

U.S. and global cyclical indicators

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U.S. Purchasing Managers' Index, 2000-2018

Manufacturing, diffusion index, base = 50
Monthly and 12-month moving average

70

60

50

40

30

20

2000

2005

2010

2015

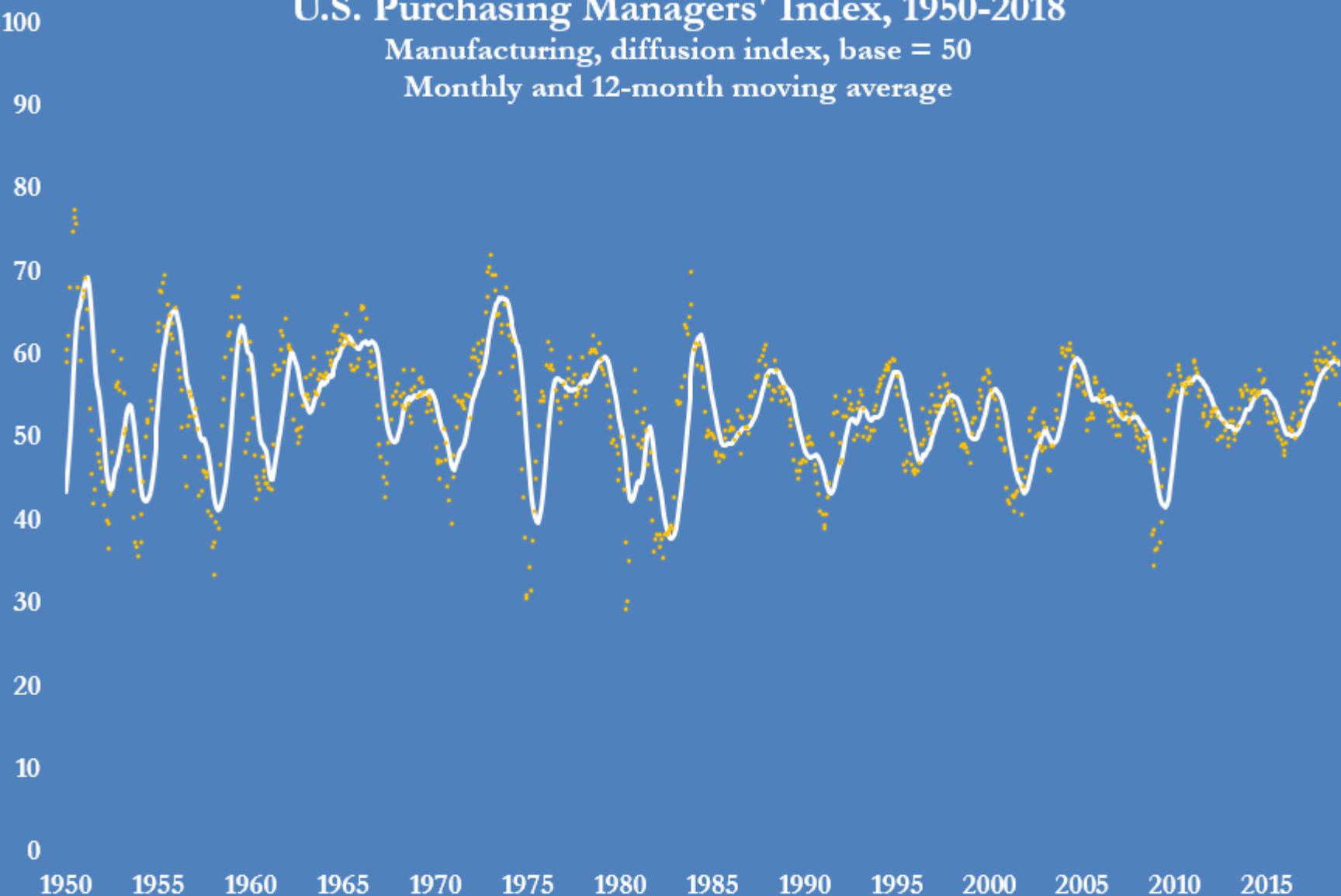
Source: Institute for Supply Management, *Manufacturing Report on Business*

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U.S. Purchasing Managers' Index, 1950-2018

