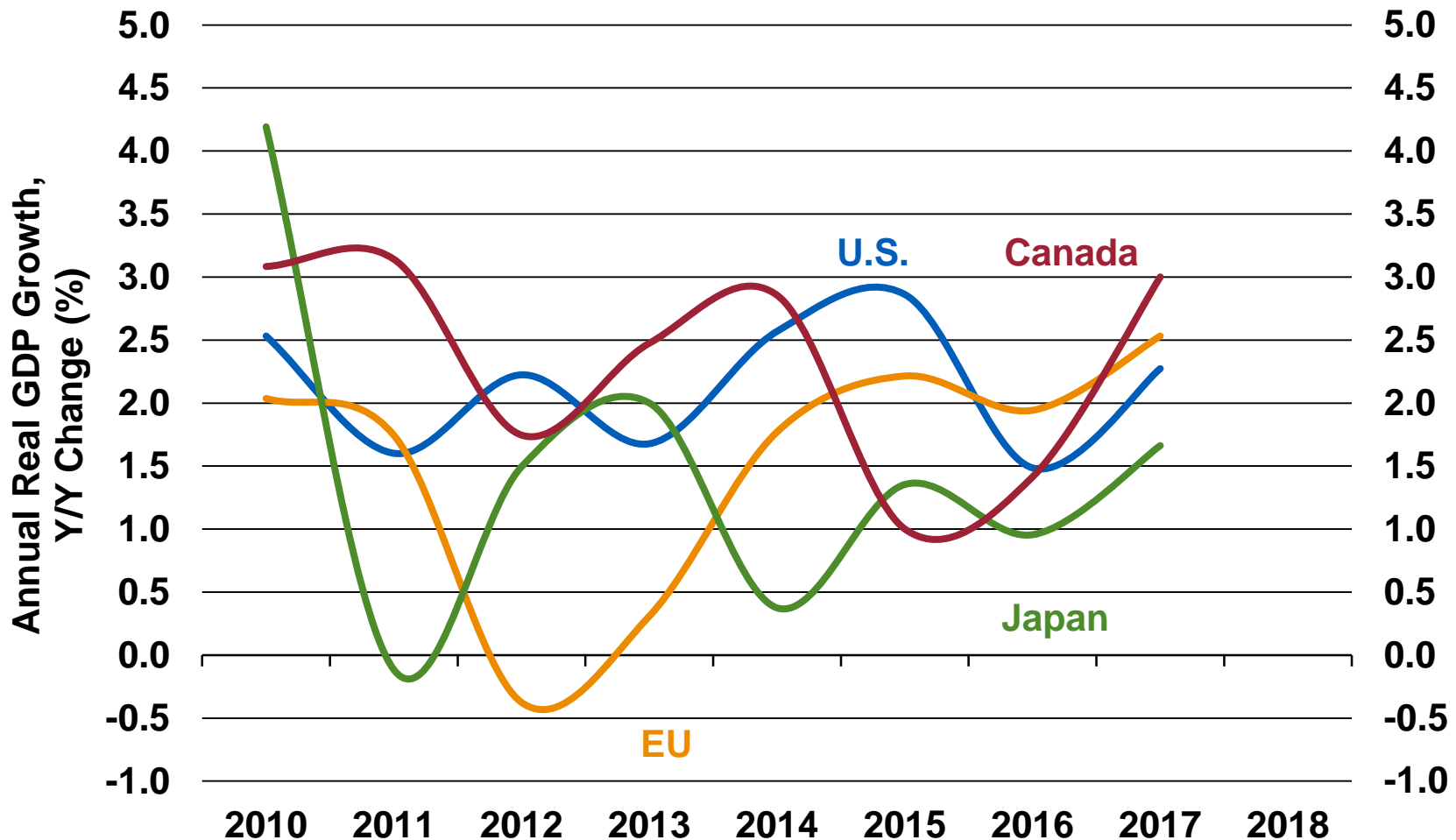
Source: Eaton Economics
Updated May 30, 2017

Global economic growth is strong

- Both developed and developing markets have shown solid growth since 2017
- Interest rates have been rising, but global monetary policy remains accommodative
- Inflation measures indicate that aggregate price level has grown at reasonable rates
- Labor markets have continued to improve, with unemployment rates at record lows
- Current risks revolve around trade, but downside to global GDP is limited if there is no escalation

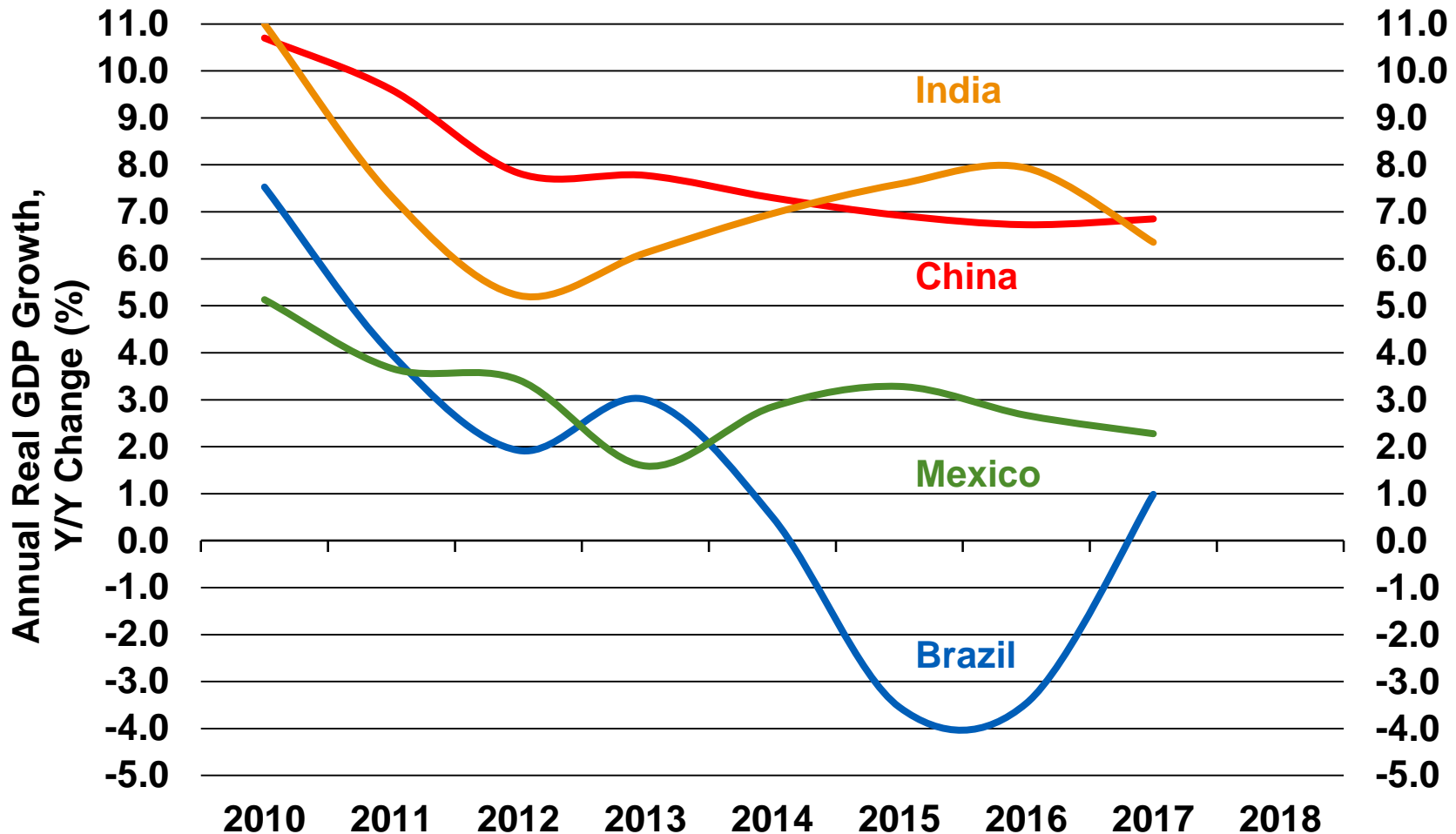
Source: Eaton Economics
Updated June 13, 2018

Developed markets witnessed GDP growth improve in 2017



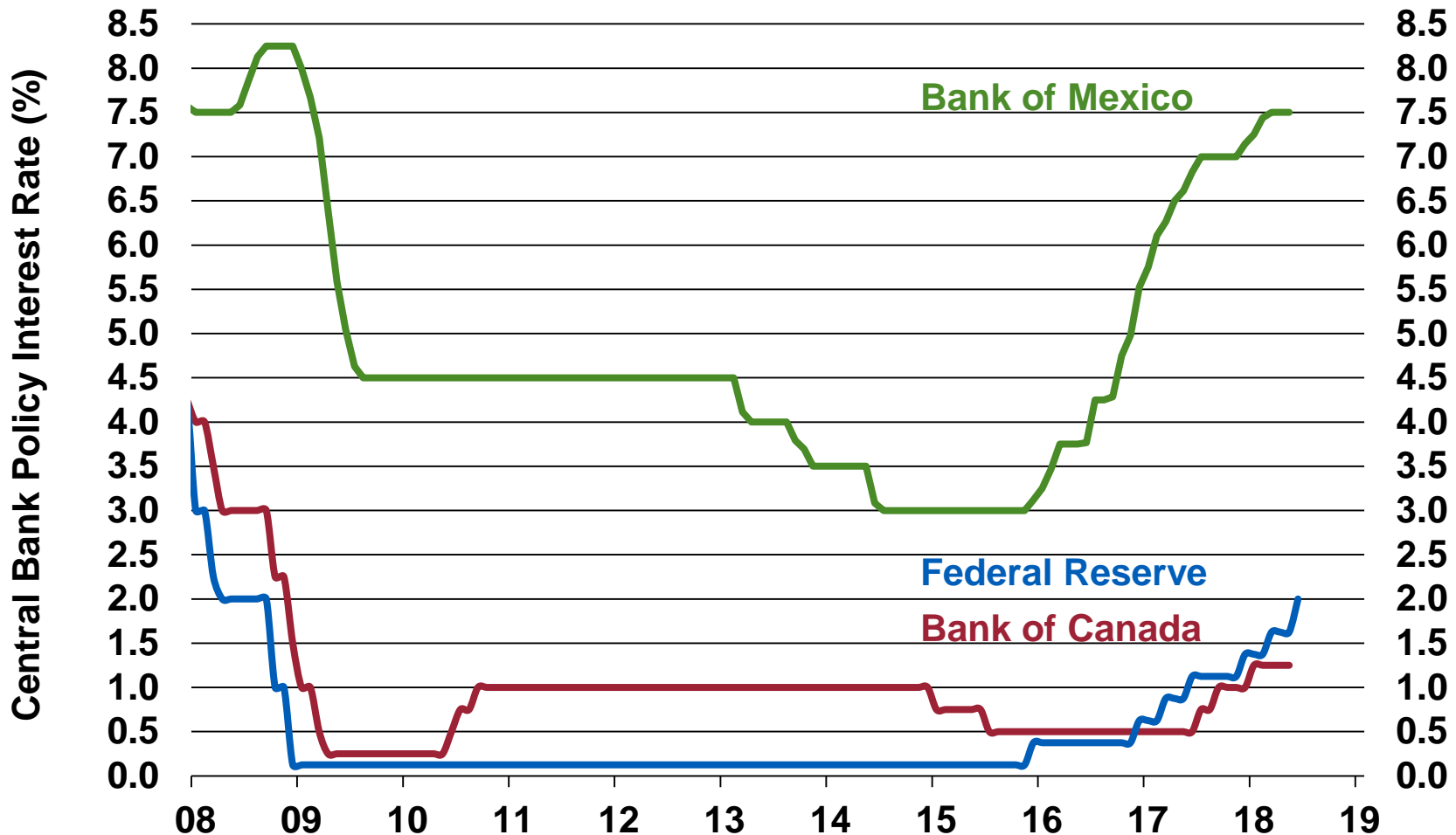
Source: U.S. Bureau of Economic Analysis, Statistics Canada, Eurostat, Japan's Cabinet Office, Eaton Economics
Data through 2017

Growth was “synchronous” in both developing and developed markets last year



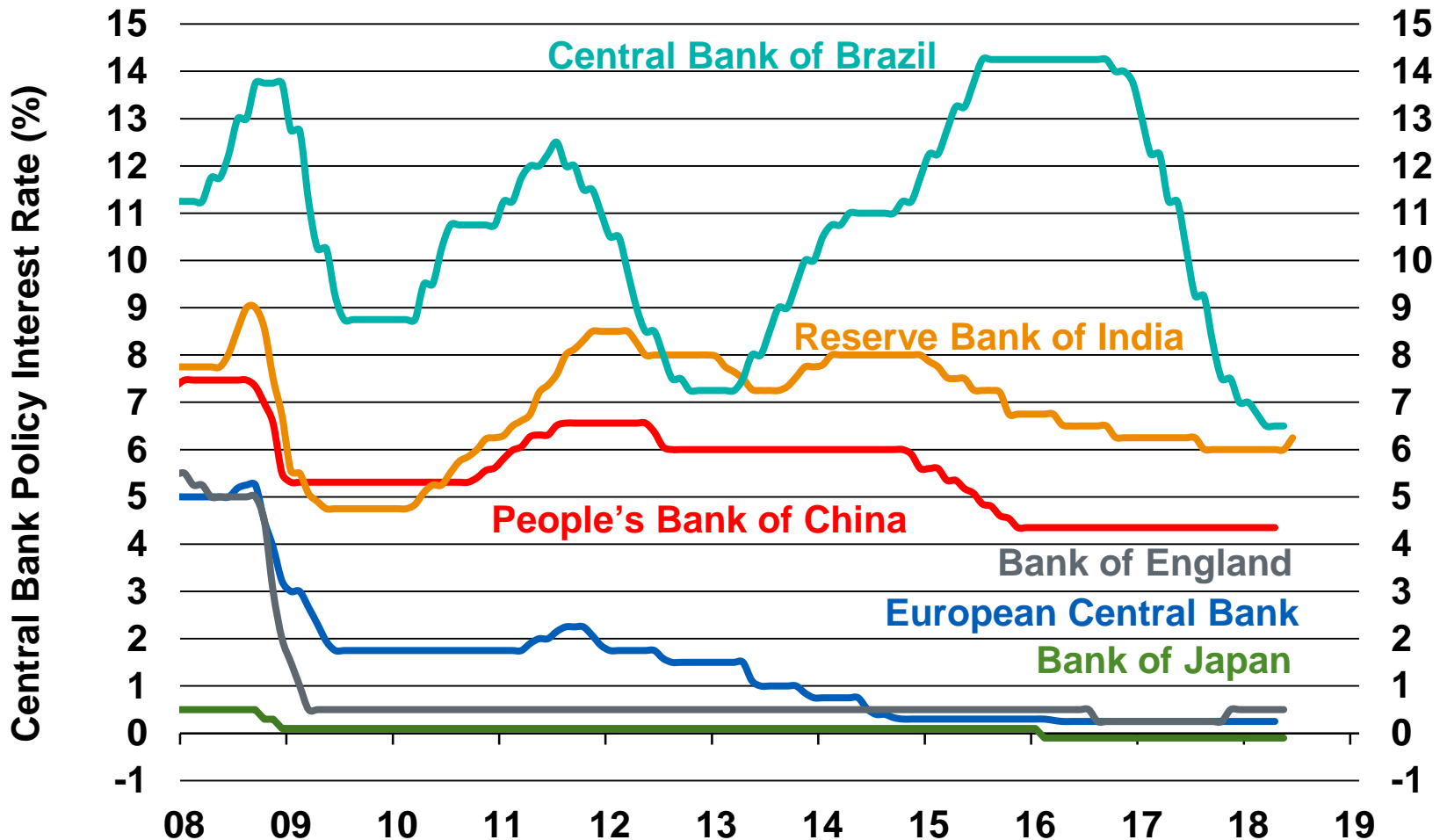
Source: India's MOSPI, China's National Bureau of Statistics, Mexico's INEGI, Brazil's IBGE, Eaton Economics
Data through 2017

Central banks in North America have tightened monetary policy



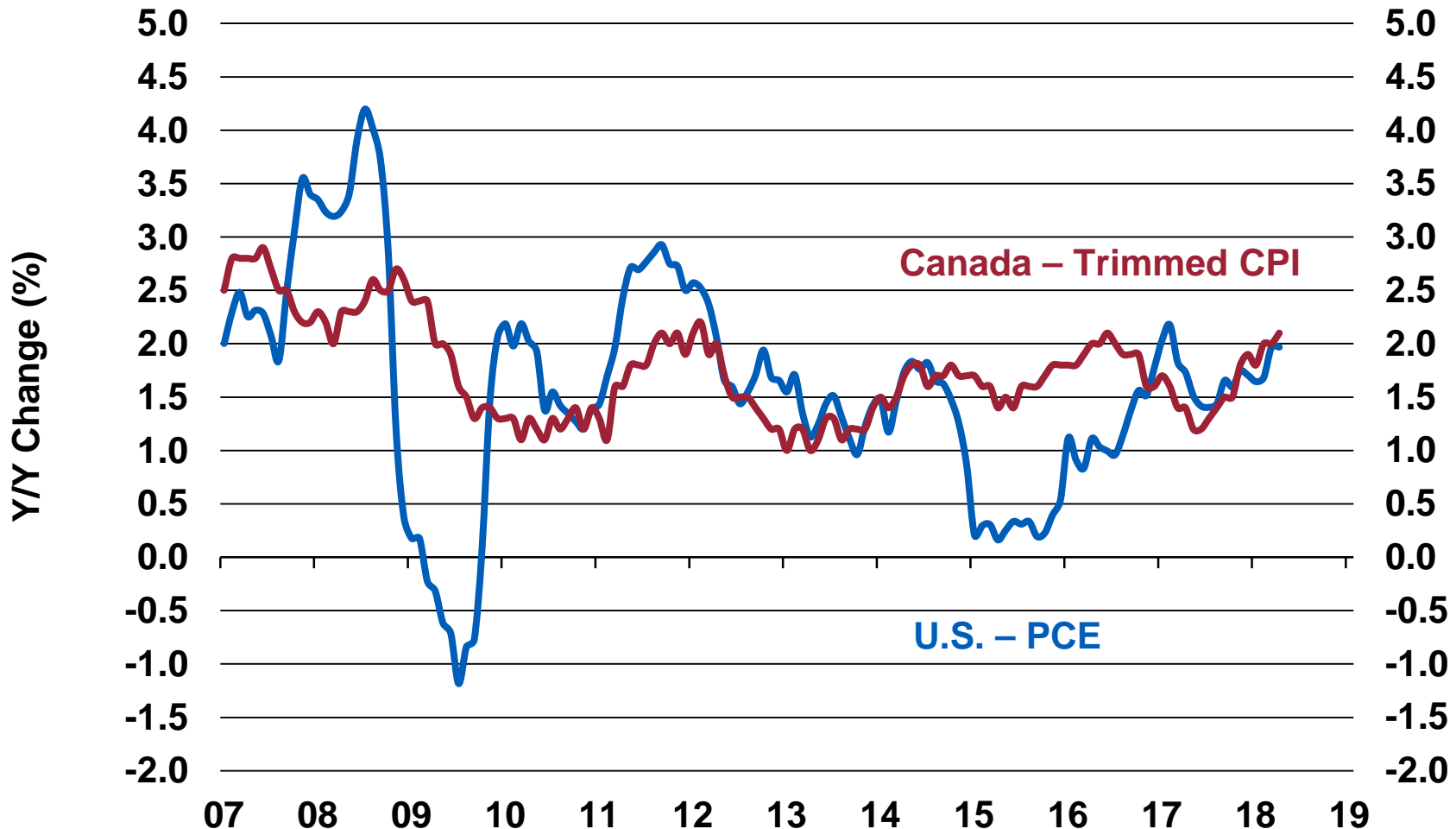
Source: U.S. Federal Reserve, Bank of Canada, Bank of Mexico, Eaton Economics
Data through May/June 2018