Manufacturing, diffusion index, base = 50

Monthly and 12-month moving average



Source: Institute for Supply Management, *Manufacturing Report on Business*

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10

8

6

4

2

0

-2

-4

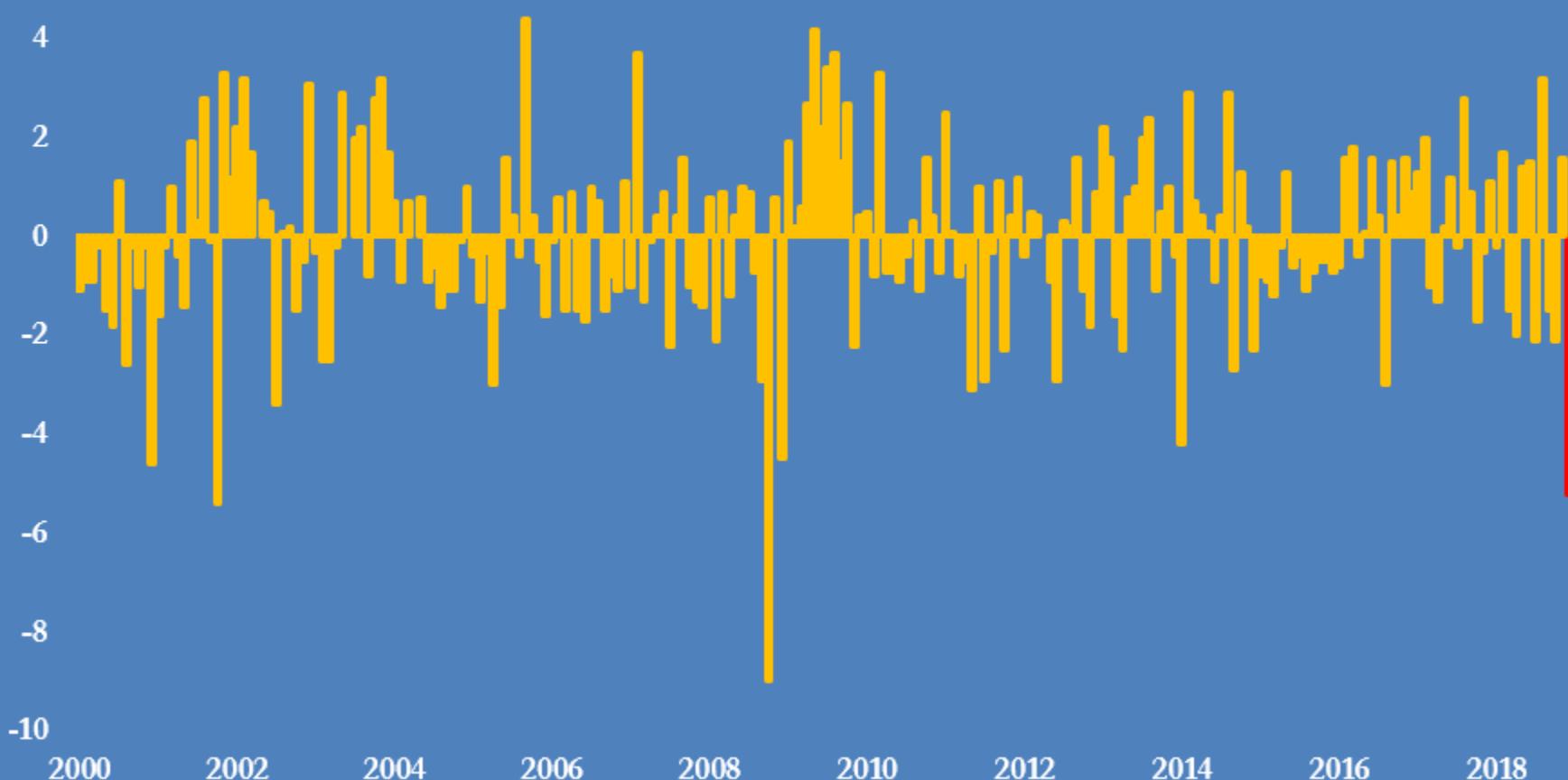
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-8

-10

U.S. Purchasing Managers' Index, 2000-2018

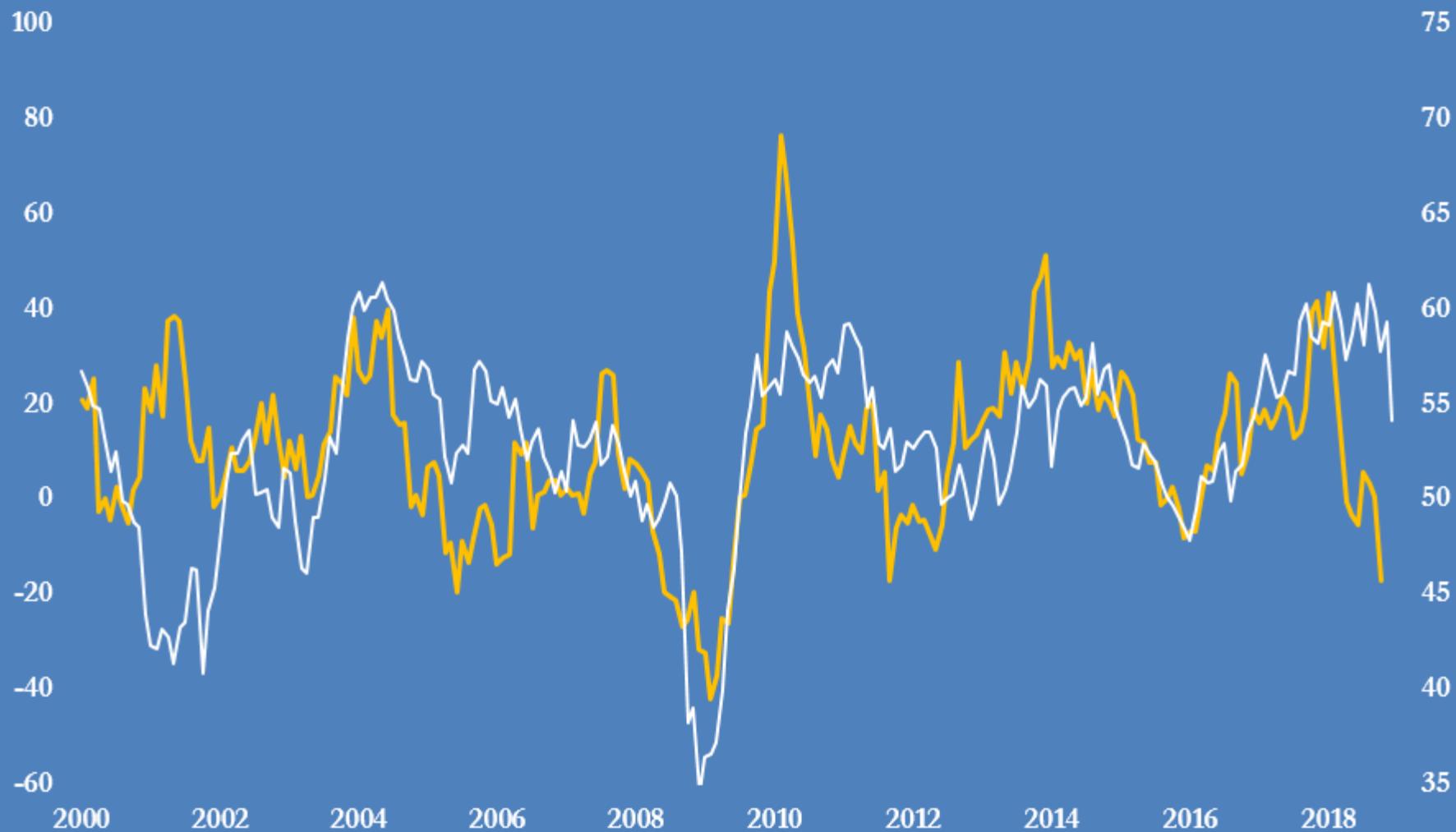
Manufacturing, diffusion index, monthly change, points



Source: Institute for Supply Management, *Manufacturing Report on Business*

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3M Corporation share price and ISM composite manufacturing index

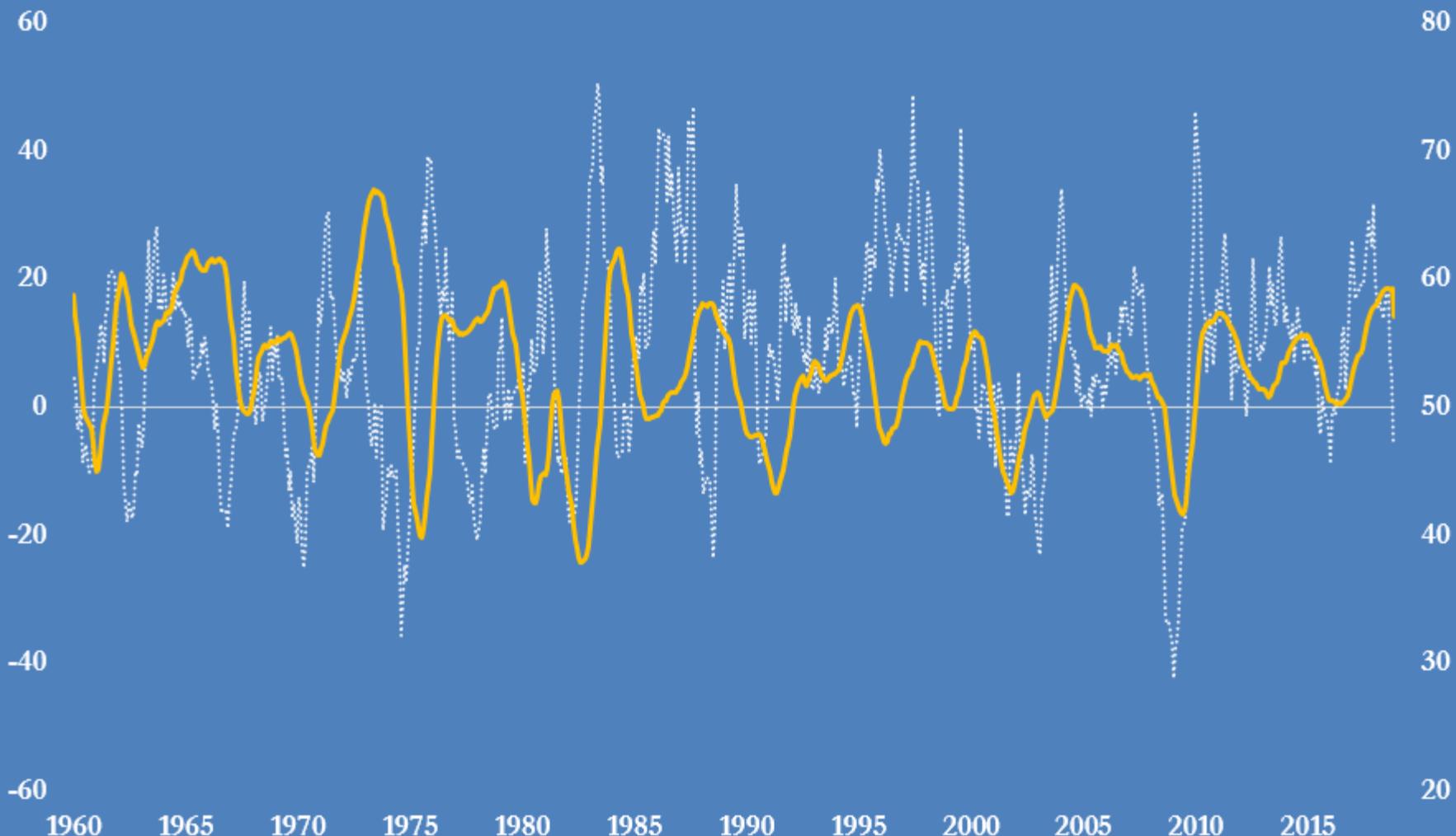


— L-Axis: 3M Corporation share price (12-month percent change)
— R-axis: ISM composite manufacturing activity index

Sources: NYSE, ISM
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Dow Jones Industrial Average versus ISM composite manufacturing index

Dow 12-month percent change, ISM index points, 1960-2018



..... Dow Industrials (left-axis)