Outside of North America, most central banks have not tightened monetary policy



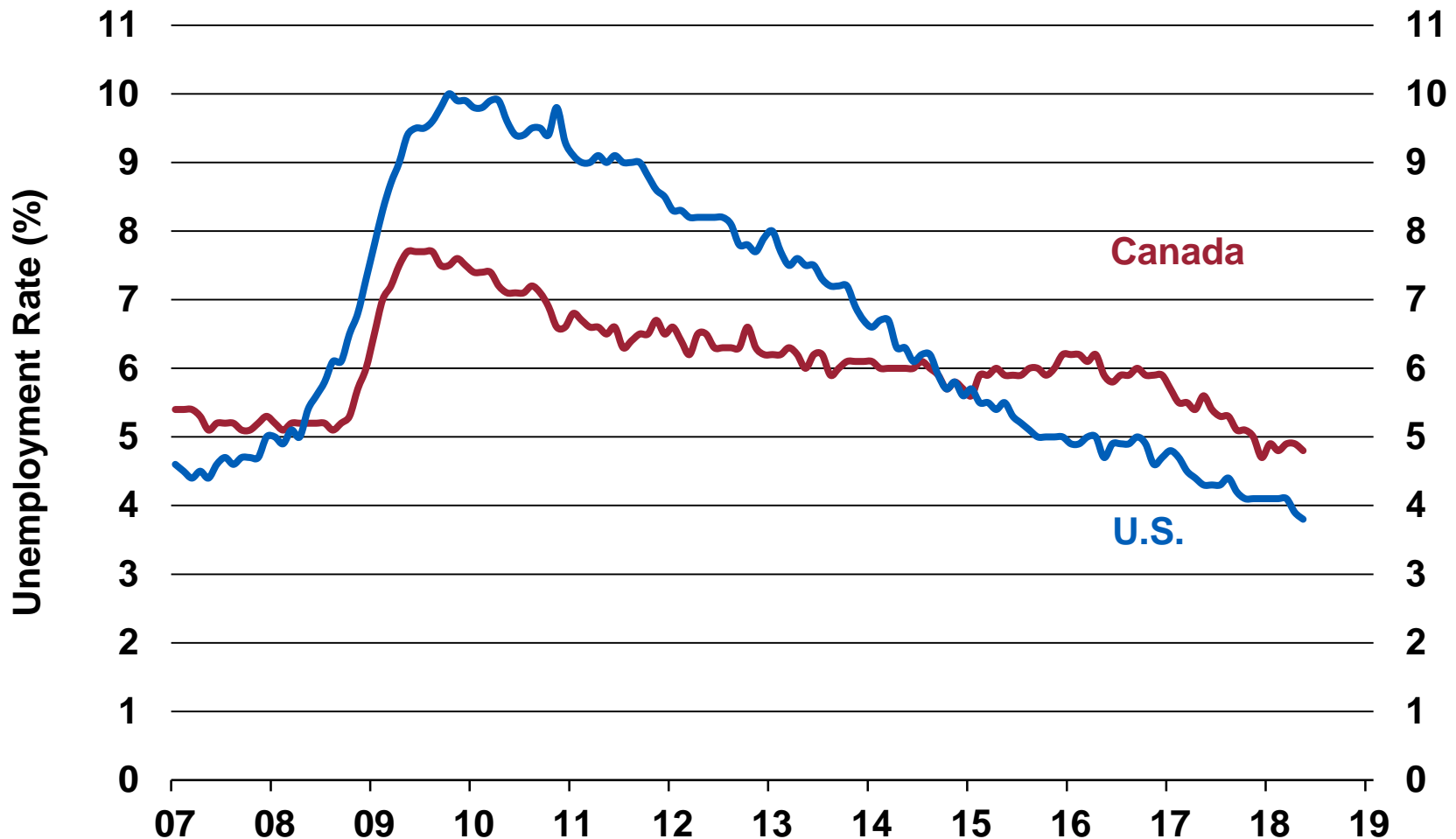
Source: Central Bank of Brazil, Reserve Bank of India, People's Bank of China, Bank of England, European Central Bank, Bank of Japan, Eaton Economics
Data through May/June 2018 © 2018 Eaton. All rights reserved.

U.S. and Canada key inflation measures show that inflation is on target



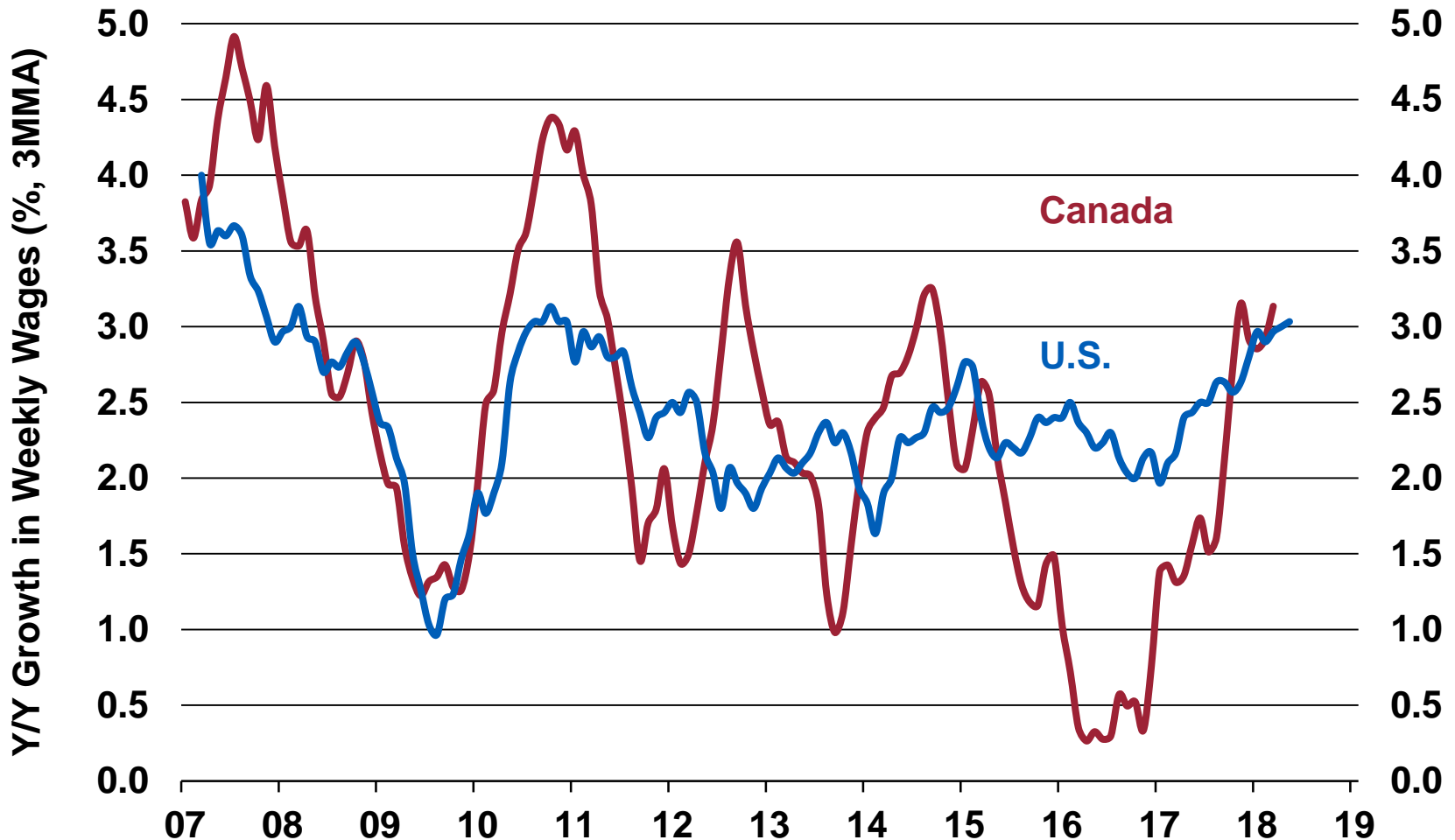
Source: U.S. Bureau of Economic Analysis, Statistics Canada, Eaton Economics
Data through April 2018

U.S. and Canada unemployment rates have continued to move lower



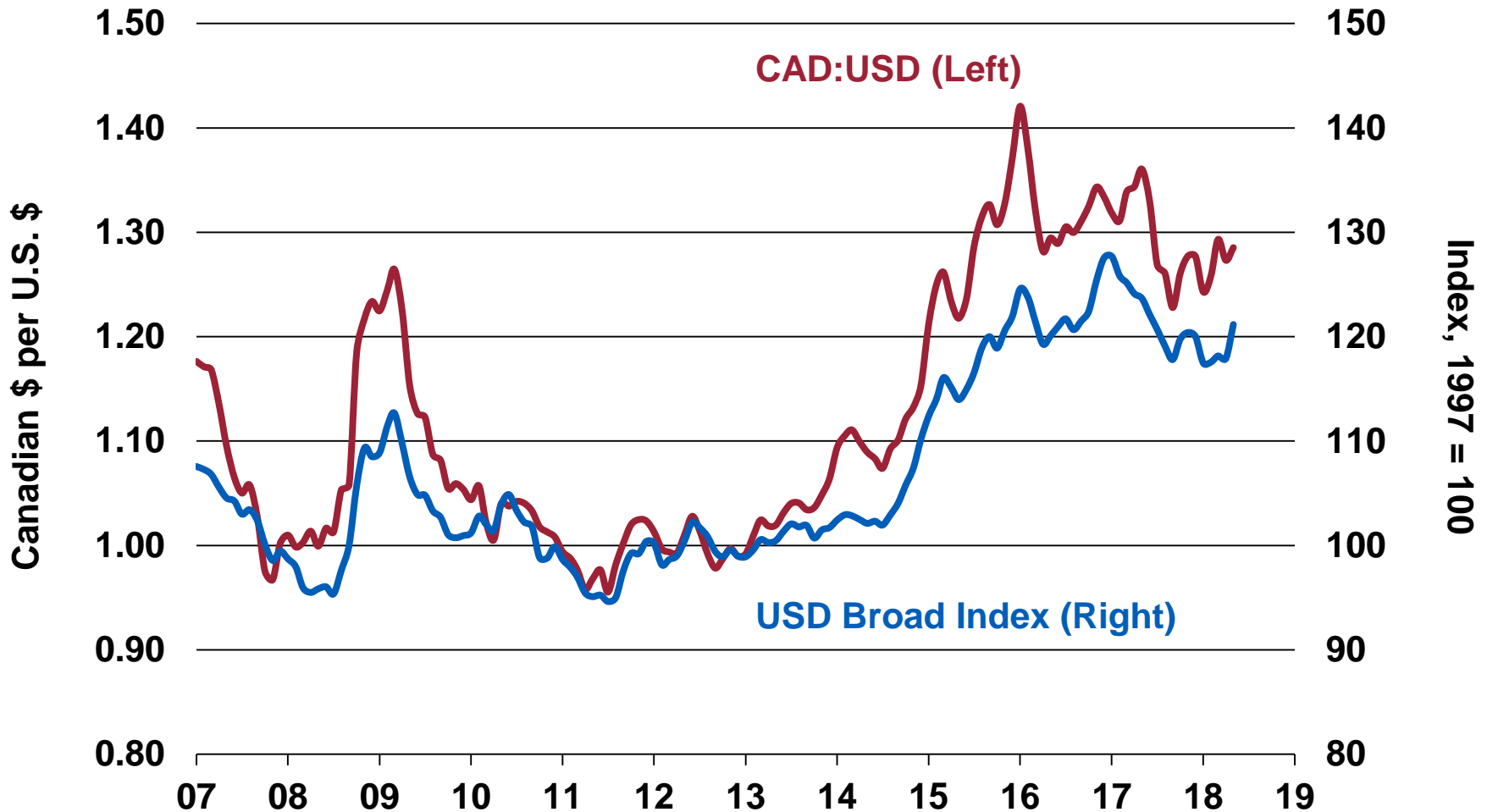
Source: U.S. Bureau of Economic Analysis, Statistics Canada, Eaton Economics
Data through May 2018

U.S. and Canada wage growth has accelerated



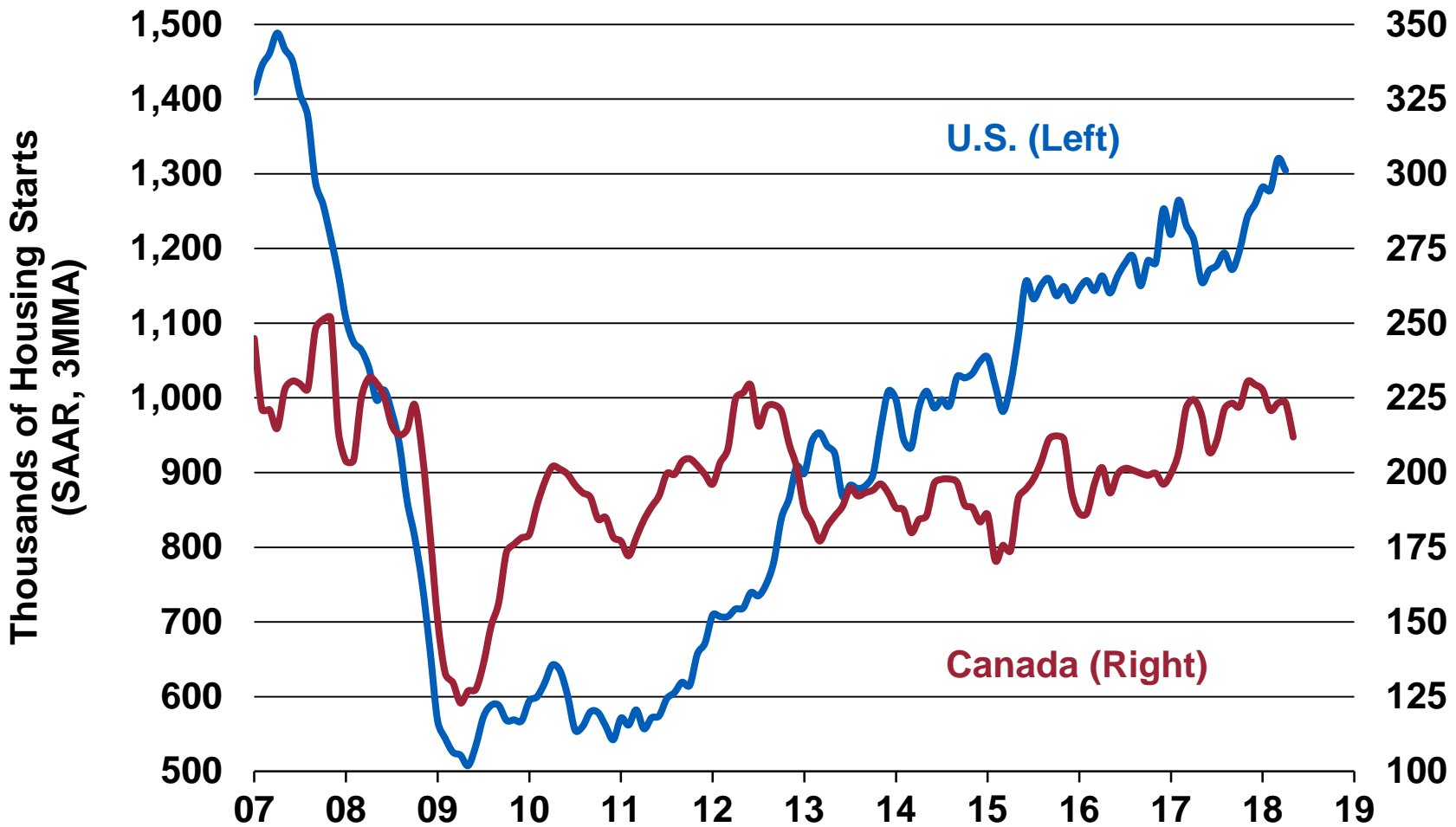
Source: U.S. Bureau of Economic Analysis, Statistics Canada, Eaton Economics
Data through March/May 2018

CAD has strengthened marginally against the USD versus 2017



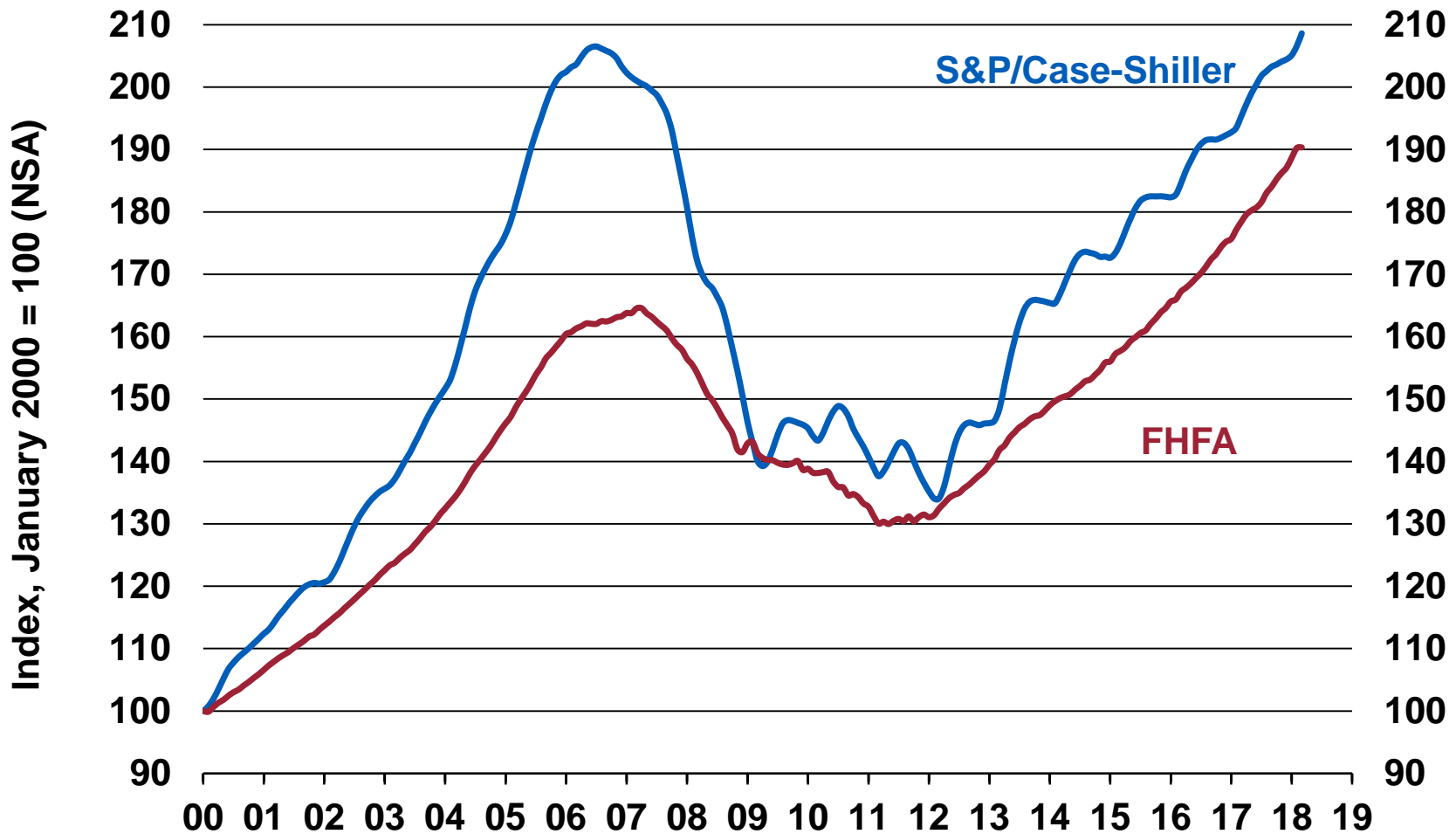
Source: U.S. Federal Reserve, Eaton Economics
Data through May 2018

U.S. housing starts have continued to grow, while they have moved sideways in Canada