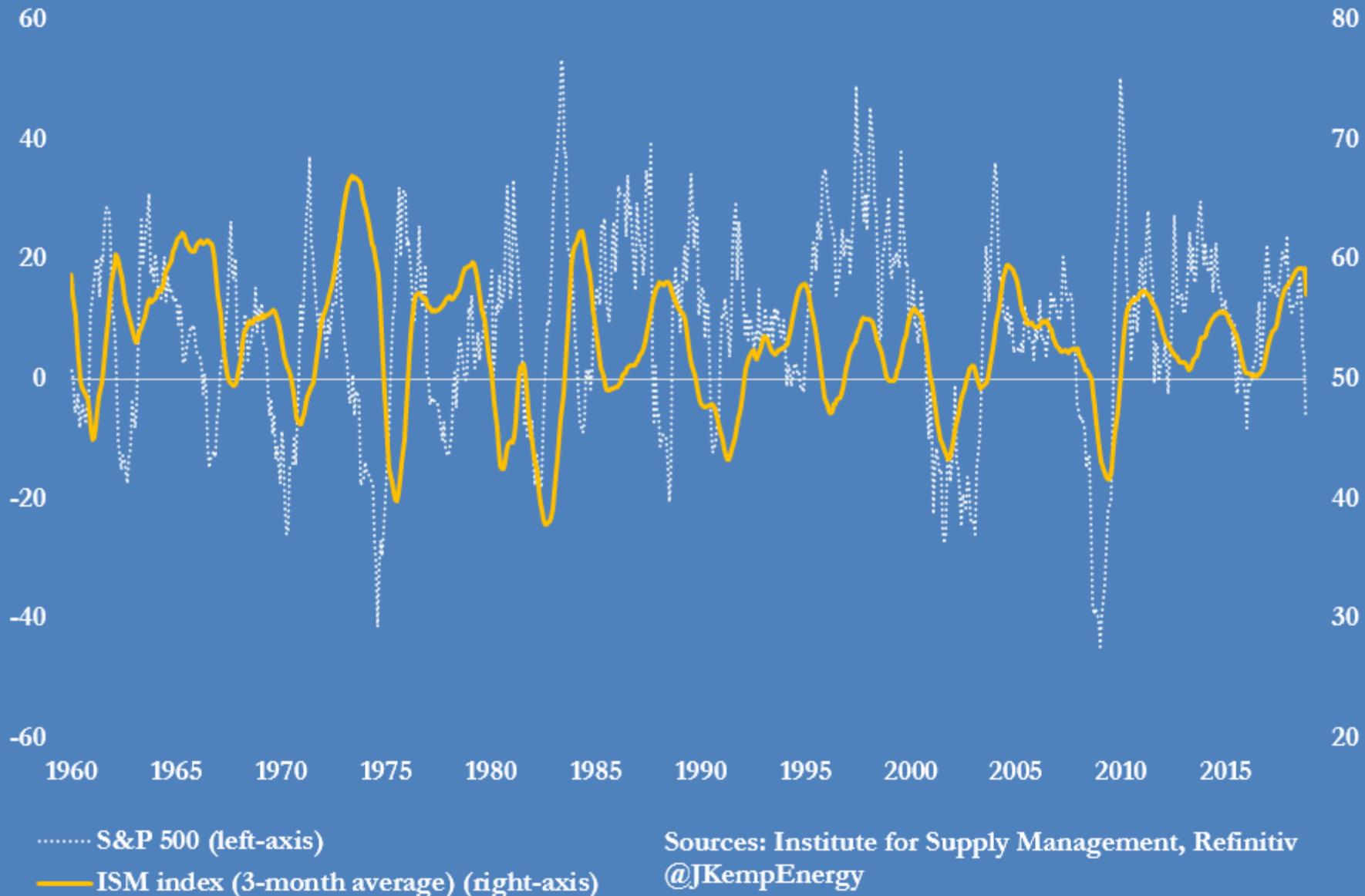
— ISM index (3-month average) (right-axis)