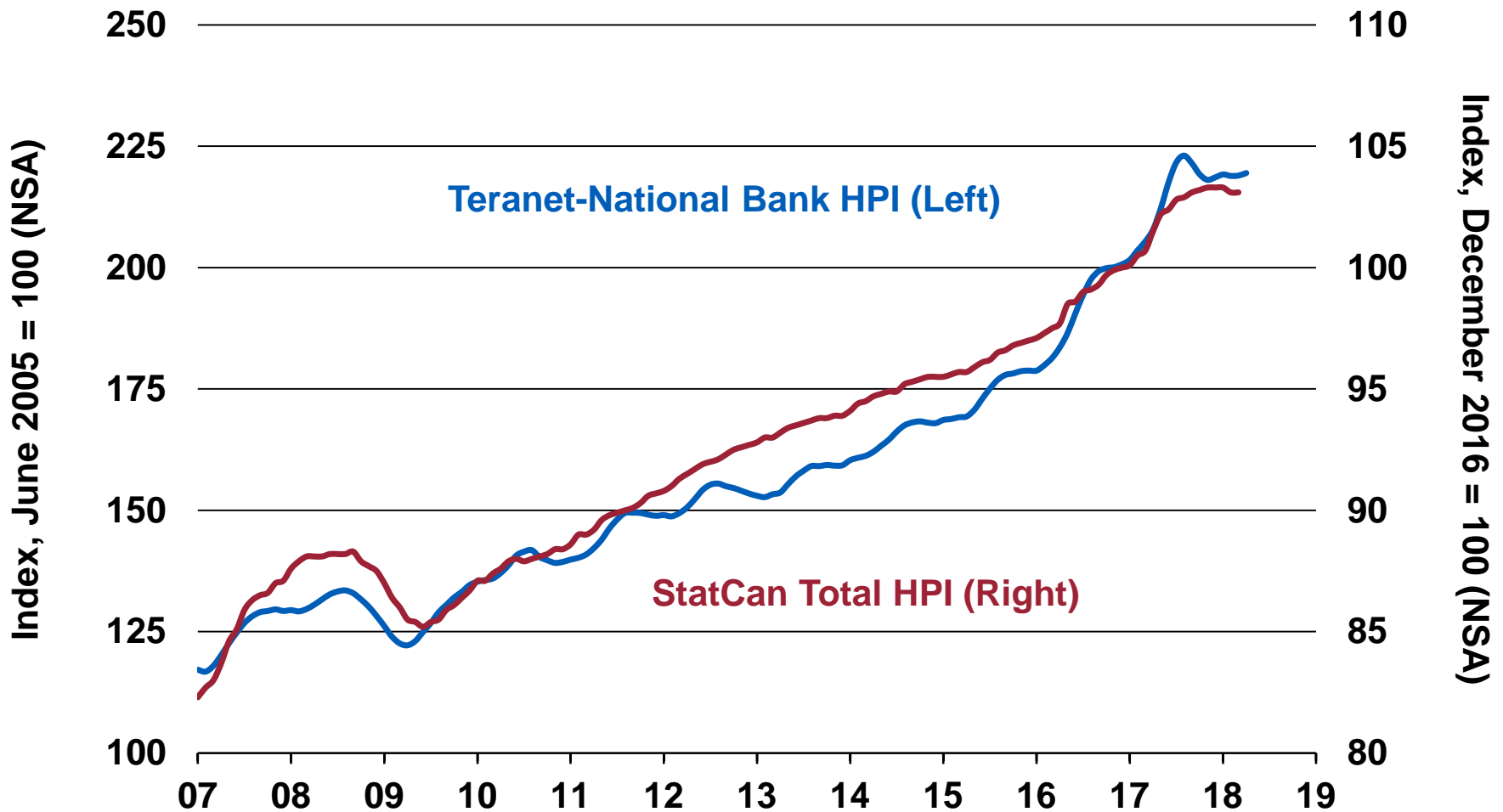
Source: U.S. Census Bureau, Canada Mortgage and Housing Corporation, Eaton Economics
Data through April/May 2018

U.S. housing prices have consistently increased



Source: Standard & Poor's/Case-Shiller, Federal Home Finance Authority, Eaton Economics
Data through May 2018

Canada housing prices have continued to grow, but that growth has decelerated



Source: Statistics Canada, Teranet-National Bank, Eaton Economics
Data through March/April 2018

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What I told you last year:

The storm has subsided

- Commodity prices are less of a headwind, are more of a crosswind now
 - Oil prices have been subdued, but rig counts have risen
 - Metals price growth has been positive for mining
- Prior years' overbuilds are less of a drag
 - NAFTA Class 8 truck production is likely flat from 2016
 - Construction equipment utilization has seen improvements
- Overall manufacturing activity has improved, demand for machinery has improved with it

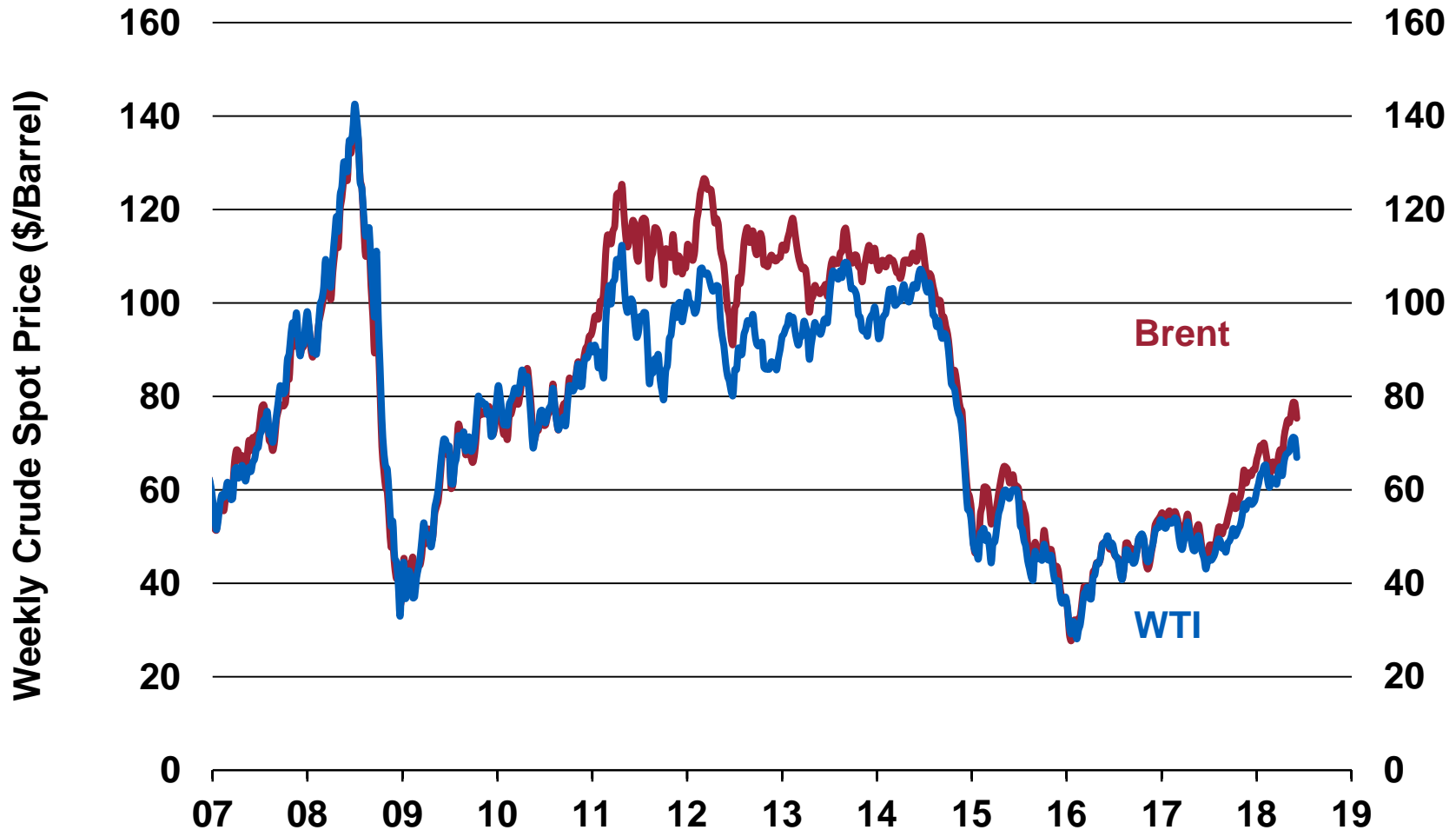
Conclusion: 2017 is set to be a positive year,
with cautious optimism for mild growth in 2018 and beyond

Source: Eaton Economics
Updated May 30, 2017

Enjoy the sunshine!

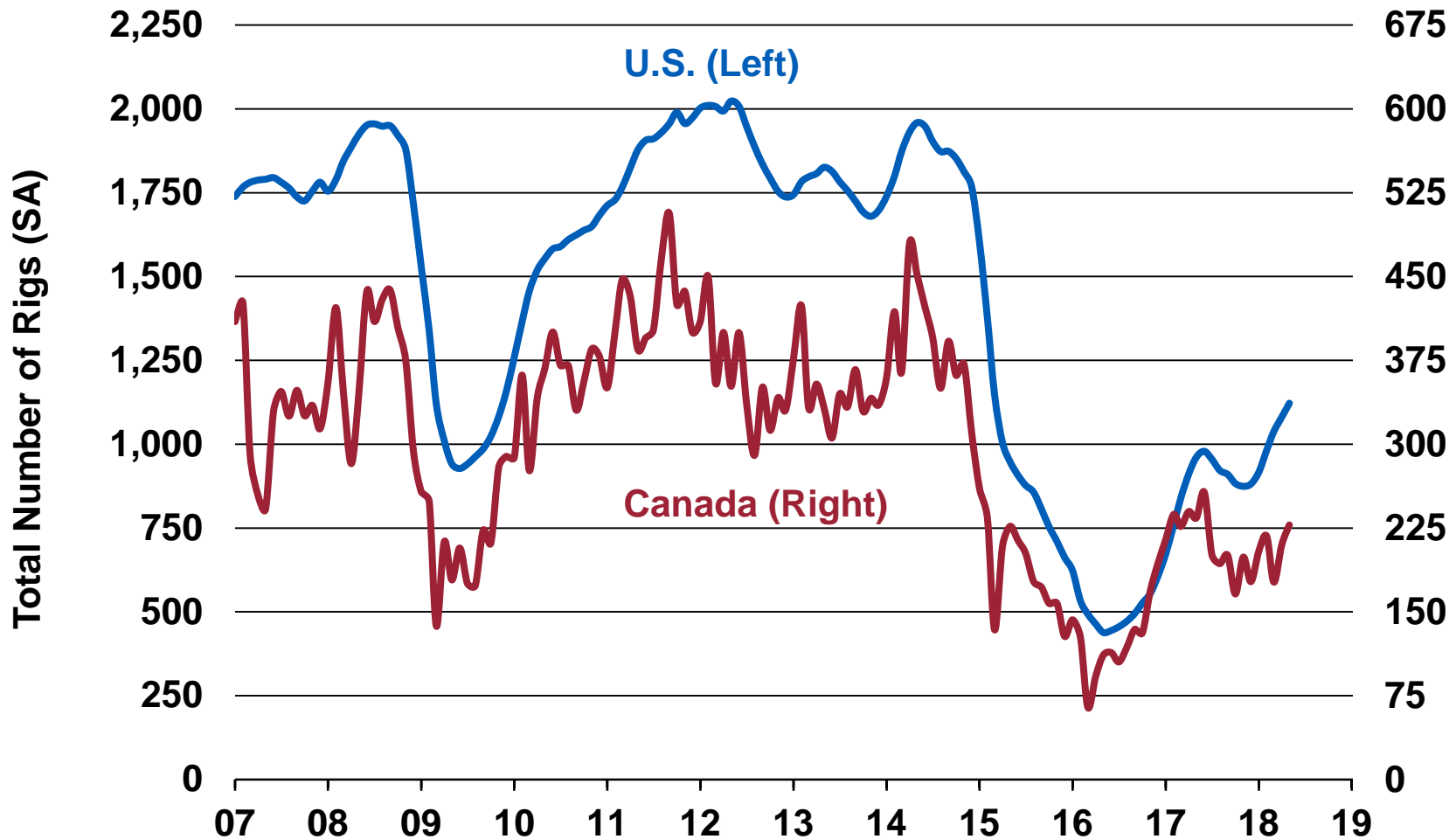
- Commodity prices are a tailwind
 - Oil prices, metals prices have risen significantly though agriculture prices remain subdued
- Global manufacturing activity remains at high level
 - Growth is no longer “synchronous,” but the U.S. has gathered solid momentum
- Class 8 trucks, construction, mining/O&G equipment, are indicators that show strong growth

Global oil prices have risen significantly



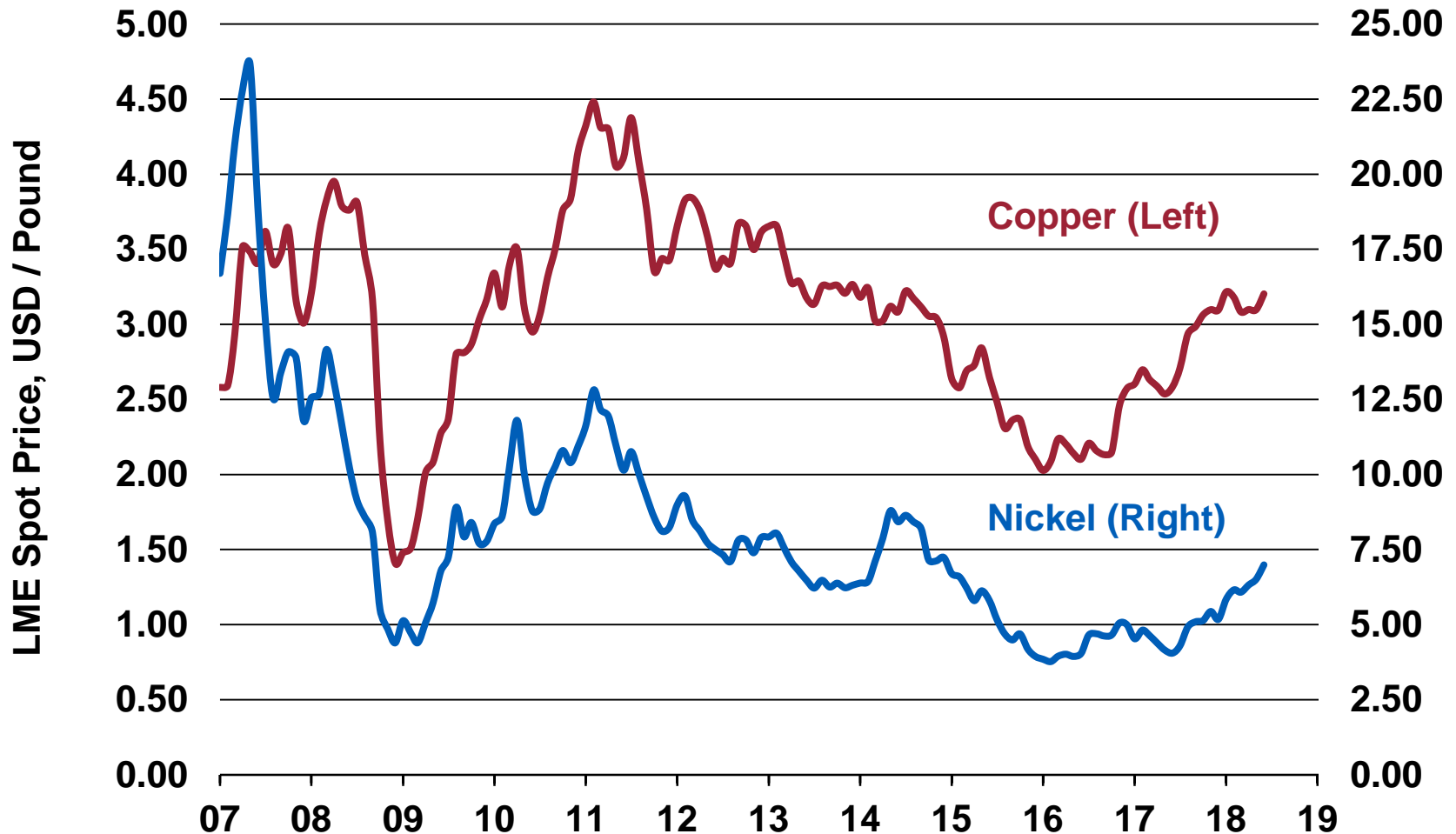
Source: U.S. Energy Information Administration, Eaton Economics
Data through May 2018

Baker Hughes rotary rig count has risen correspondingly



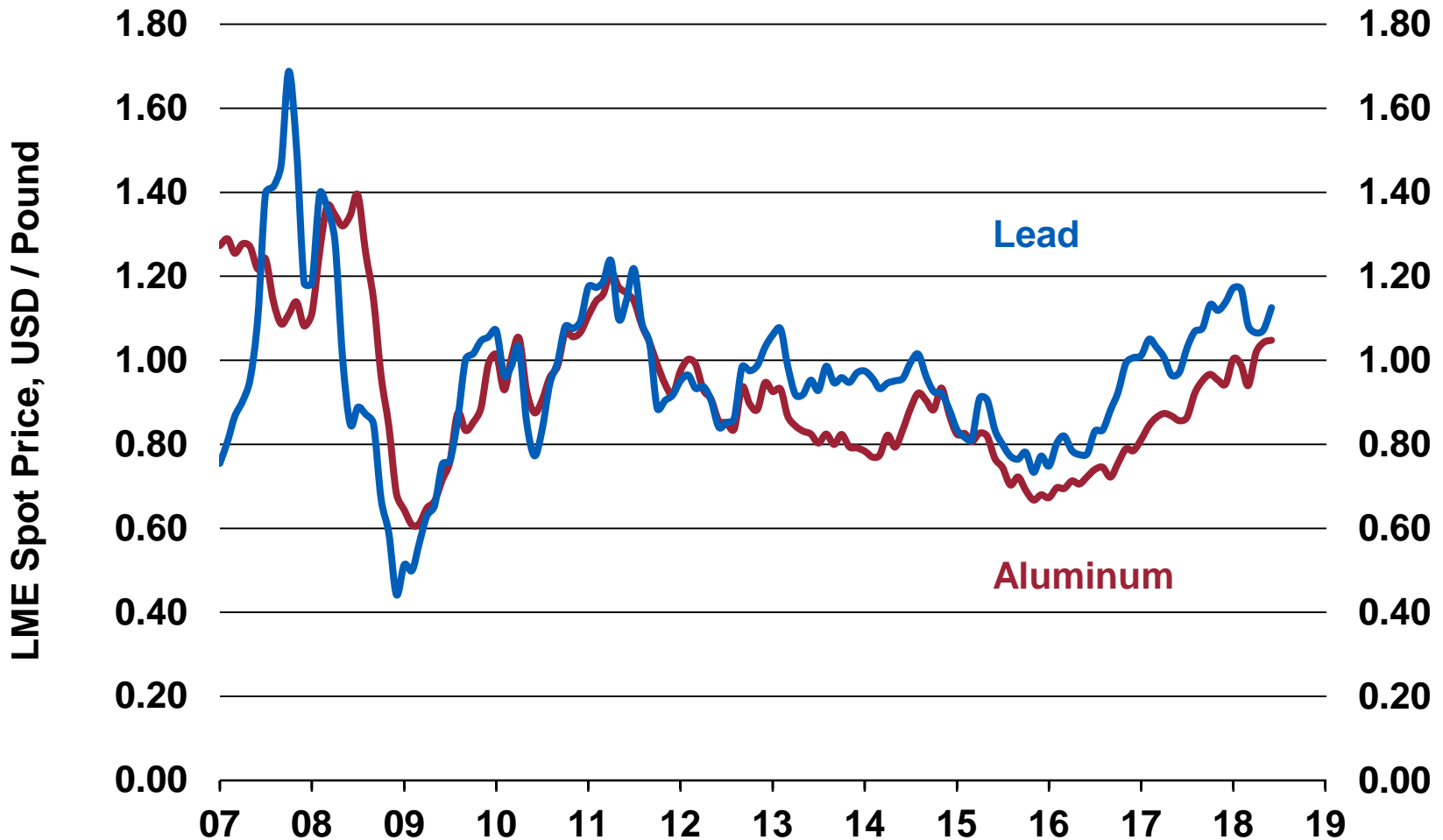
Source: Baker Hughes, Eaton Economics
Data through May 2018

Copper and nickel prices have risen strongly



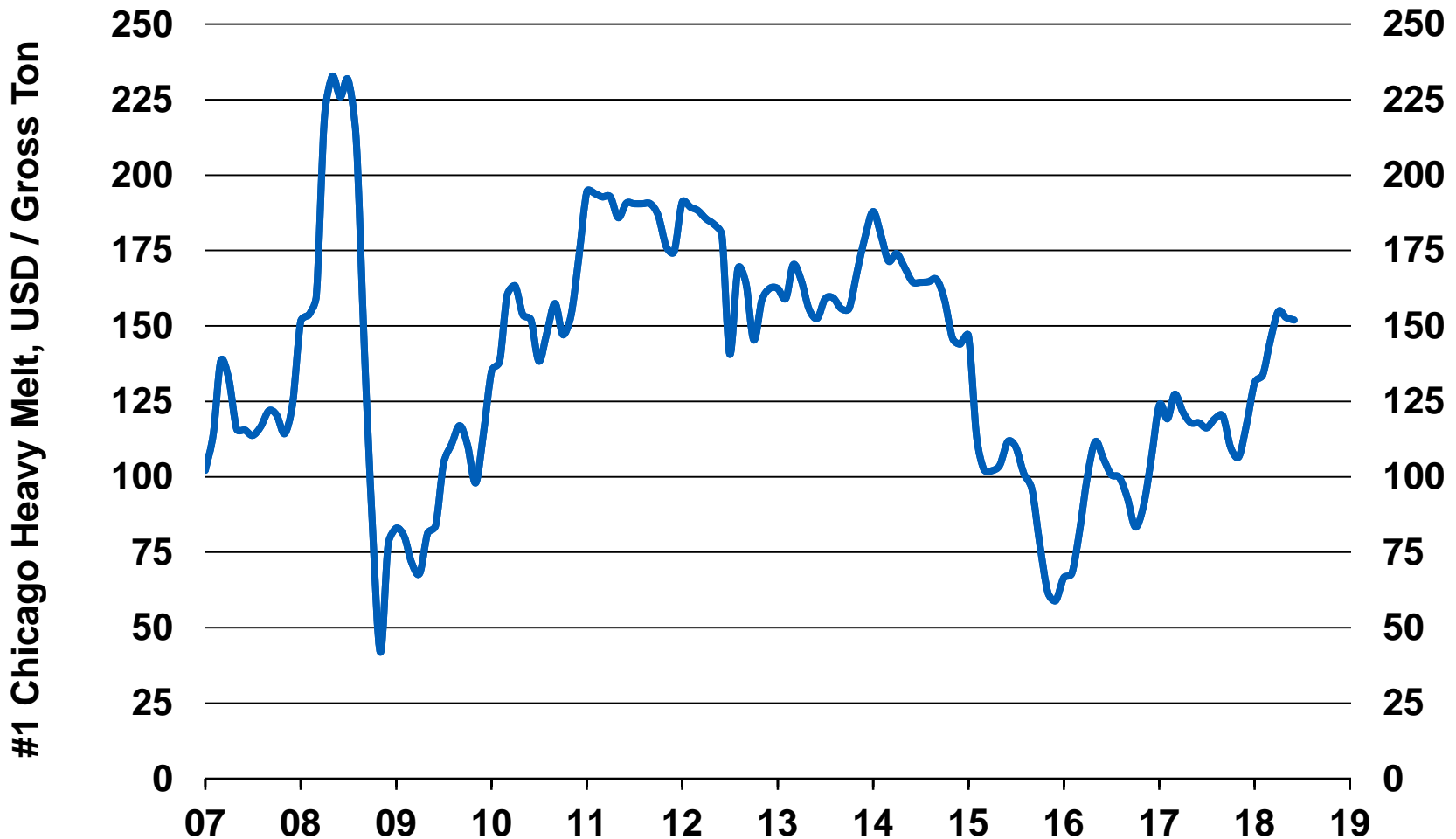
Source: London Metal Exchange, Eaton Economics
Data through May 2018

Aluminum and lead prices have risen strongly



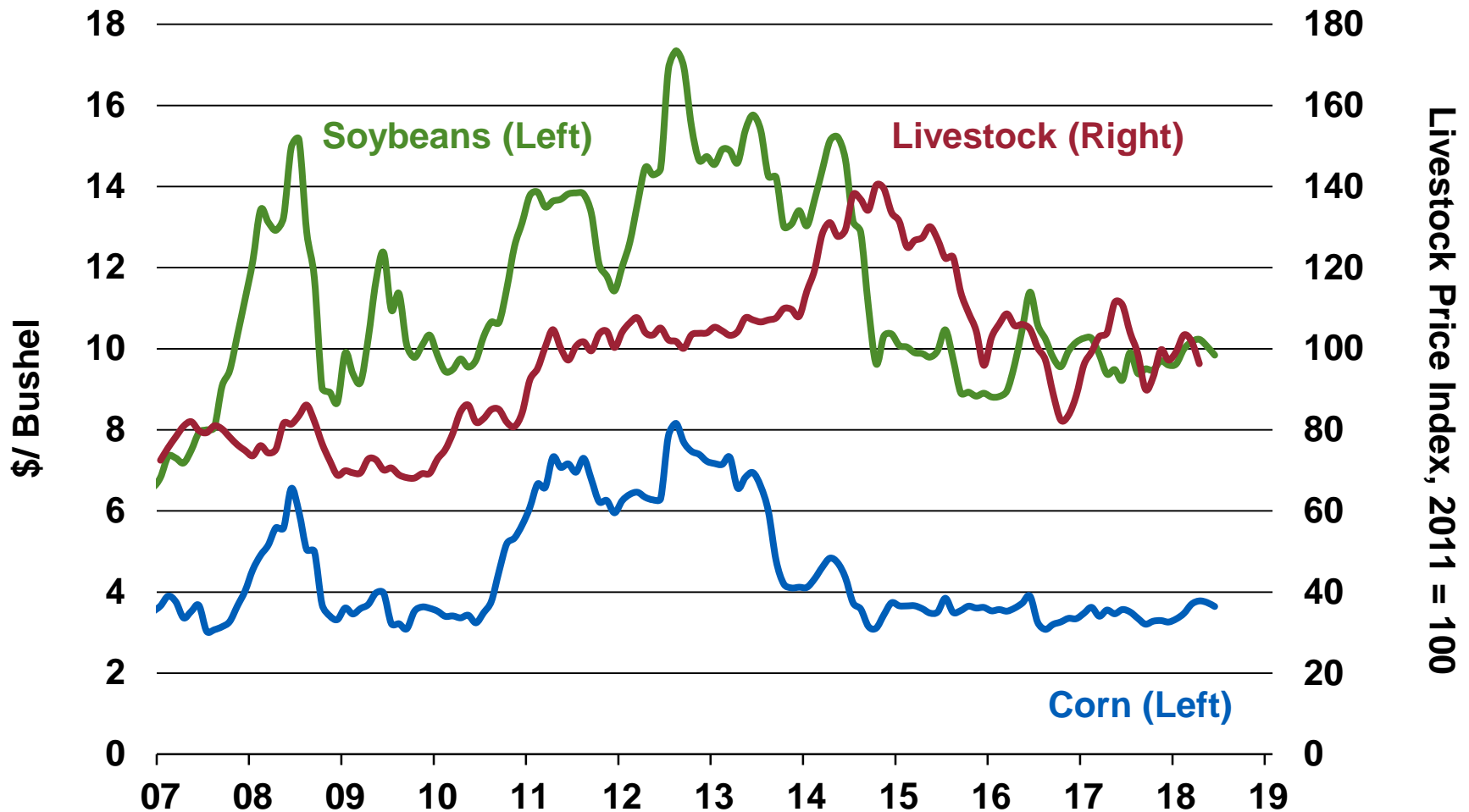
Source: London Metal Exchange, Eaton Economics
Data through May 2018

Ferrous metal prices have risen strongly



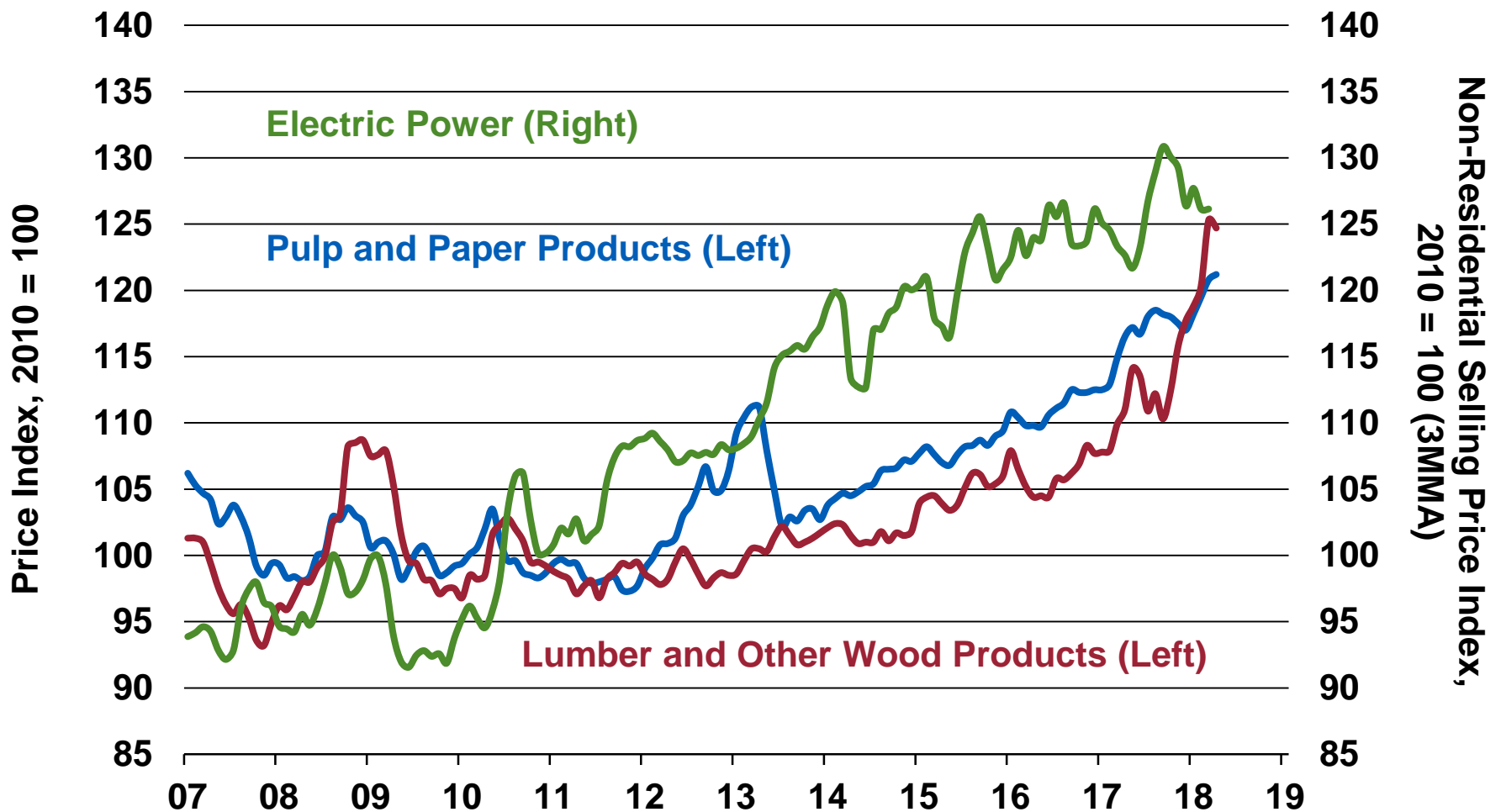
Source: London Metal Exchange, Eaton Economics
Data through May 2018

Crop and livestock prices have remained relatively subdued



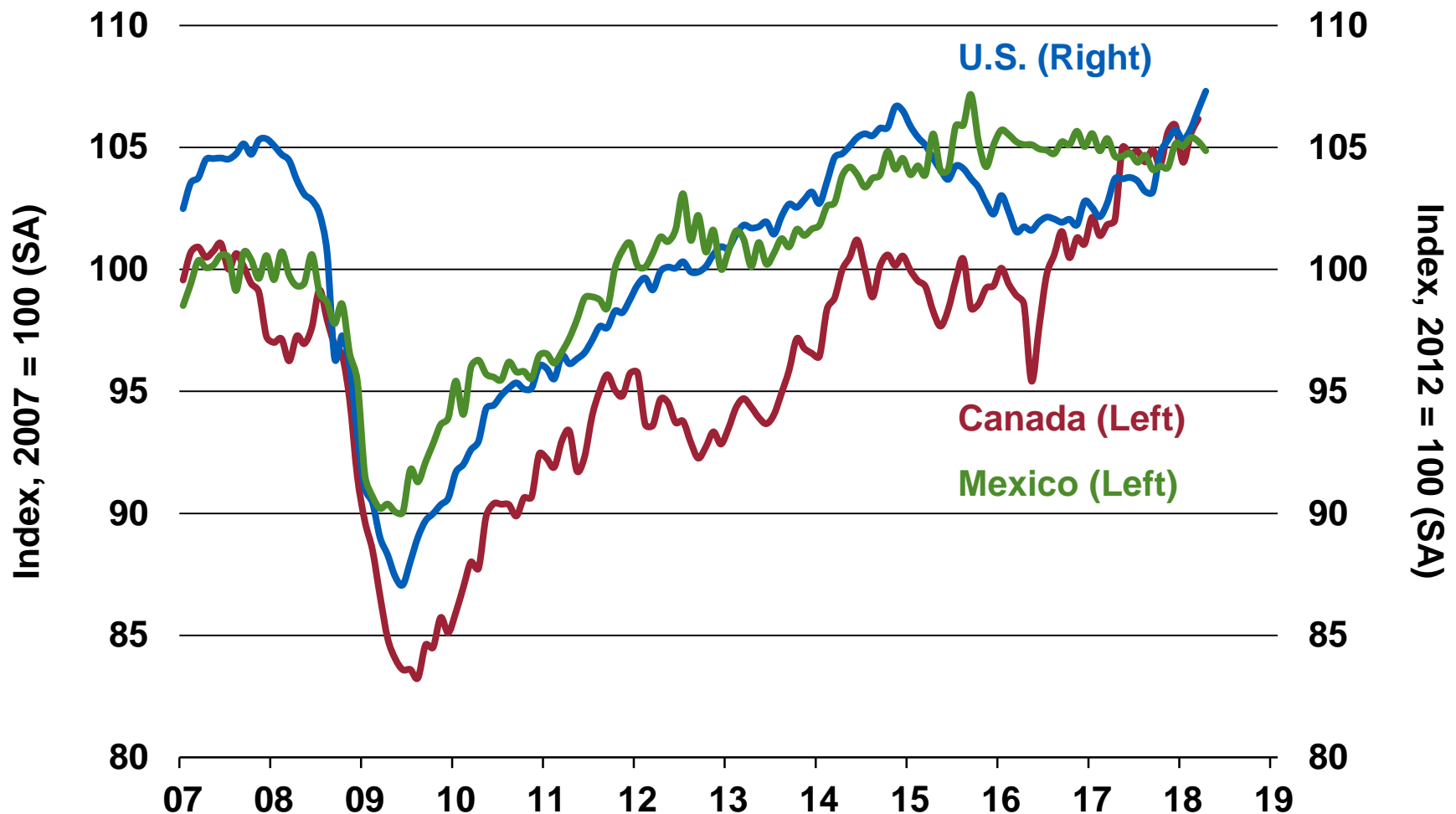
Source: U.S. Department of Agriculture, Eaton Economics
Data through April/May 2018

Canada lumber prices have increased significantly since autumn 2017



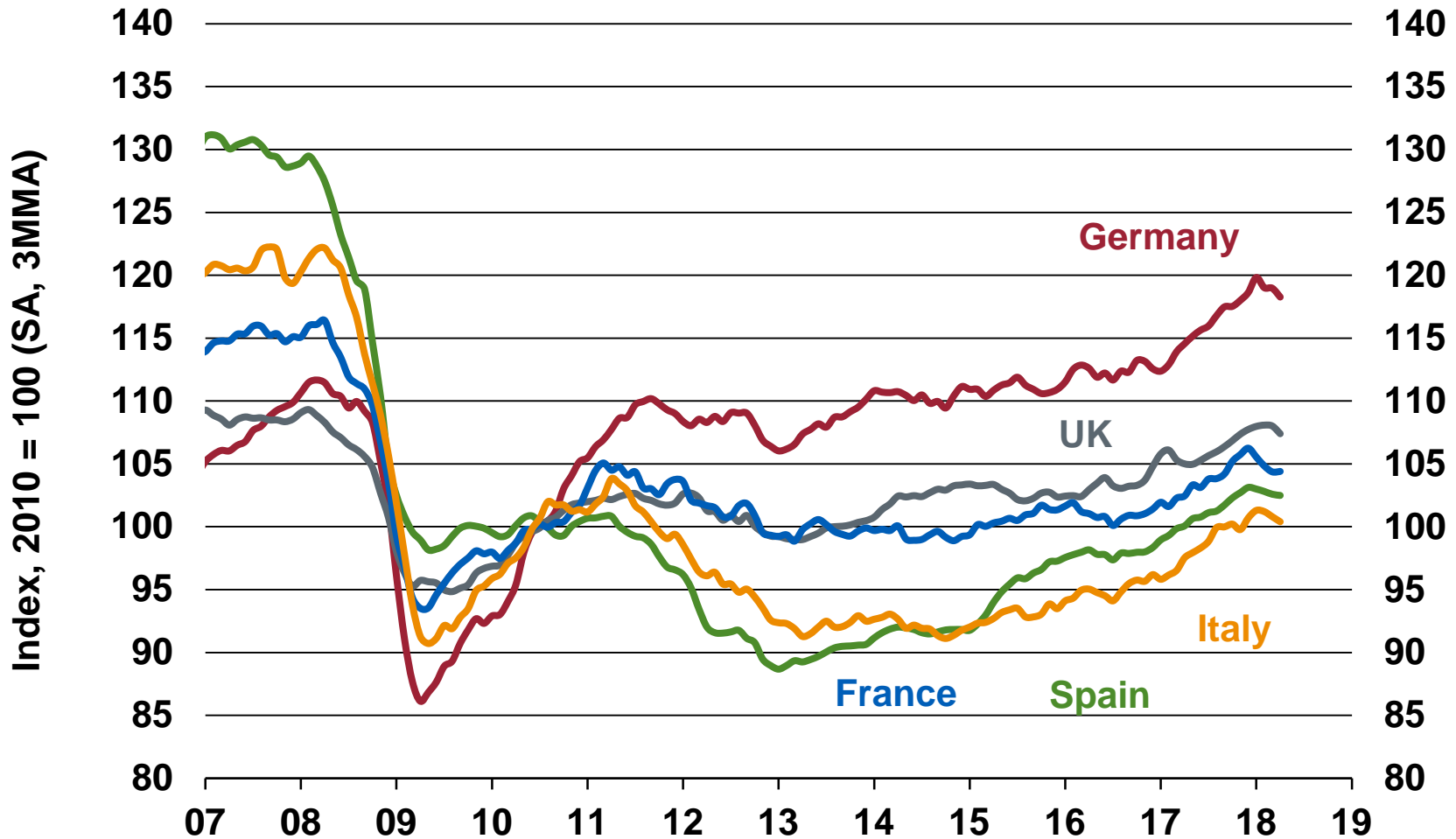
Source: Statistics Canada, Eaton Economics
Data through March/April 2018

Industrial output has increased in North America with robust U.S. growth leading the way



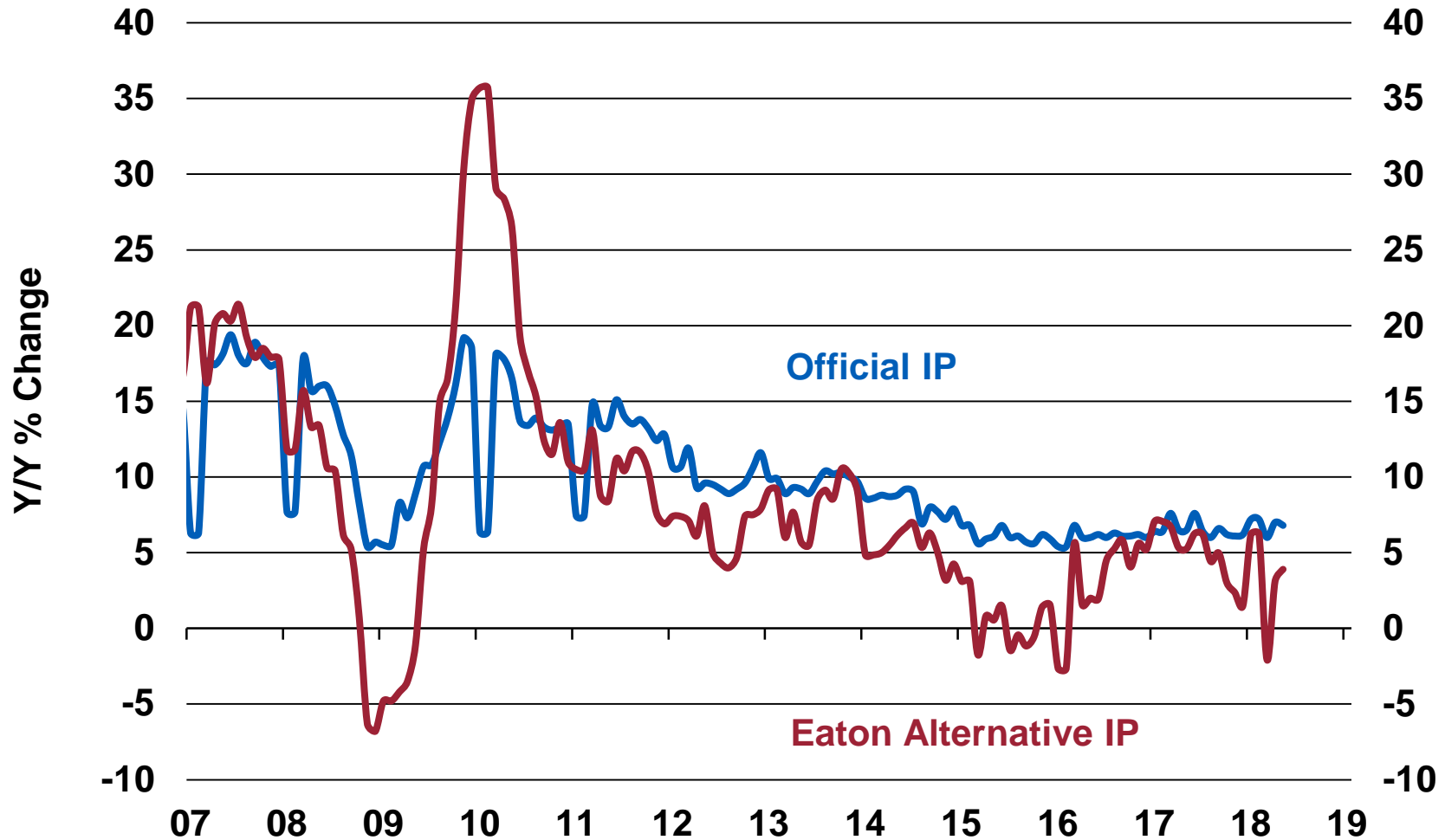
Source: U.S. Federal Reserve, Statistics Canada, INEGI, Eaton Economics
Data through March/April 2018