Sources: Institute for Supply Management, Refinitiv

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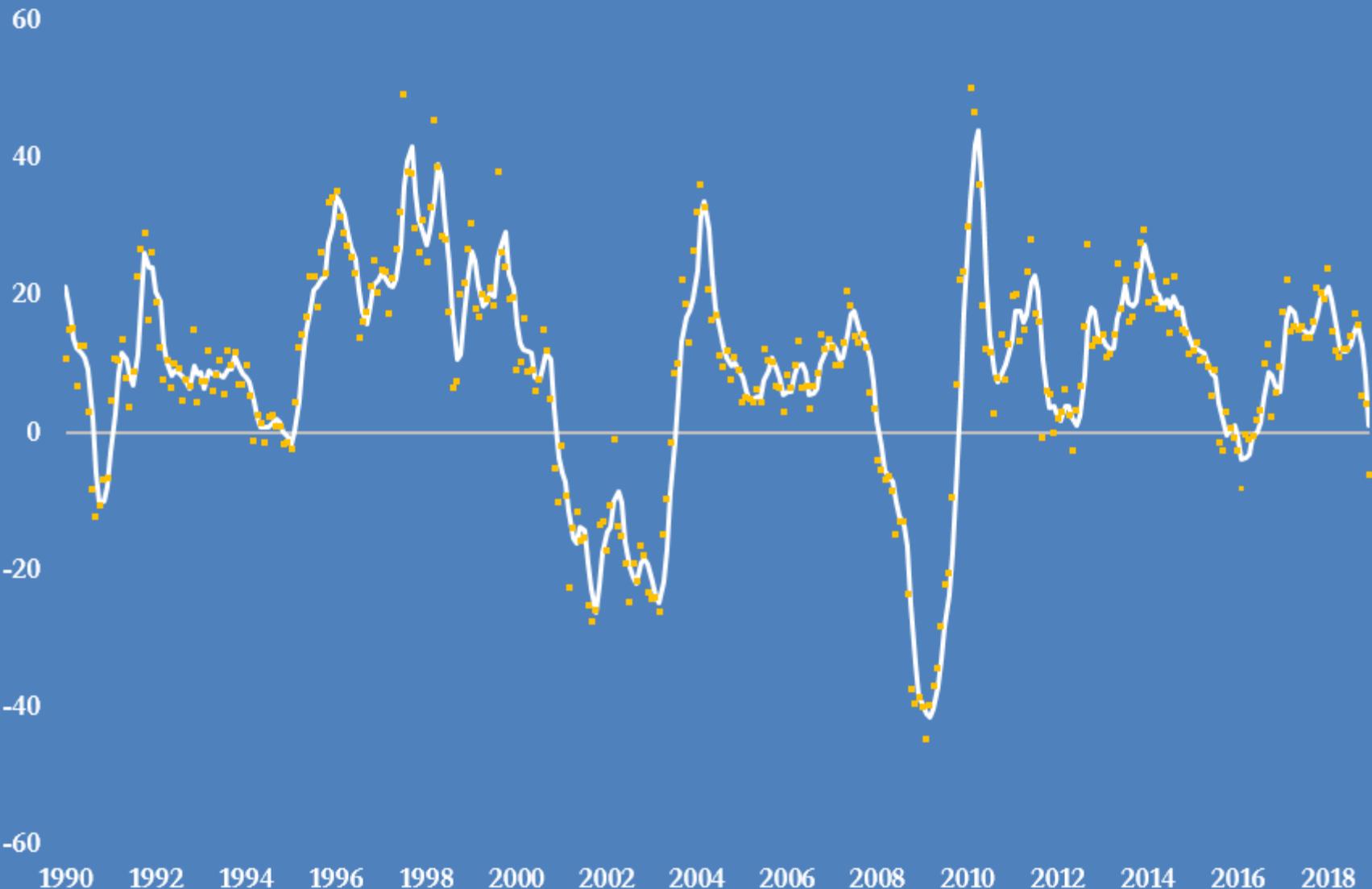
S&P 500 index versus ISM composite manufacturing index

S&P 12-month percent change, ISM index points, 1960-2018



S&P500 equity index, 1990-2018

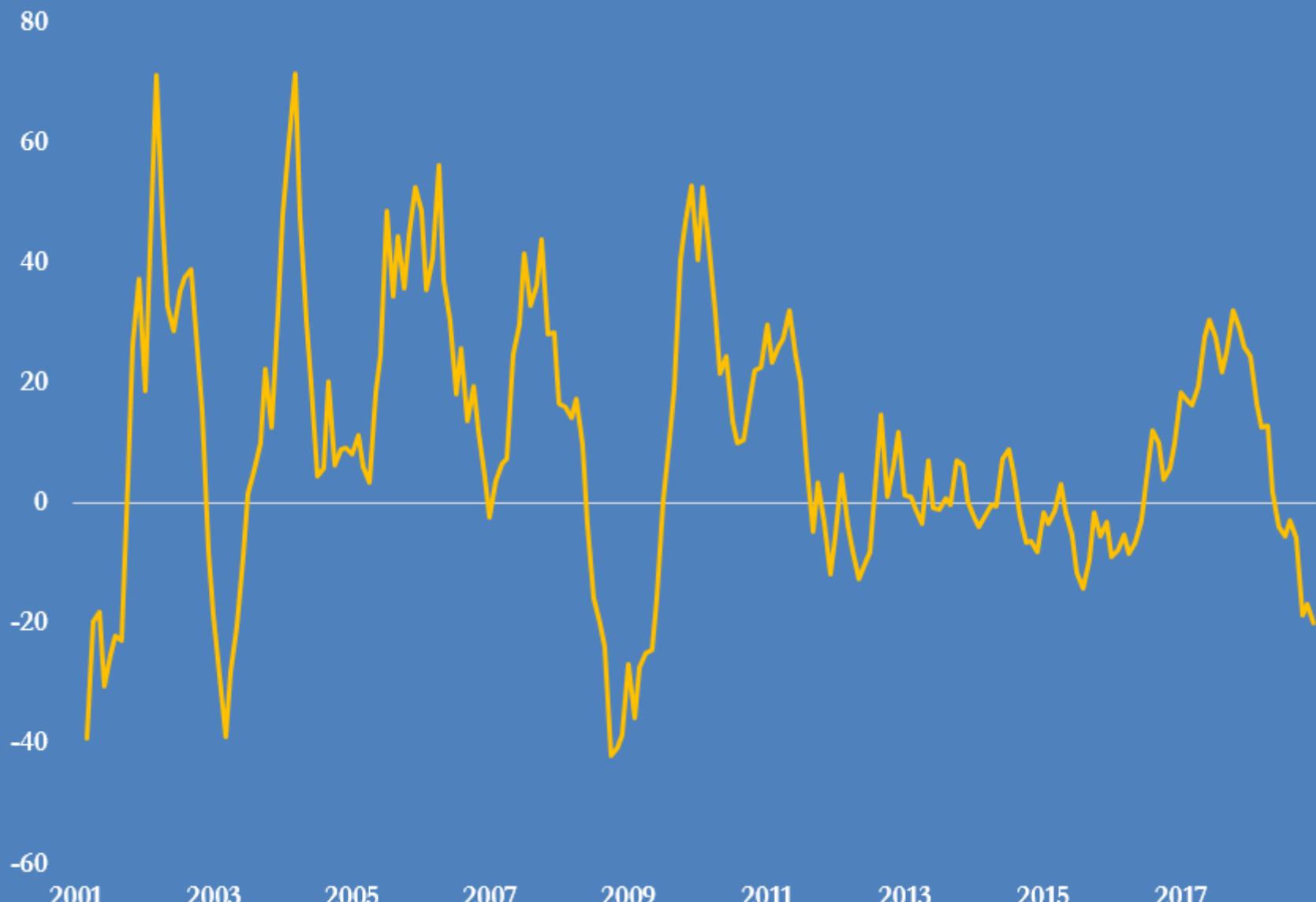
Percent change from prior year, individual months and 3-month average