Europe manufacturing output has increased but that expansion has slowed



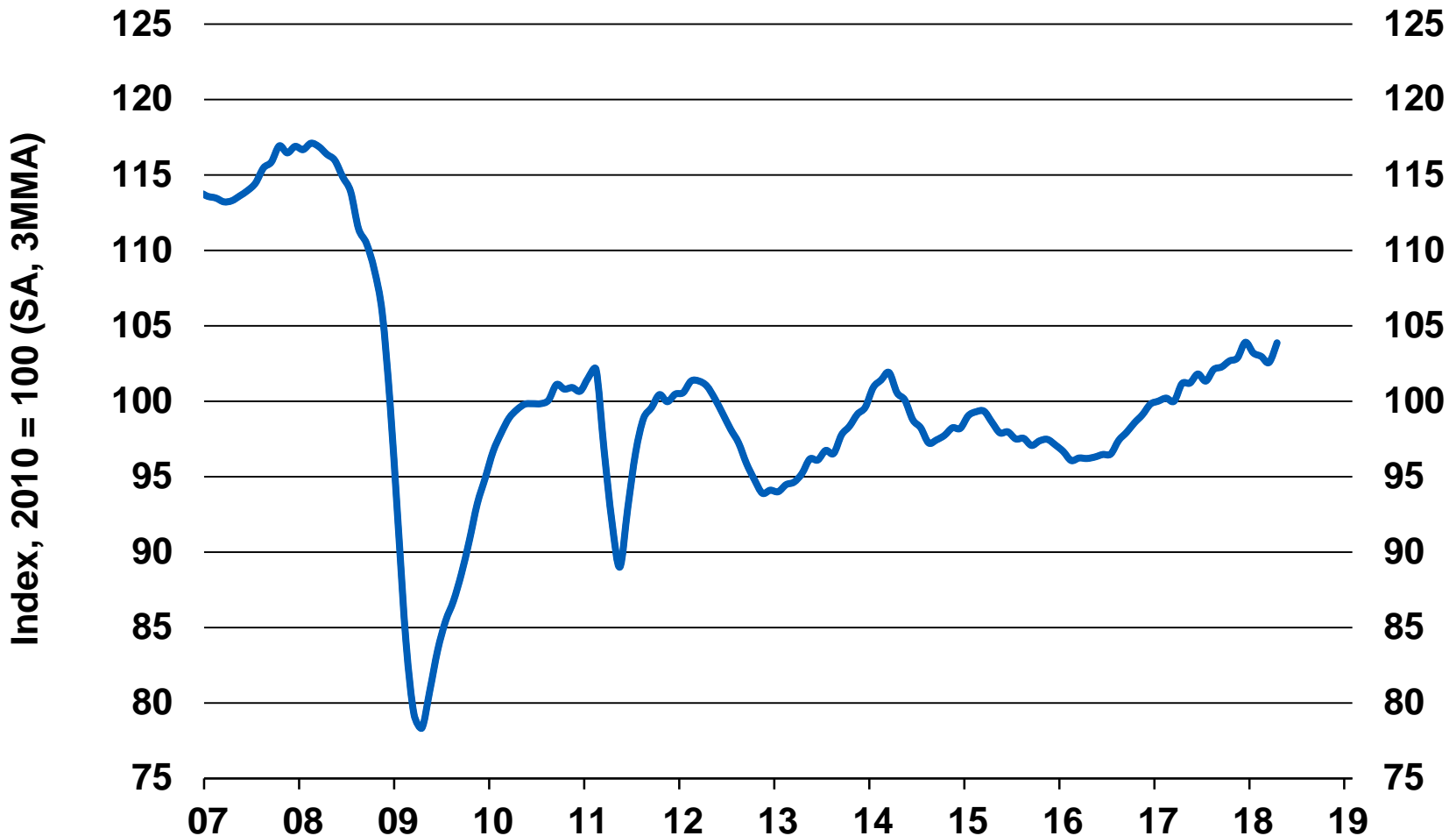
Source: Eurostat, Eaton Economics
Data through April 2018

China industrial production has grown solidly this year, albeit more slowly than last year



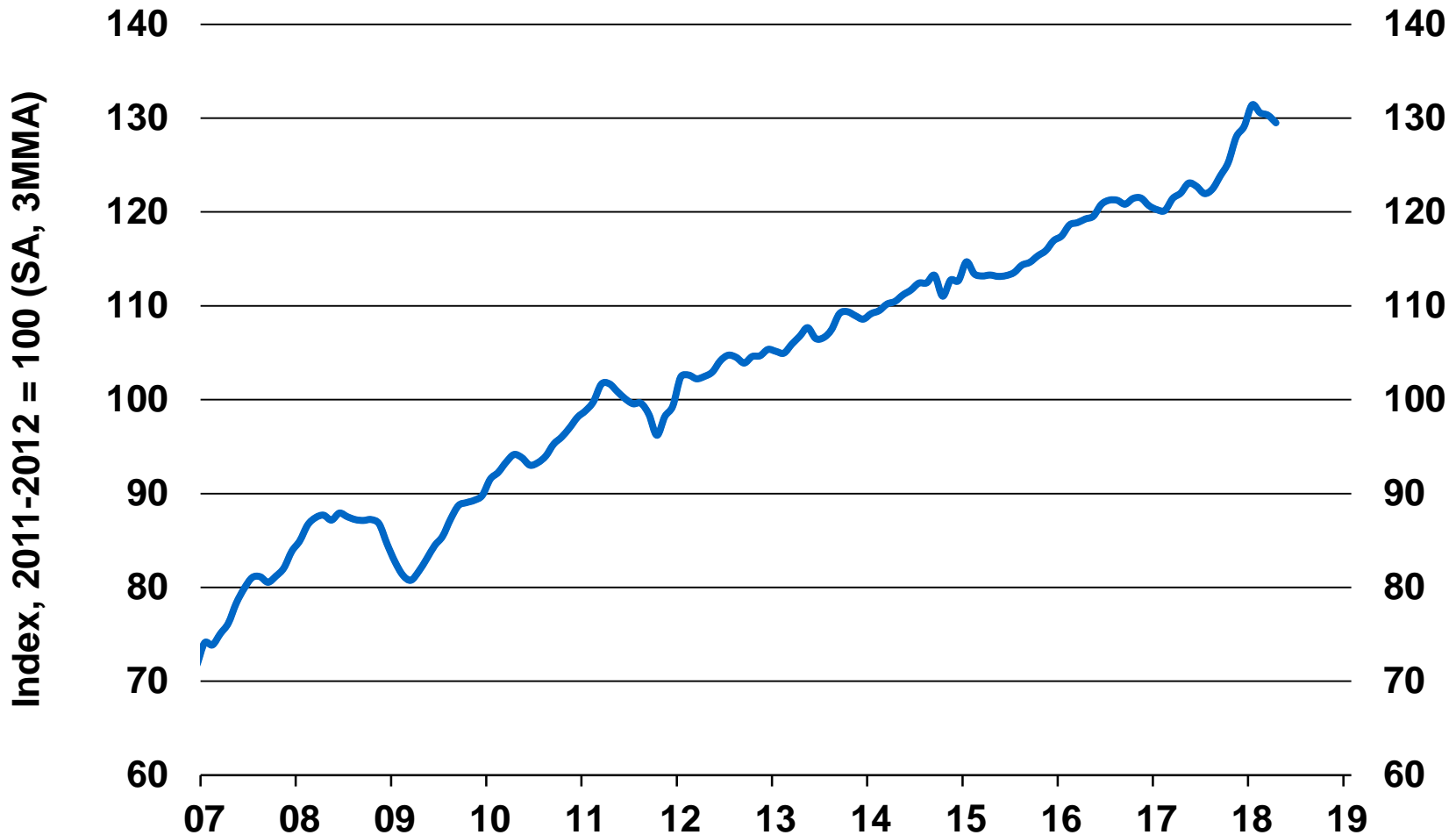
Source: National Bureau of Statistics, Eaton Economics
Data through May 2018

Japan manufacturing output has grown but more slowly than it did in 2017



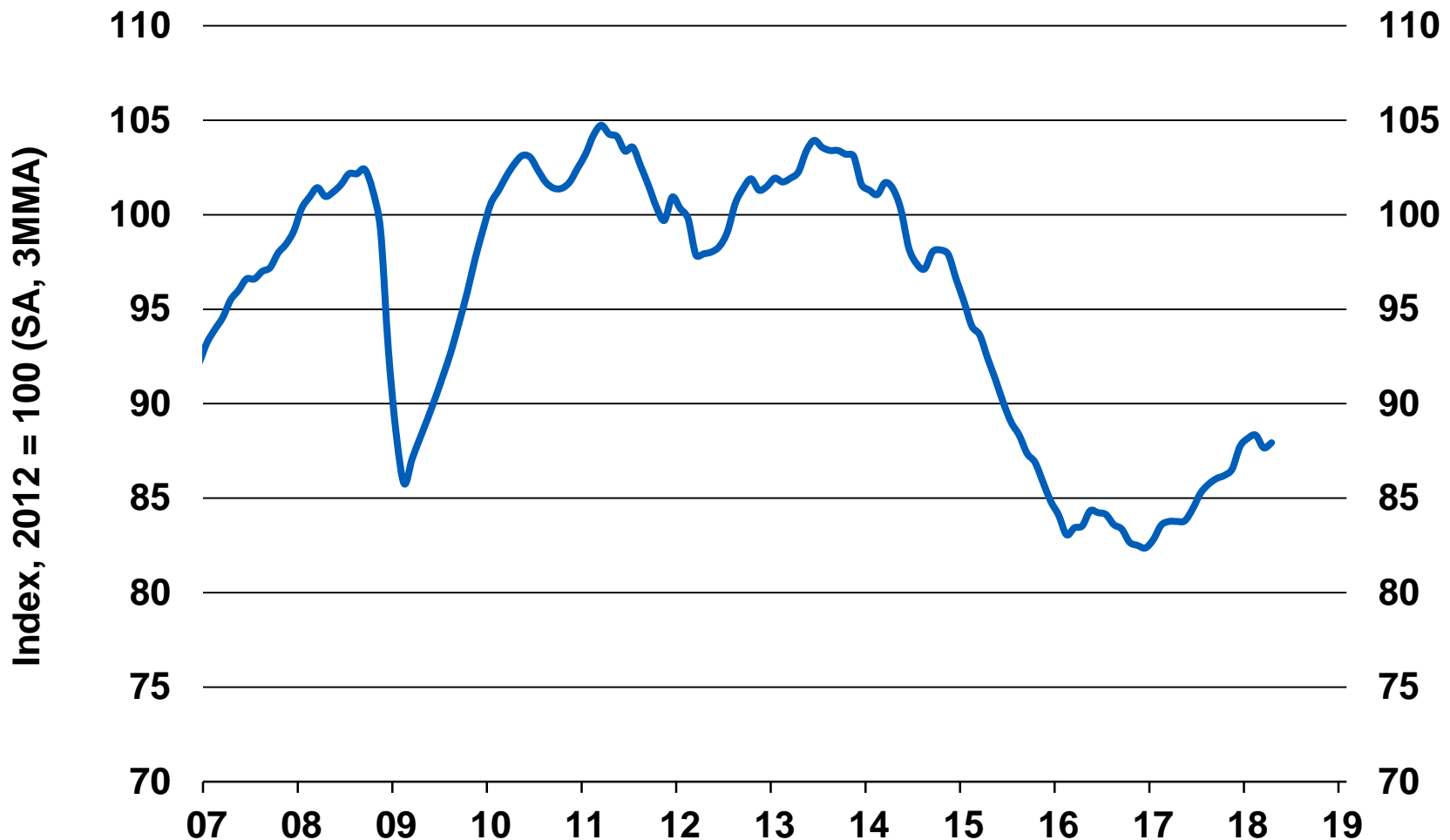
Source: Ministry of Trade and Industry, Eaton Economics
Data through April 2018

India's pace of manufacturing output exceeded its historical average in recent months



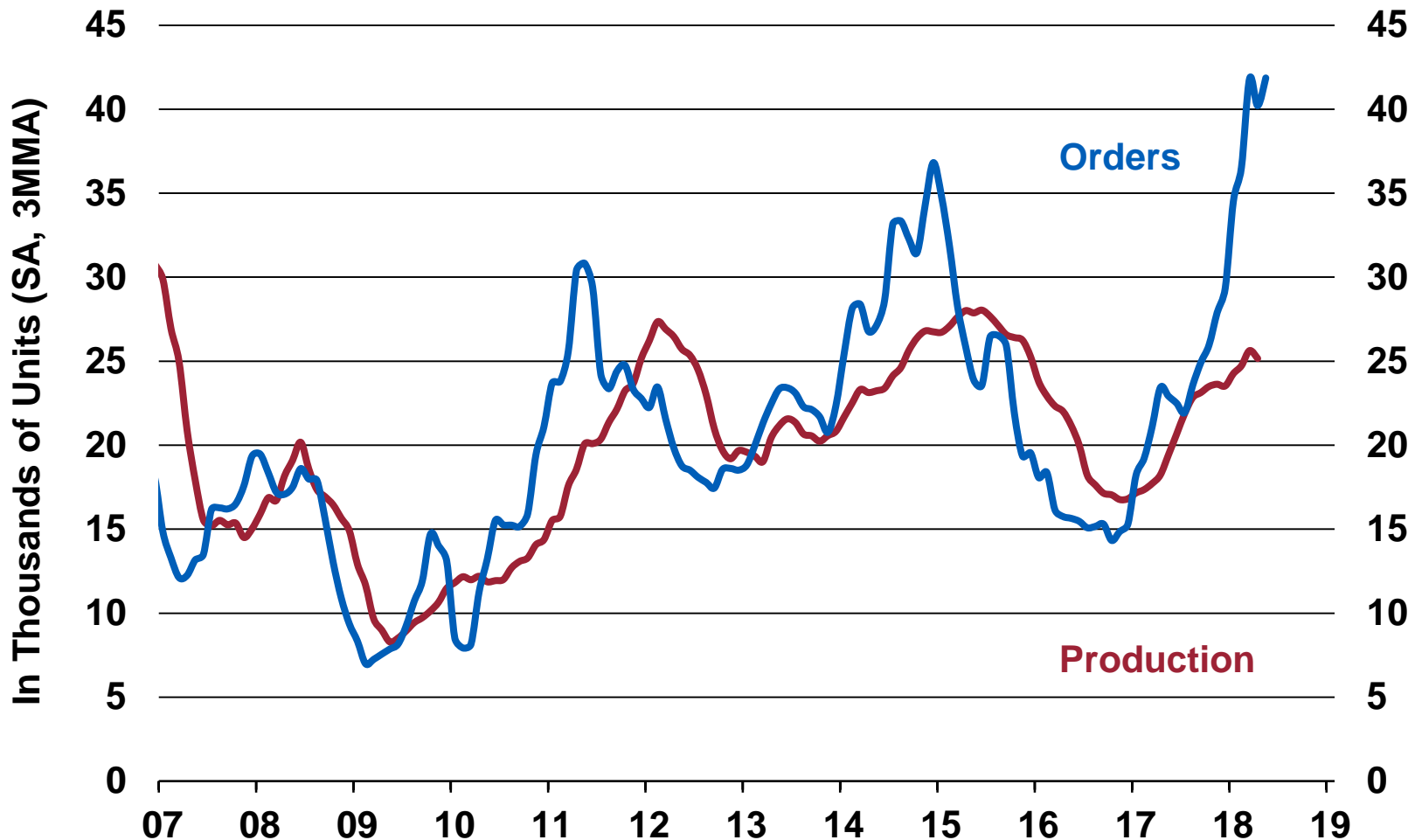
Source: Ministry of Statistics and Program Implementation, Eaton Economics
Data through April 2018

Brazil manufacturing output recovered from recession along with its broader economy



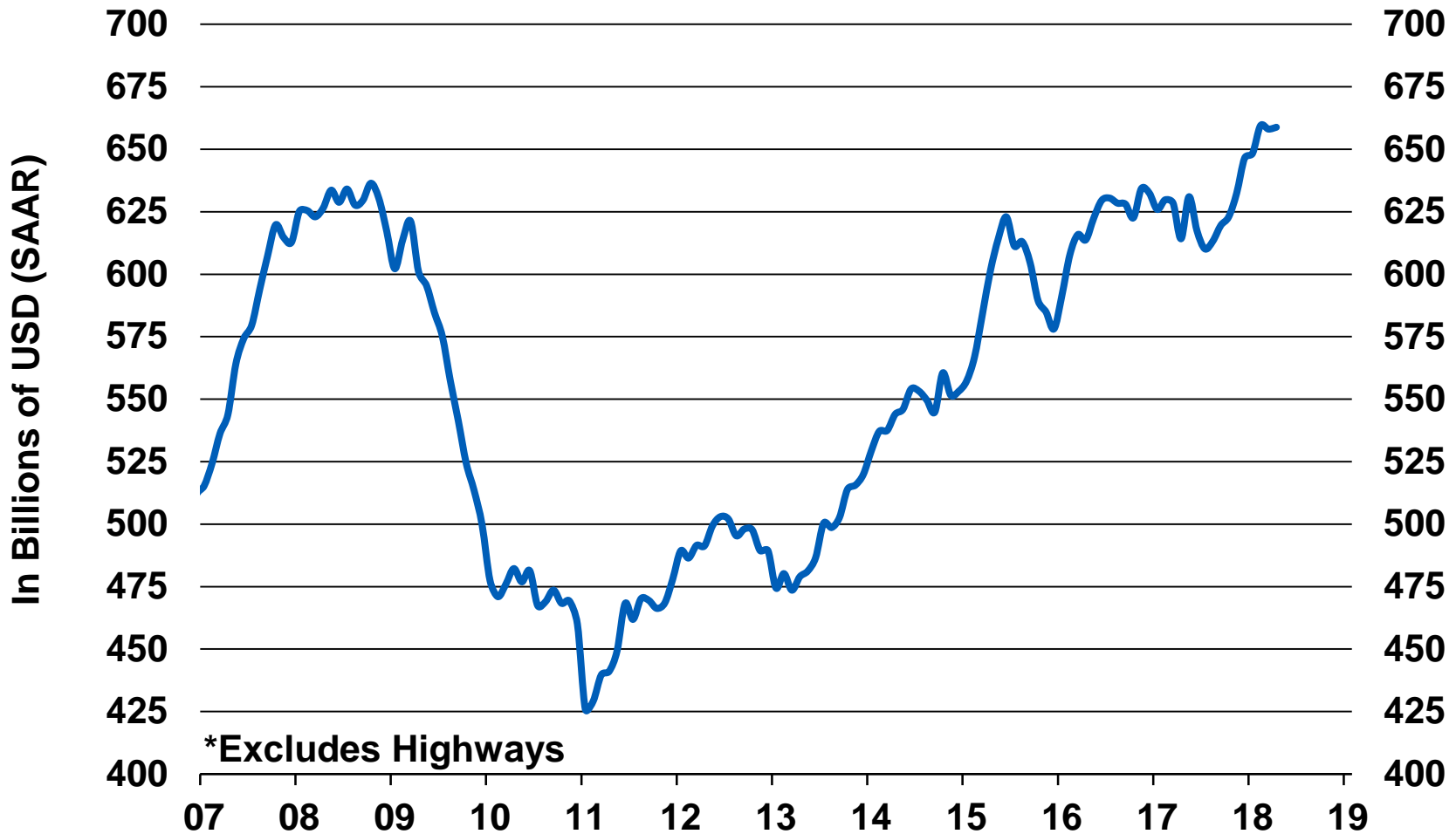
Source: IBGE, Eaton Economics
Data through April 2018

NAFTA class 8 truck demand has been very strong, is near record highs



Source: ACT Research, Eaton Economics
Data through April/May 2018

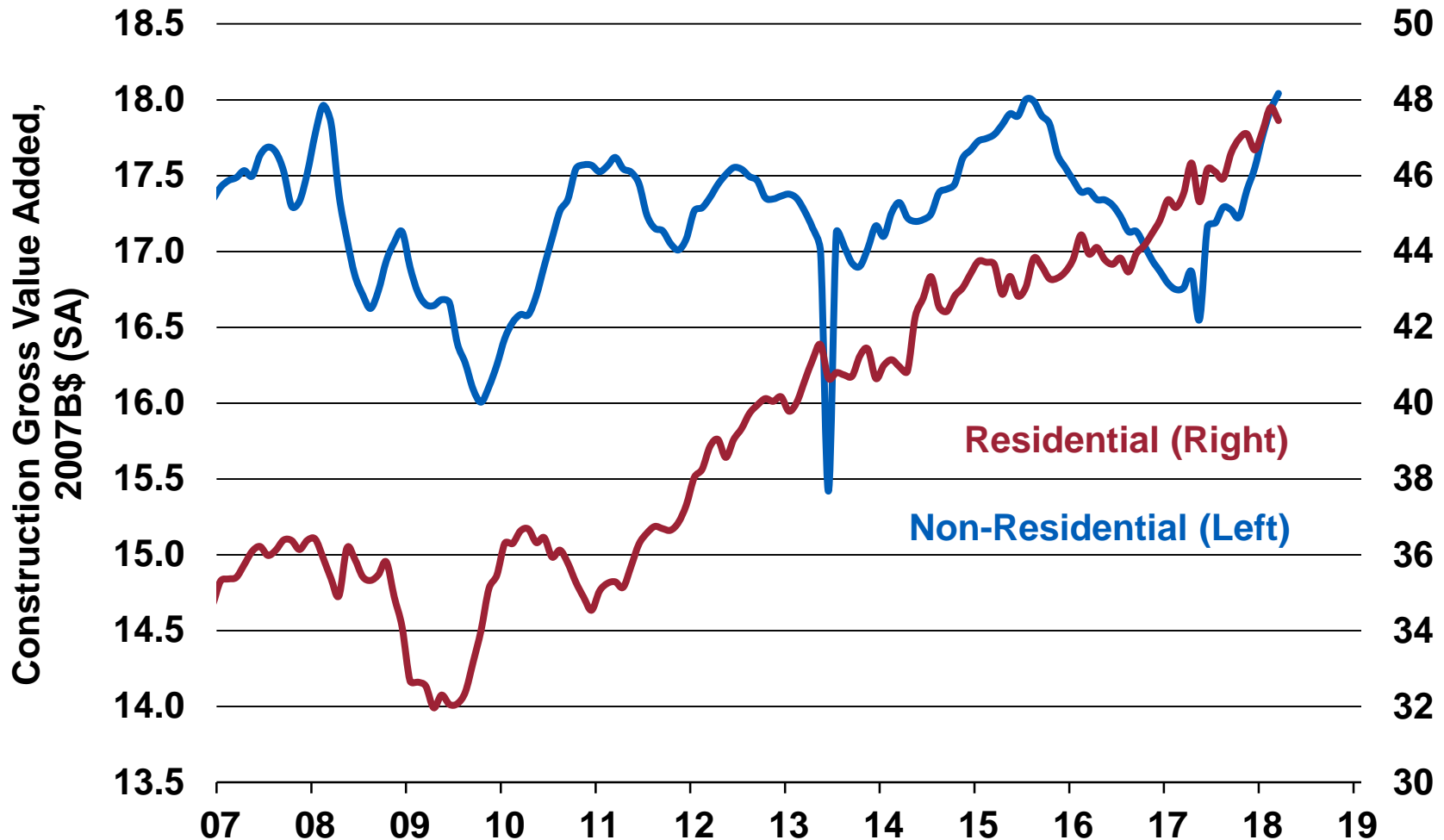
U.S. nonresidential construction is at cyclical high



*Excludes Highways

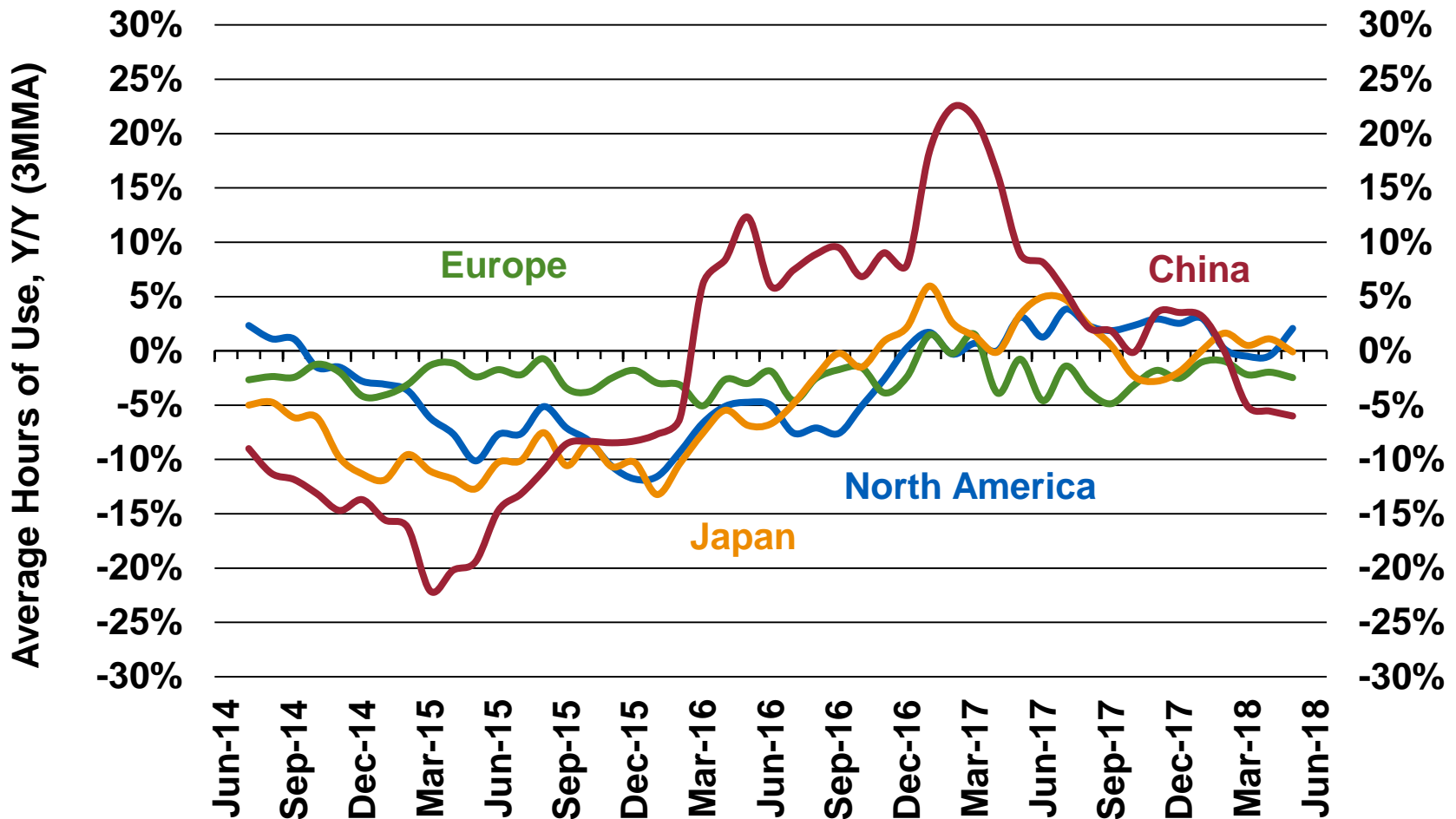
Source: U.S. Census Bureau, Eaton Economics
Data through April 2018

Canadian construction is growing again due to non-residential building



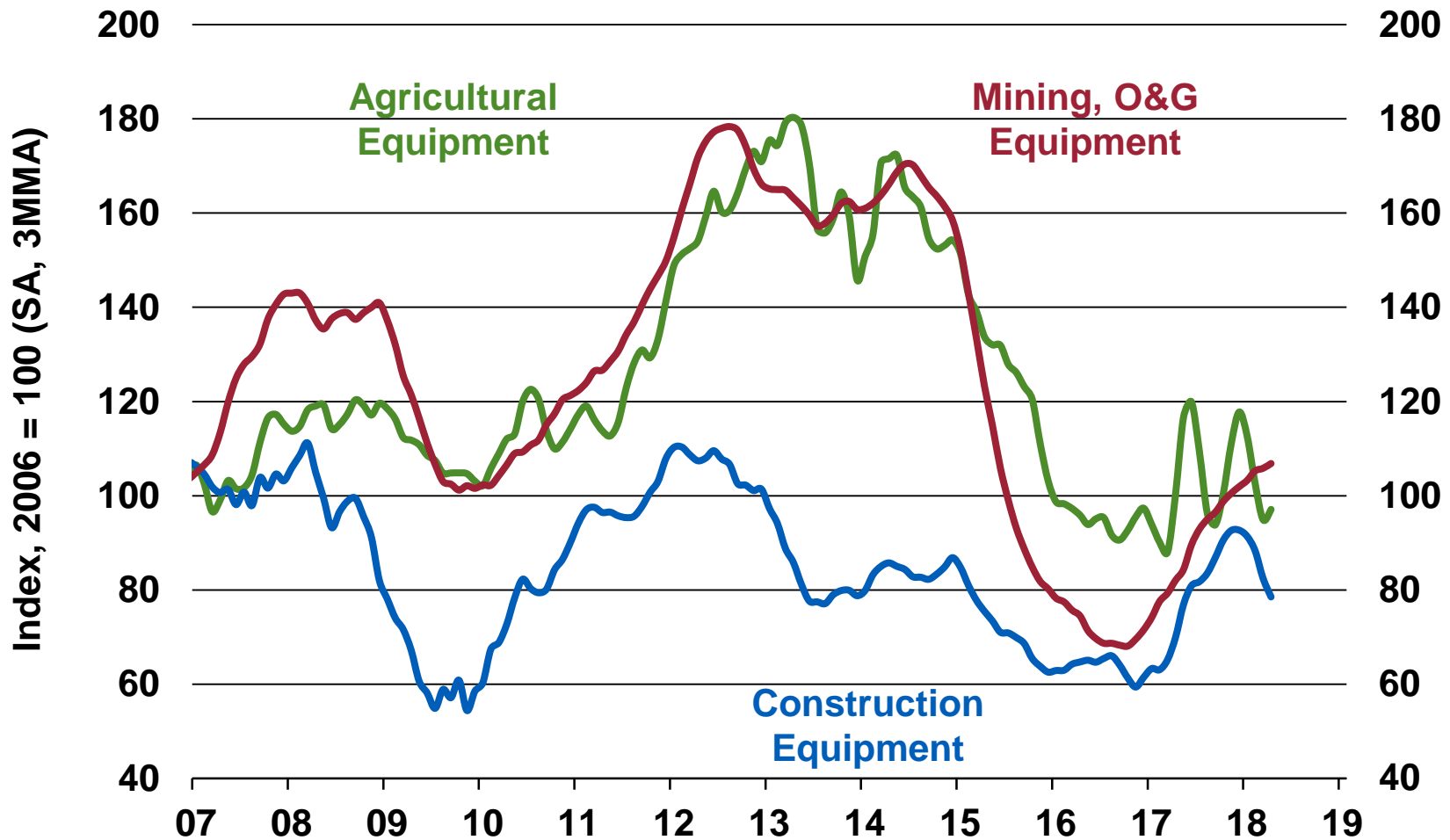
Source: Statistics Canada, Eaton Economics
Data through March 2018

Komatsu construction equipment utilization is largely unchanged, except for China



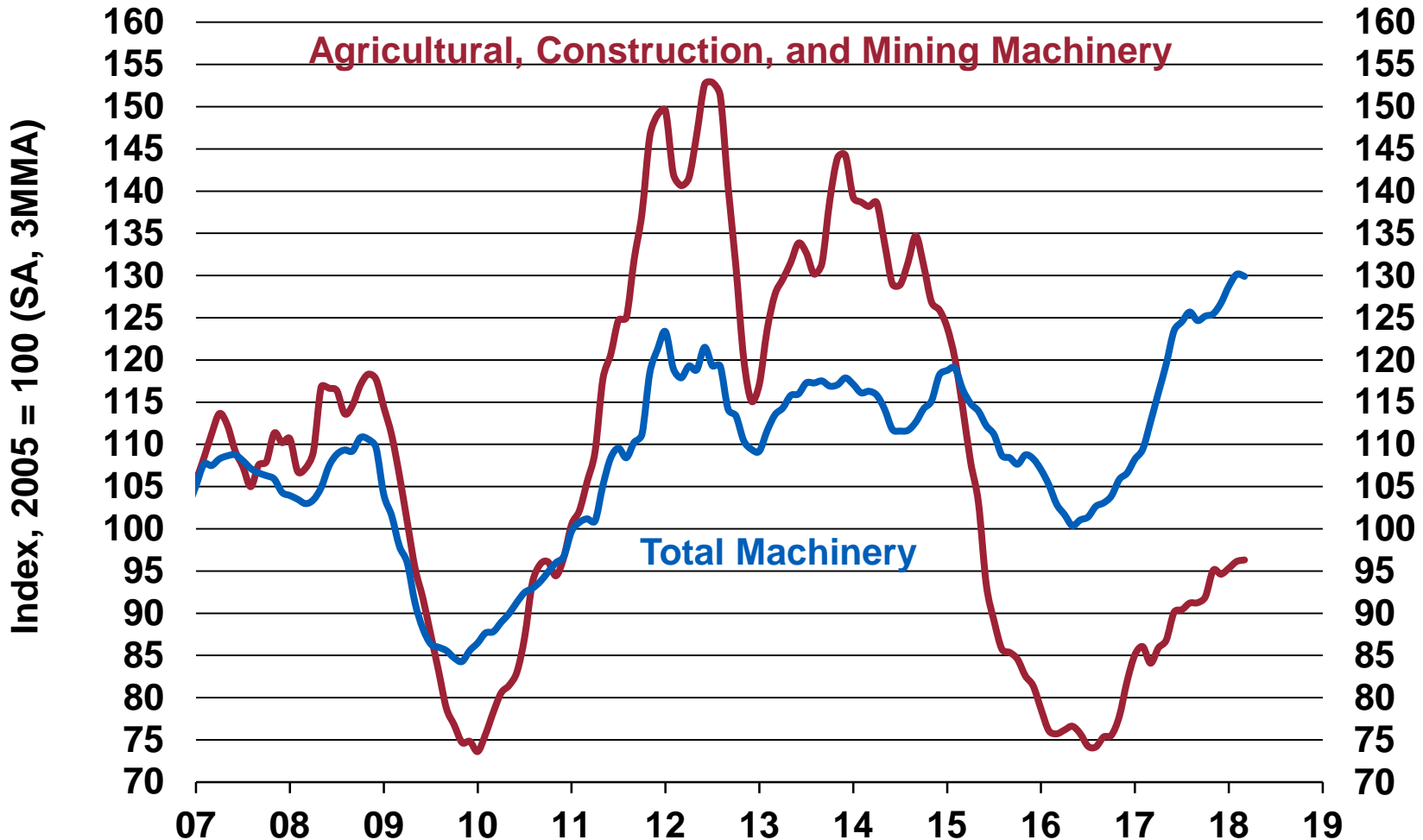
Source: Komatsu Investor Relations, Eaton Economics
 Data through May 2018, Note China January & February are average due to Lunar New Year

U.S. mobile hydraulics end markets are mixed but still positive



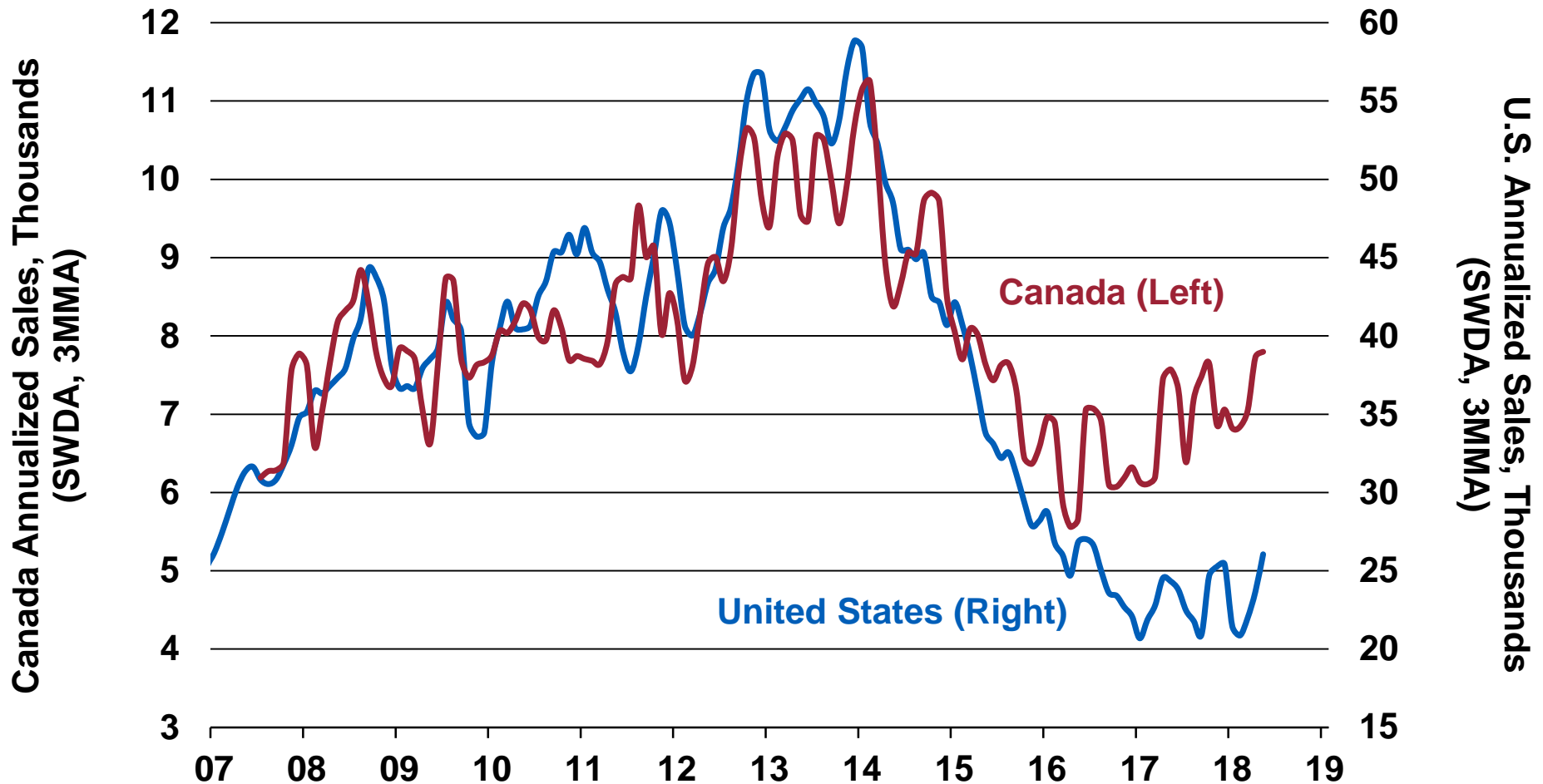
Source: U.S. Federal Reserve, Eaton Economics
Data through April 2018