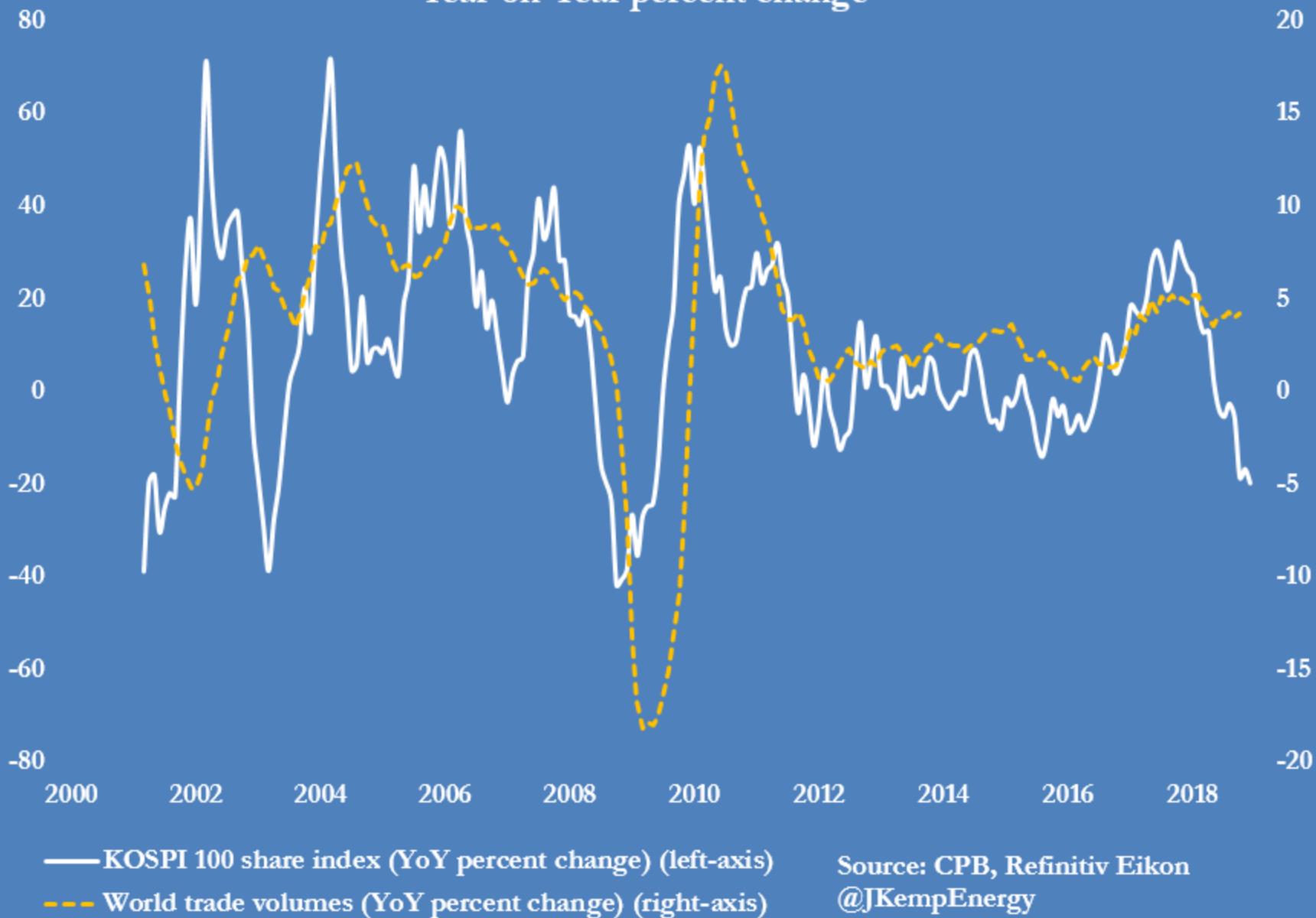
Source: Thomson Reuters Eikon

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South Korea's KOSPI-100 equity index, 2001-2018 monthly, percent change compared with prior year