Canadian end markets continue to grow



Source: Statistics Canada, Eaton Economics
Data through March 2018

Large agricultural equipment sales not showing much growth



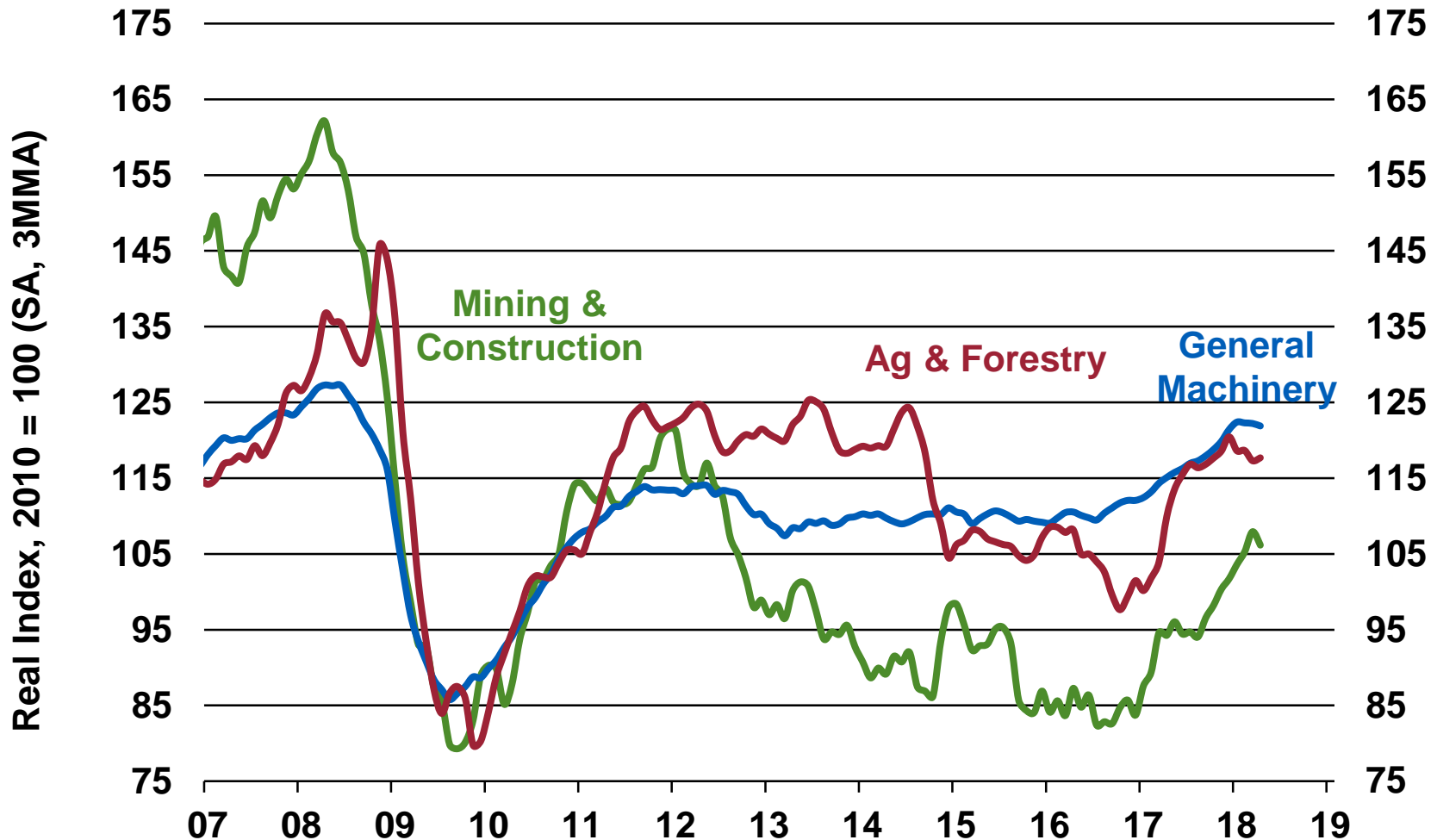
Source: AEM Flash Reports, Eaton Economics
Data through May 2018

Large agricultural equipment inventory levels have moved slightly only lower



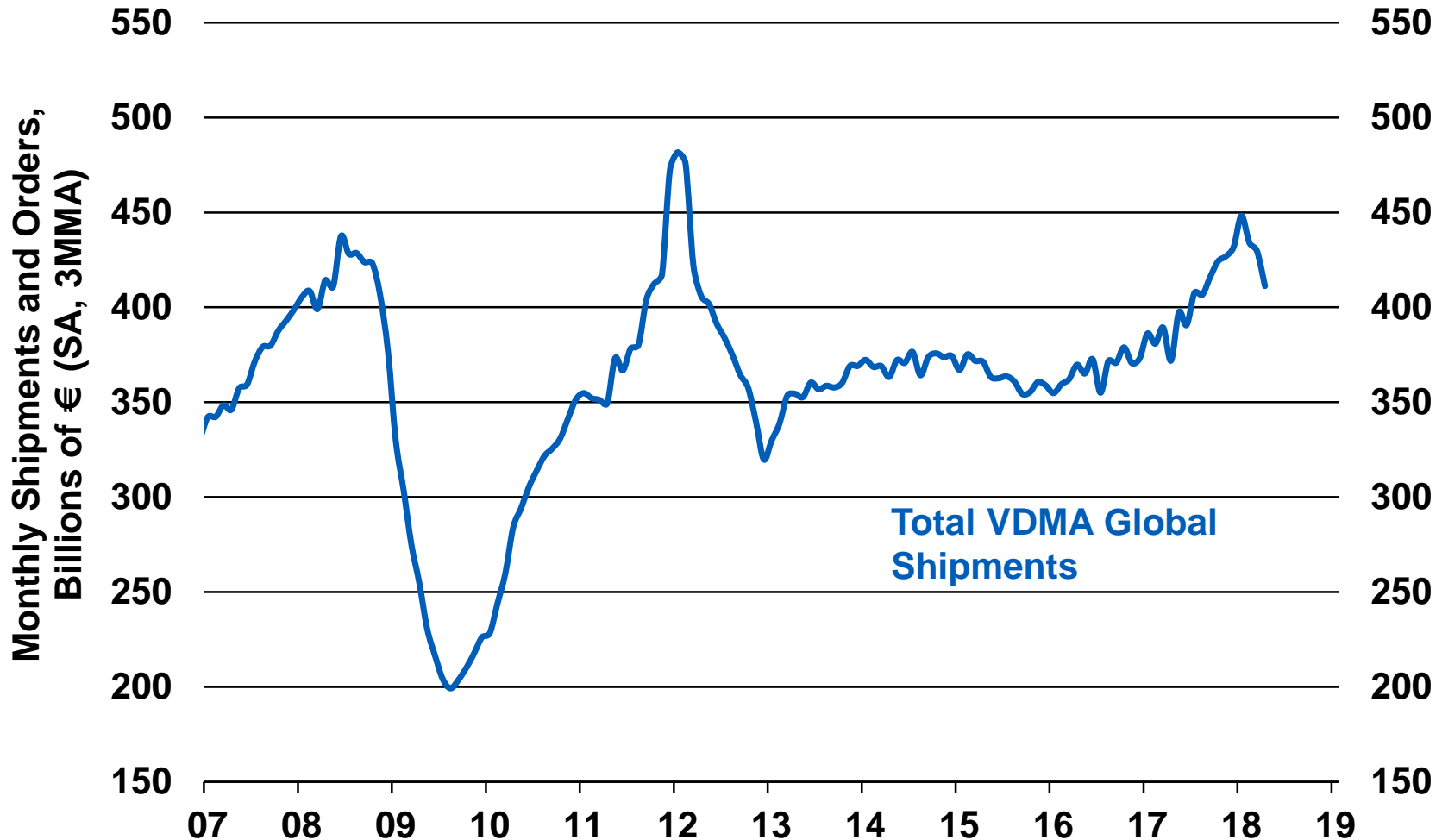
Source: AEM Flash Reports, Eaton Economics
Data through May 2018

EU-28 fluid power end markets have strengthened



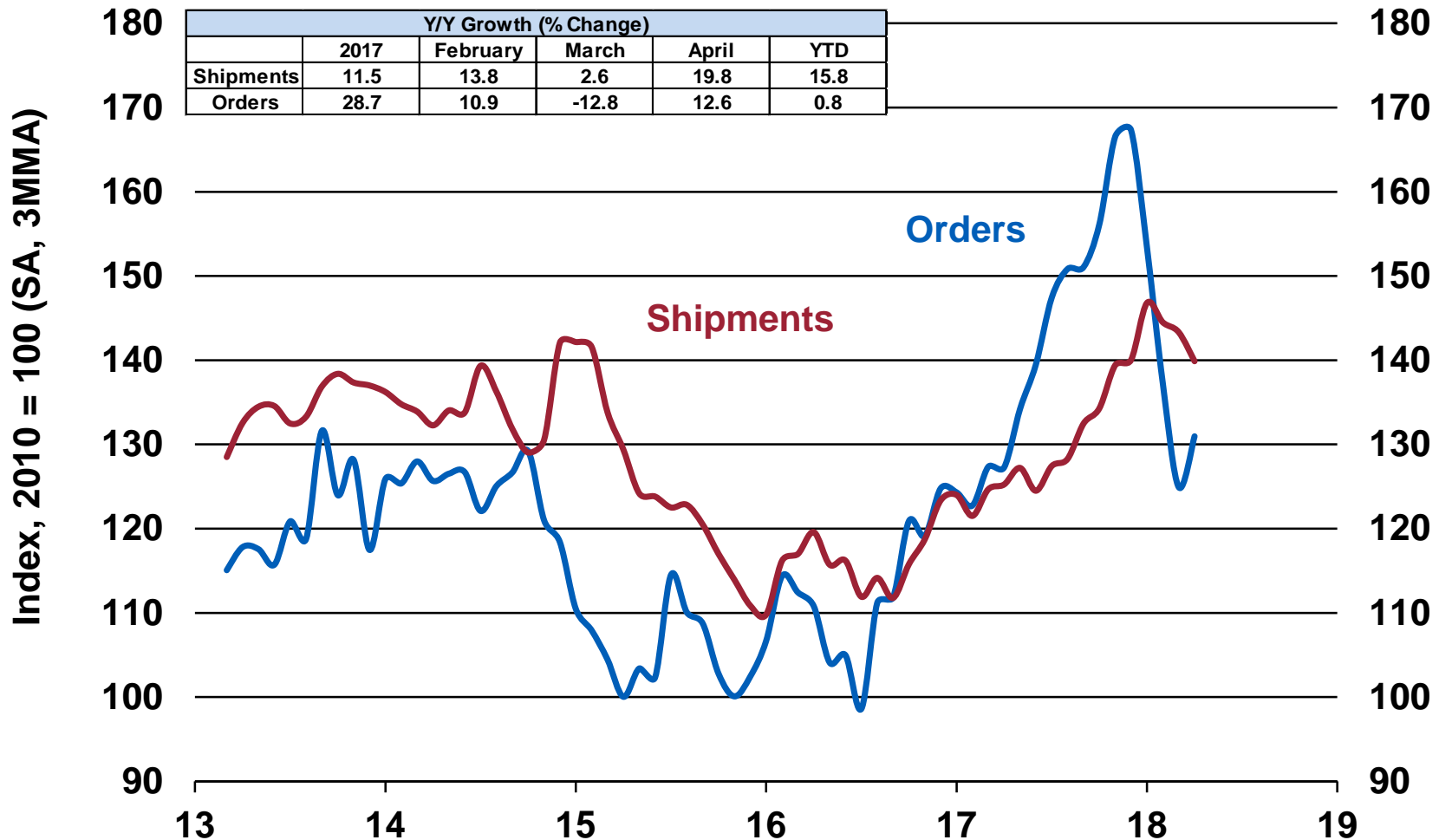
Source: Eurostat, Eaton Economics
Data through April 2018

Germany VDMA hydraulics shipments strong Y/Y, sequentially moving lower



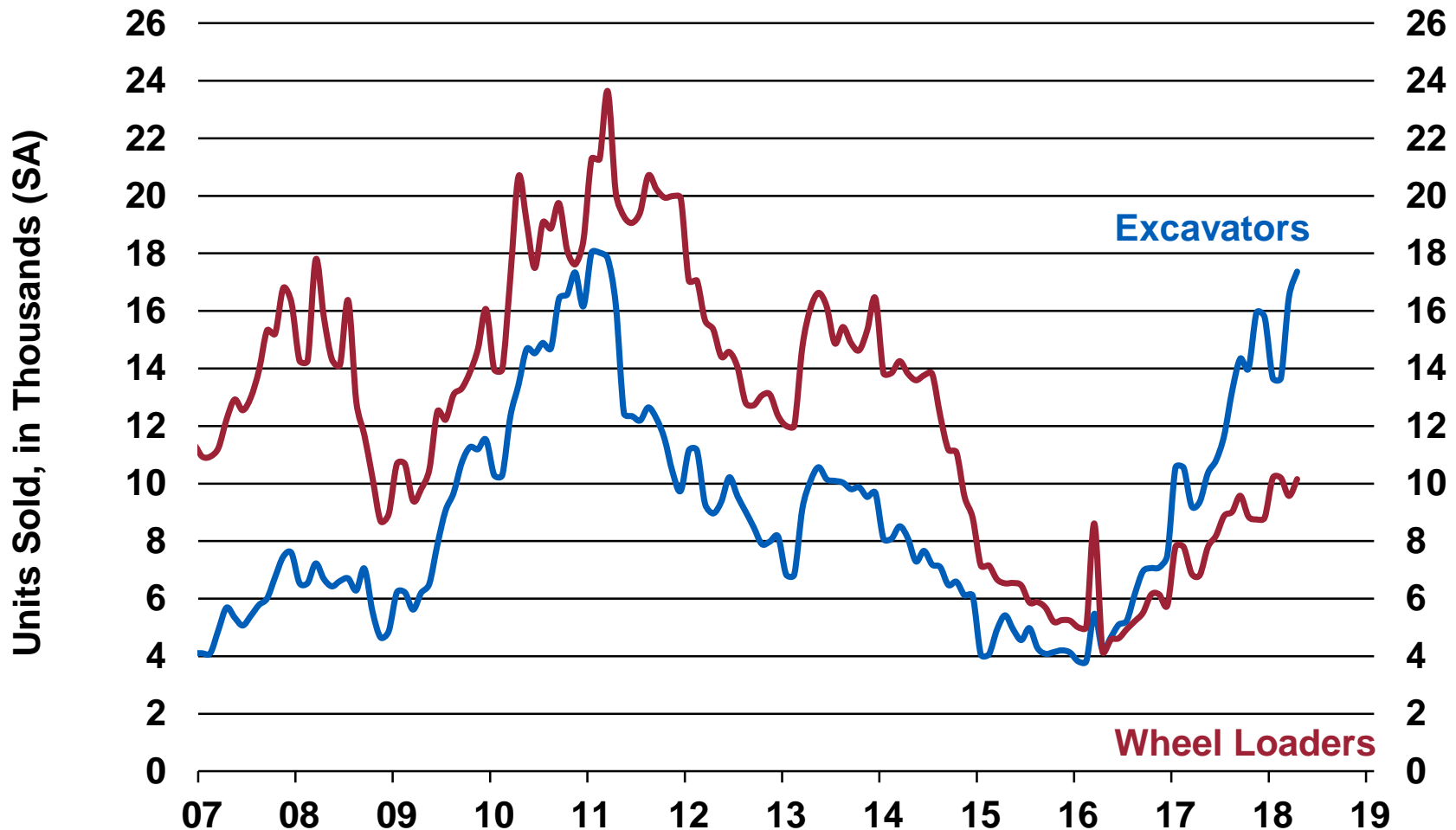
Source: VDMA, Eaton Economics
Data through April 2018

UK BFPA domestic hydraulics data shows that shipments are strong



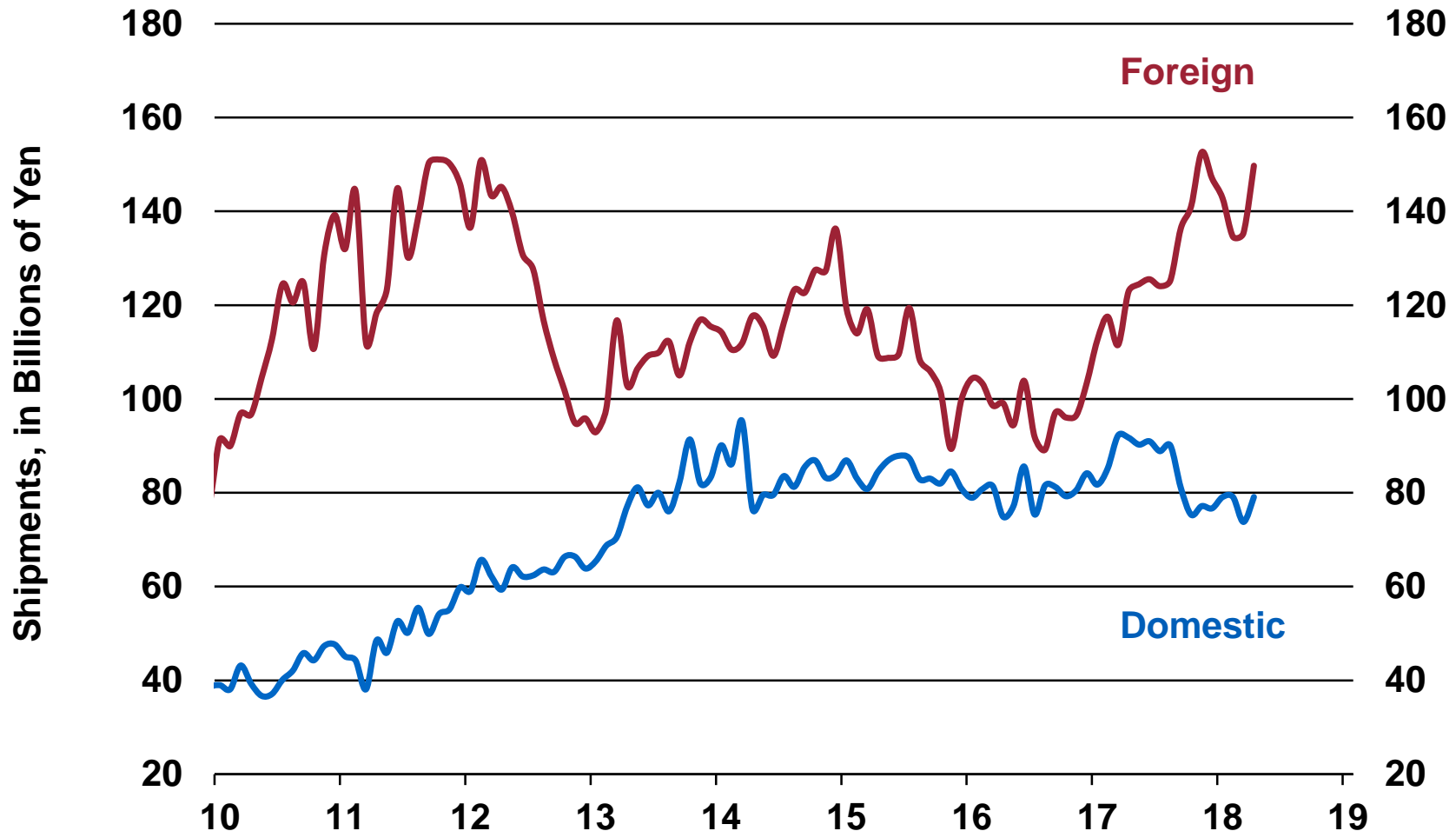
Source: British Fluid Power Association, Eaton Economics
Data through April 2018

China excavator and wheel loader sales remain very strong even after very strong 2017



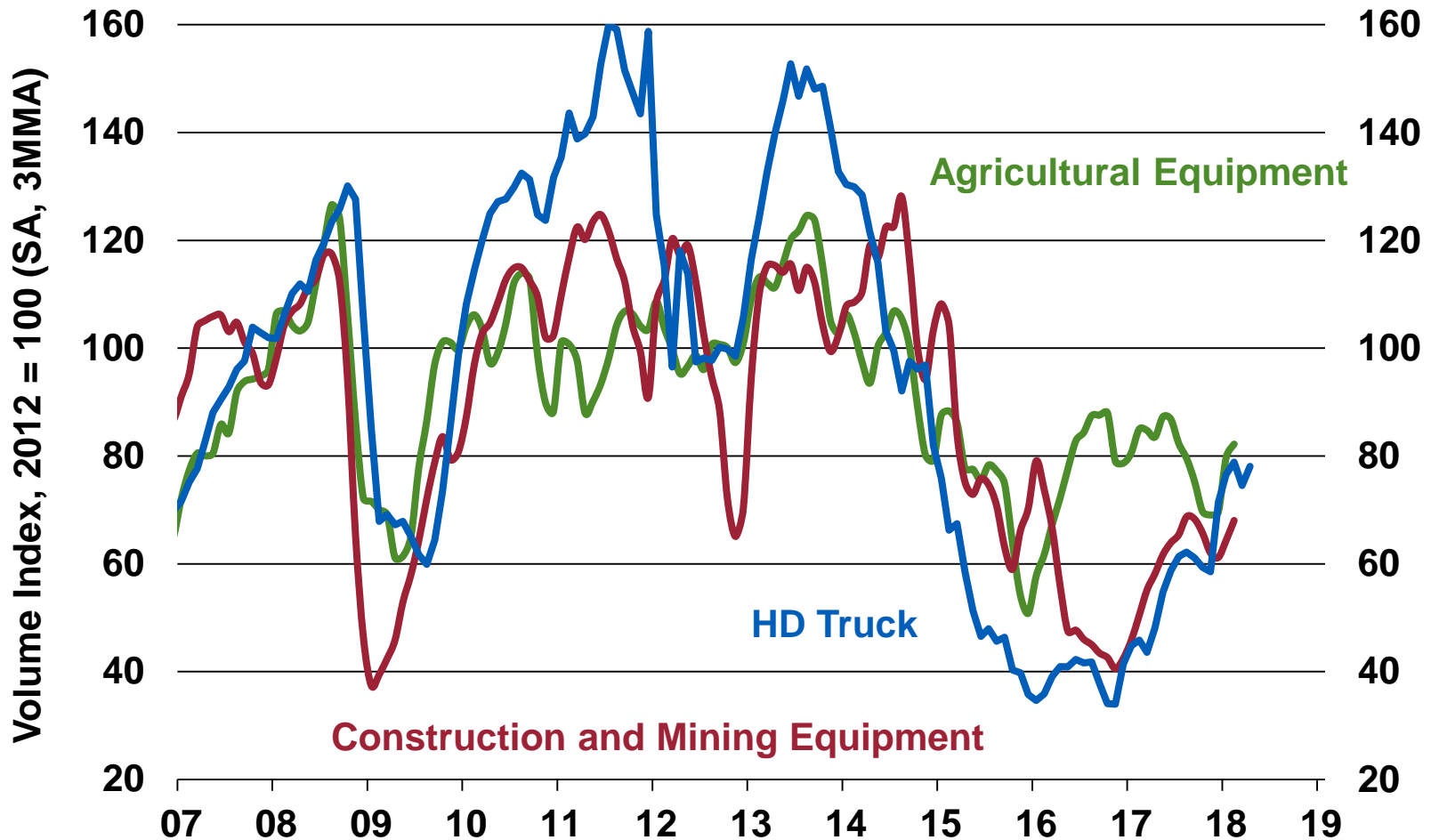
Source: China Construction Equipment Association, Eaton Economics
Data through April 2018