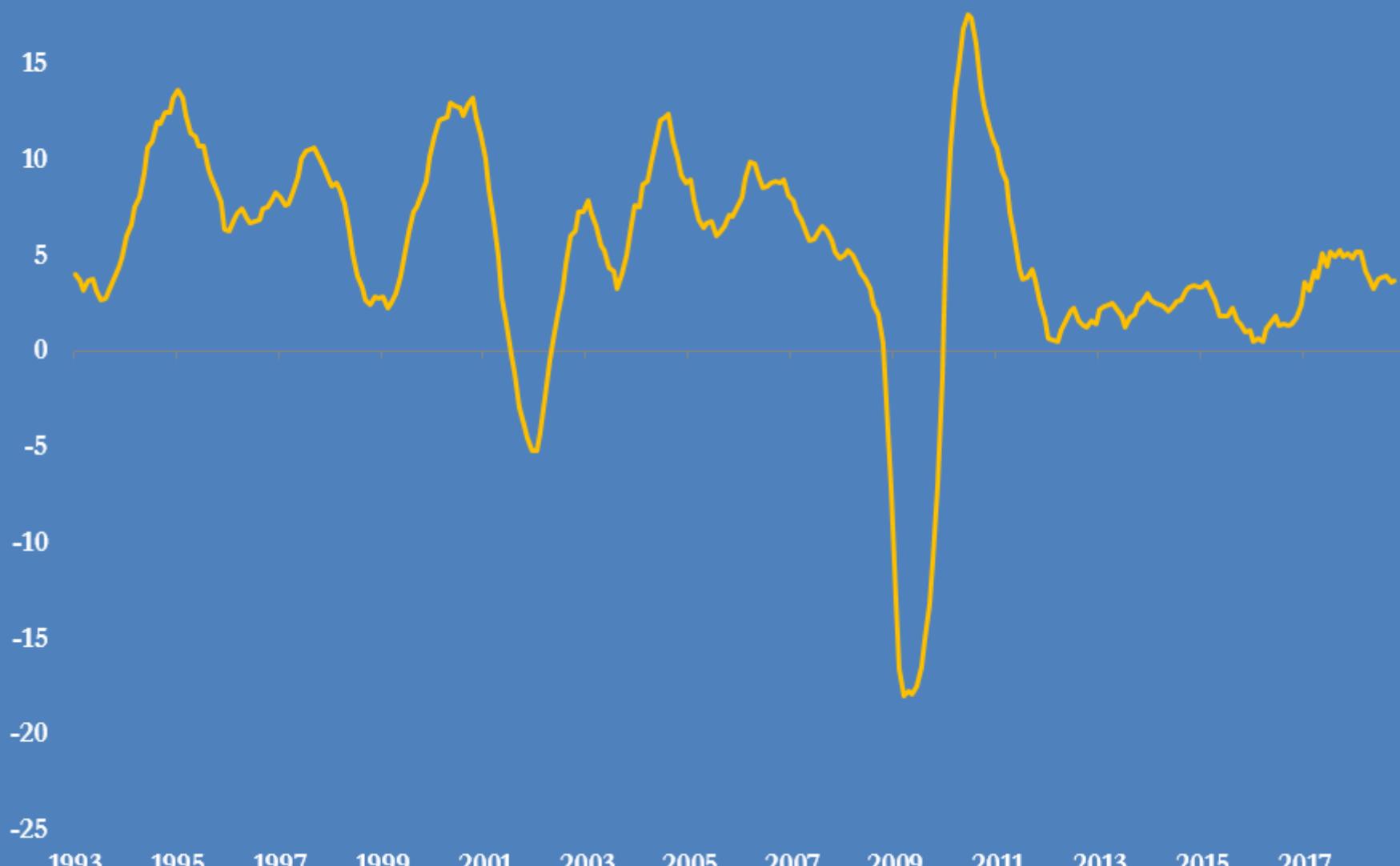
South Korea's KOSPI 100 equity index and world trade Year-on-Year percent change



— KOSPI 100 share index (YoY percent change) (left-axis)
— World trade volumes (YoY percent change) (right-axis)

Source: CPB, Refinitiv Eikon
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Volume of World Trade Year-on-year percent growth, 3-month average