Japan construction equipment shipments remain positive due to foreign shipments



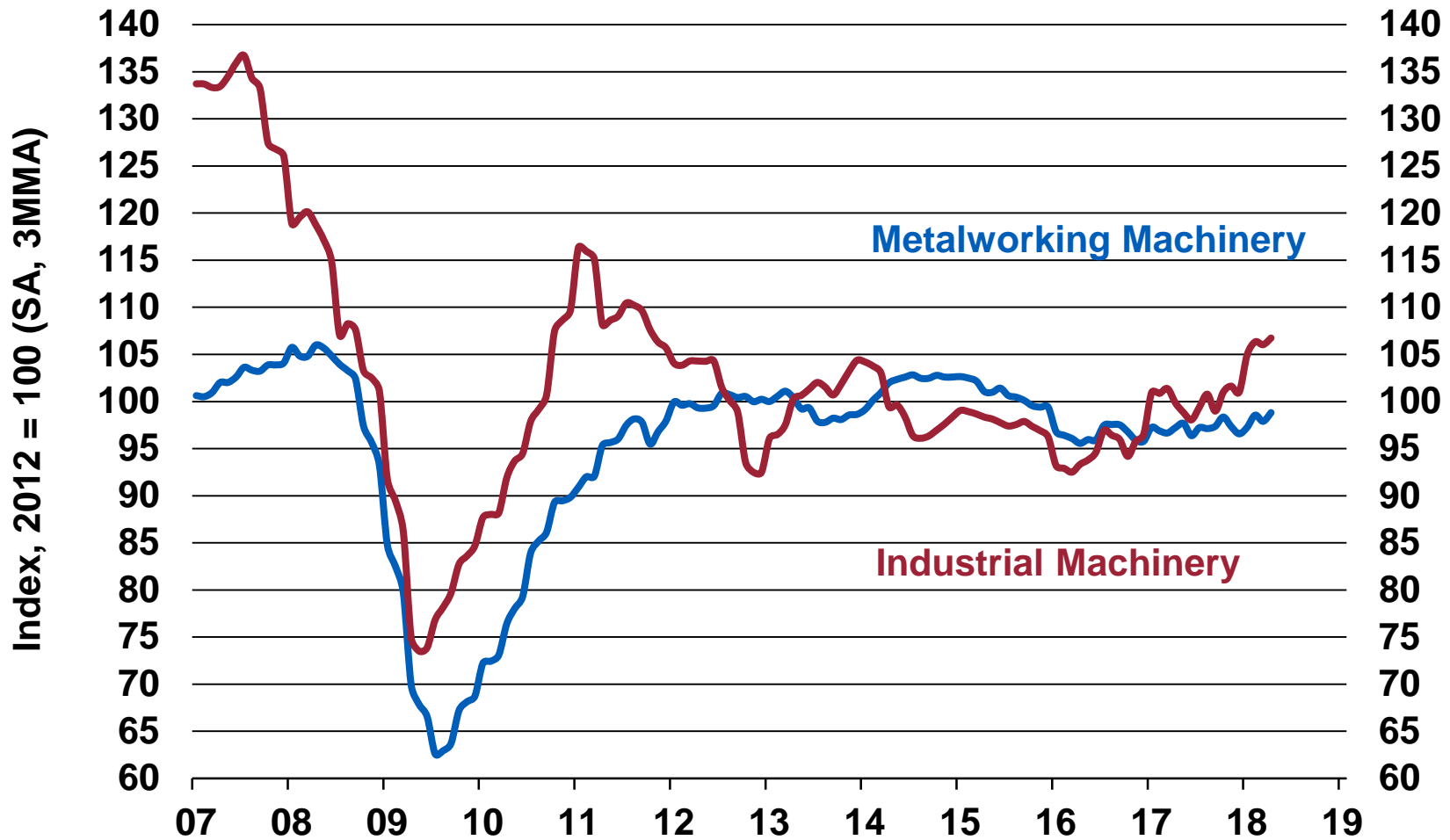
Source: Japan Construction Equipment Manufacturers Association, Eaton Economics
Data through April 2018

Brazilian end markets have improved in aggregate



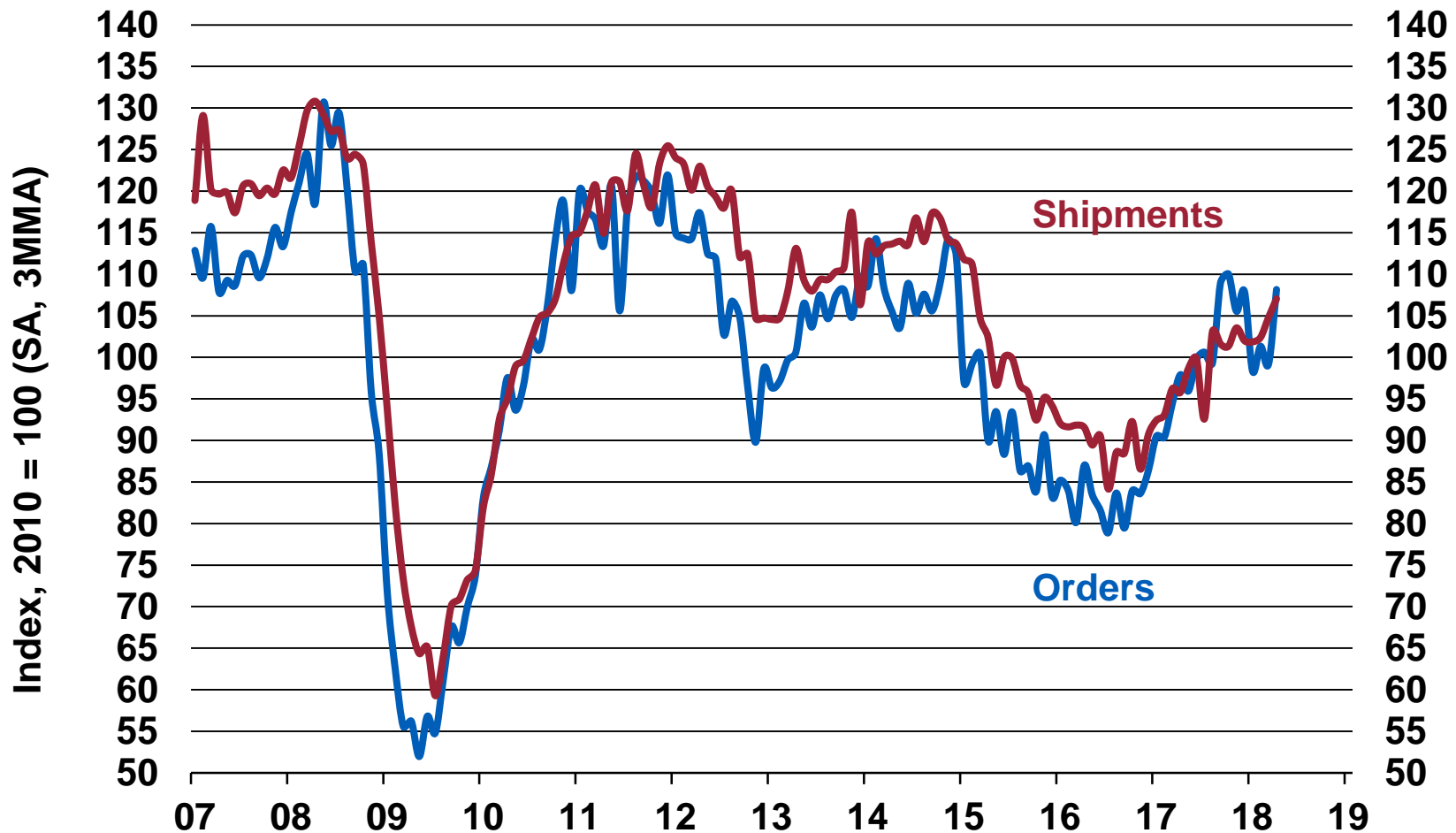
Source: IBGE, Anfavea, Eaton Economics
Data through April/May 2018

U.S. production of factory equipment turning around



Source: U.S. Federal Reserve, Eaton Economics
Data through April 2018

U.S. hydraulics market overall is posting positive, low double-digit growth



Source: National Fluid Power Association, U.S. Bureau of Labor Statistics, Eaton Economics
Data through April 2018

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What I told you last year:

Key takeaways

- Global economy has strengthened since 2016
 - Developed and developing markets both have improved, though political risk is elevated
- 2017 appears to be a year of recovery for fluid power markets
 - Helped by some commodities, construction, and improved manufacturing activity
- Cautious optimism for mild growth in 2018 and beyond is reasonable
 - Some current tailwinds likely to dissipate, but others likely to gather strength

Conclusion

- The global economy is on firm footing
 - GDP growth is positive, although more divergent than in 2017
- Hydraulics markets are strong
 - Solid industrial activity, commodities prices are supporting growth
- 2018 is set to be a good year
 - Prudent, accommodative monetary policy and improved labor markets are encouraging signs, buttressed by strong consumer and business sentiment, demand
- Risks remain, primarily from trade, but there does appear to be ample runway for continued growth

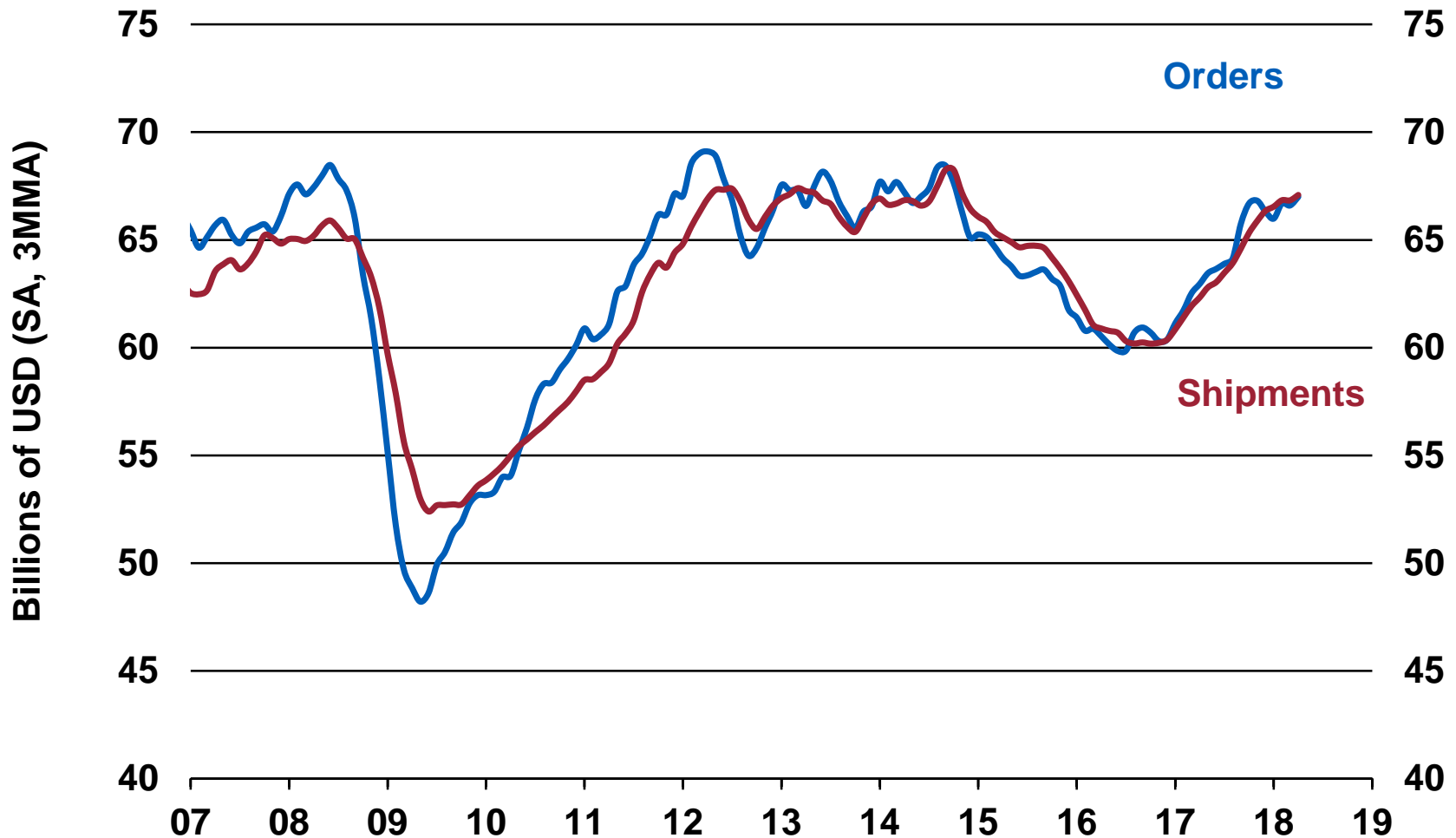
Global Manufacturing Purchasing Manager Index: New Orders

	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18
Global	53.5	53.3	53.6	54.2	53.7	54.1	55.1	55.8	55.4	55.0	53.7	53.8	53.4
United States	53.5	51.6	53.9	53.6	52.8	54.7	54.4	55.9	56.8	57.0	56.4	58.8	58.0
Canada	55.7	55.1	56.4	54.4	54.9	53.2	53.9	54.6	56.4	55.6	55.6	55.7	57.6
Eurozone	57.8	58.7	57.0	58.3	58.5	58.8	61.4	61.5	59.6	58.0	55.5	54.5	54.2
Germany	60.7	61.7	58.6	60.3	60.8	60.4	63.7	64.2	60.0	58.7	56.0	55.8	55.2
France	53.5	55.9	55.4	57.1	56.8	56.6	58.7	59.8	59.0	56.3	53.3	52.8	52.8
Italy	55.8	56.0	56.4	58.2	57.0	59.4	61.5	60.1	61.3	57.8	55.4	52.2	51.4
Spain	55.7	54.1	52.8	51.6	53.8	56.1	55.5	54.1	54.2	56.7	55.2	54.4	52.6
UK	59.3	54.6	56.7	58.8	56.4	57.3	61.1	56.7	55.7	56.9	55.1	55.0	54.7
Russia	54.2	51.0	55.0	53.1	53.1	52.3	53.2	53.3	54.2	51.7	50.7	51.2	50.2
Japan	53.4	52.3	51.8	51.9	53.4	52.8	54.7	56.2	56.8	54.7	53.1	53.8	53.0
China	50.3	51.0	52.8	53.2	51.2	52.4	51.8	53.0	52.3	52.8	52.1	51.6	51.8
India	52.6	51.3	46.2	51.5	51.0	49.9	54.2	56.8	53.0	52.3	51.5	52.0	51.6
Brazil	54.4	52.8	51.1	53.0	52.4	52.2	56.2	53.9	52.1	54.4	55.3	53.8	50.6

Source: IHS Markit, Eaton Economics
Data through May 2018

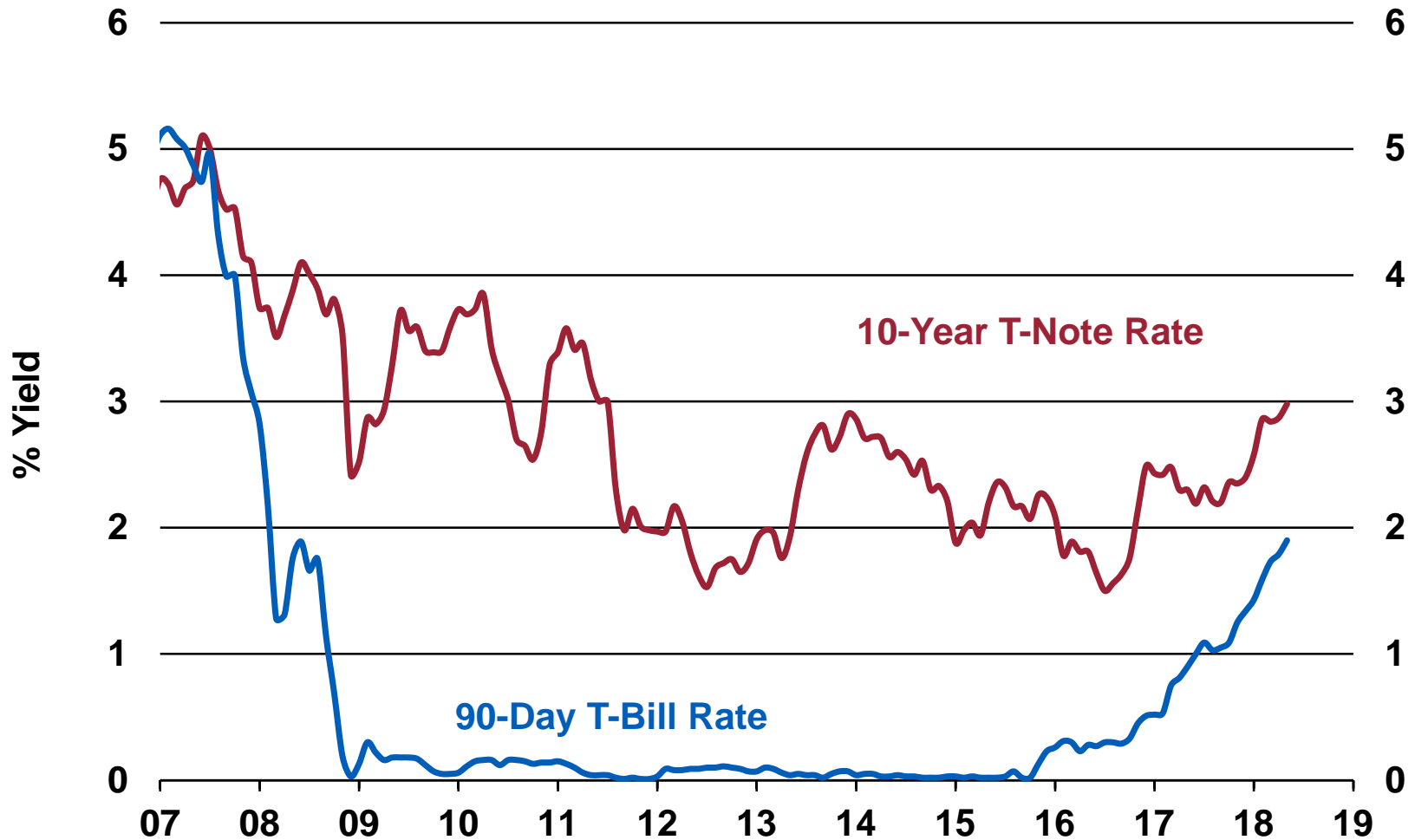
>54	51-54	45-51	<45
Above Trend	Trend	Flat	Recession

U.S. non-defense capital goods (ex. aircraft) portends solid investment



Source: U.S. Census Bureau, Eaton Economics
Data through April 2018

U.S. yield curve



Source: U.S. Federal Reserve, Eaton Economics
Data through May 2018

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