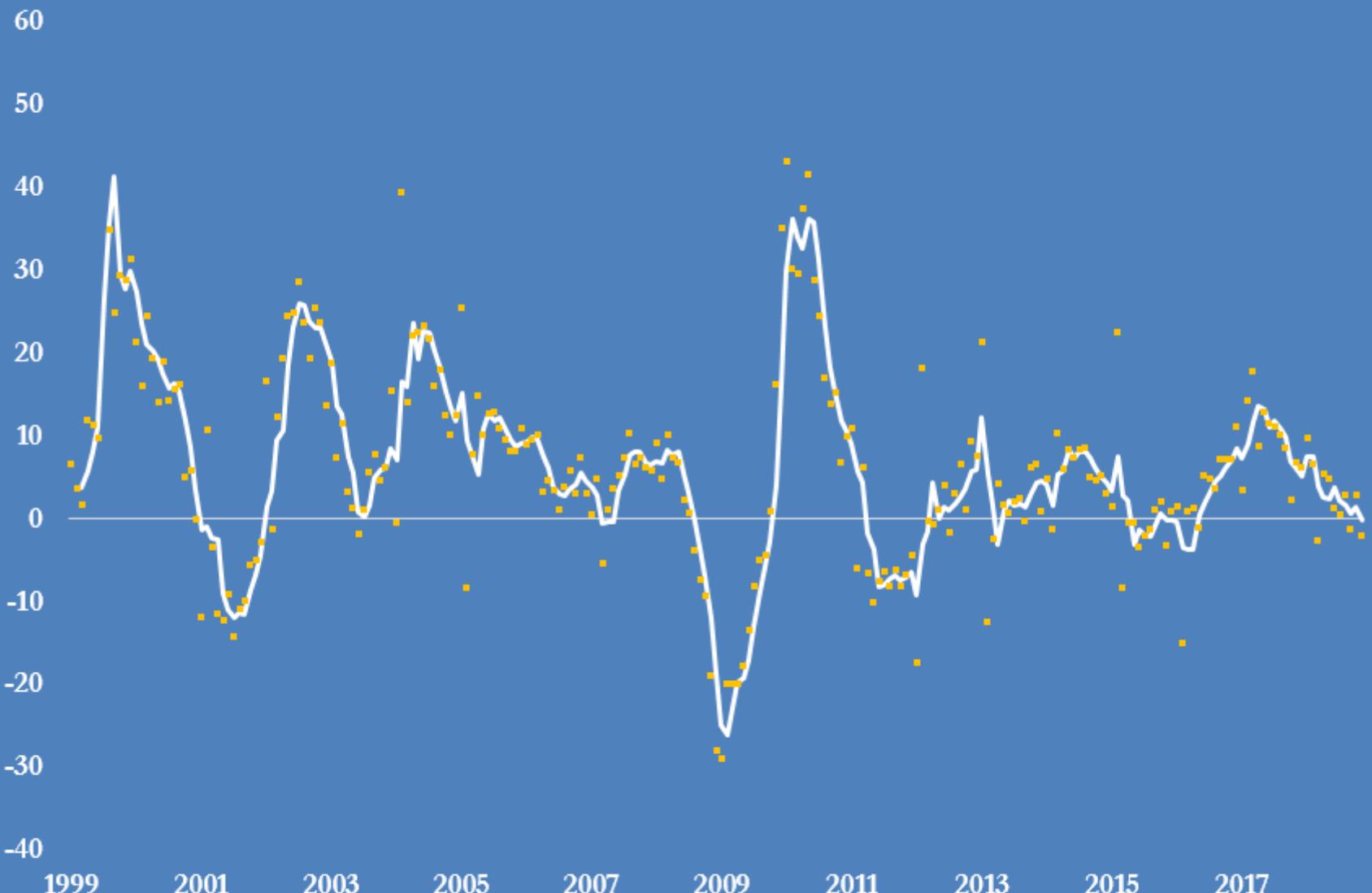


Source: Netherlands Bureau for Economic Policy Analysis, *World Trade Monitor*

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Hong Kong air freight volume, 1998-2018

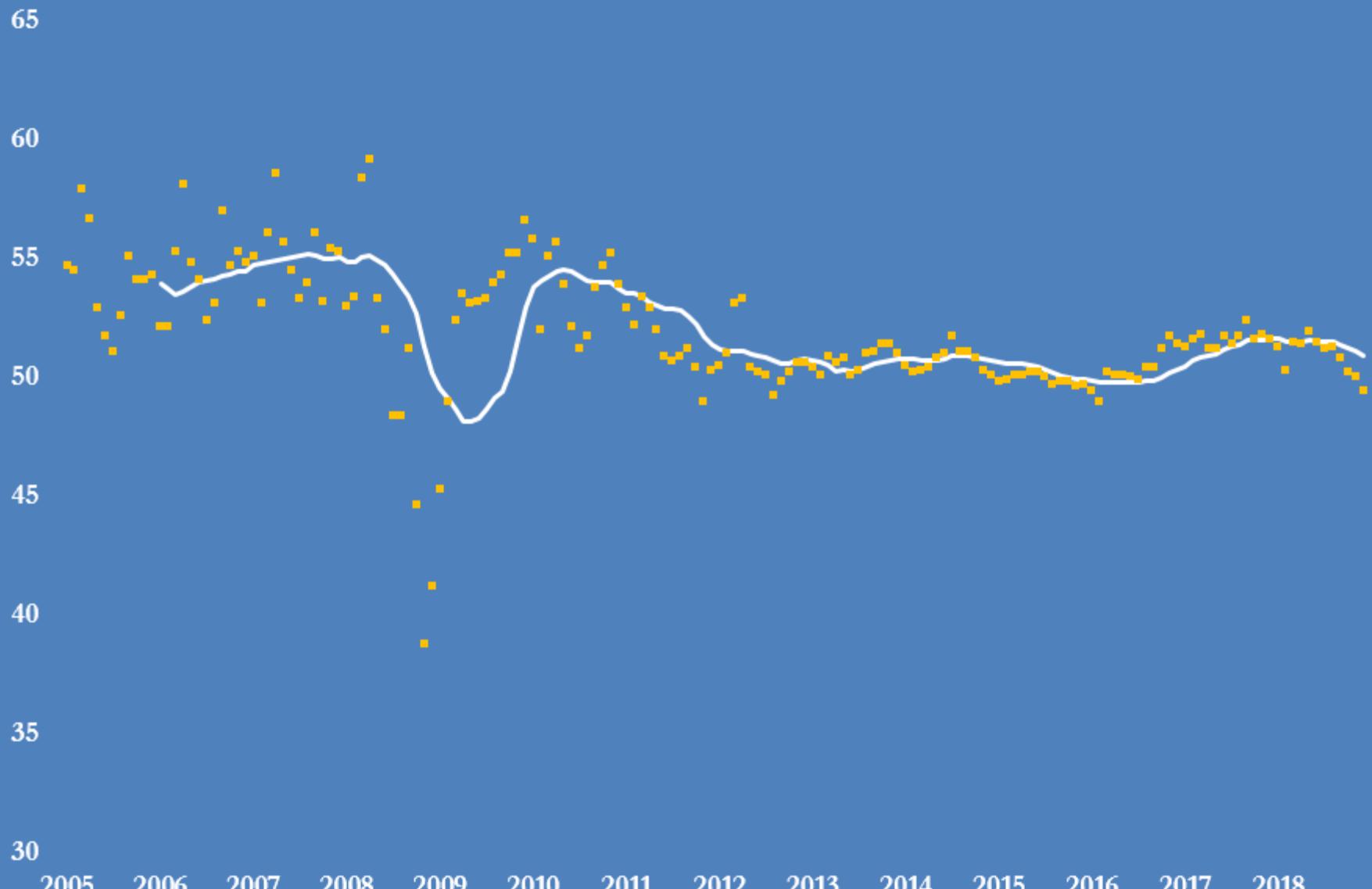
Percent change compared with prior year, monthly and 3-month average



Source: Civil Aviation Department of Hong Kong Special Administrative Region
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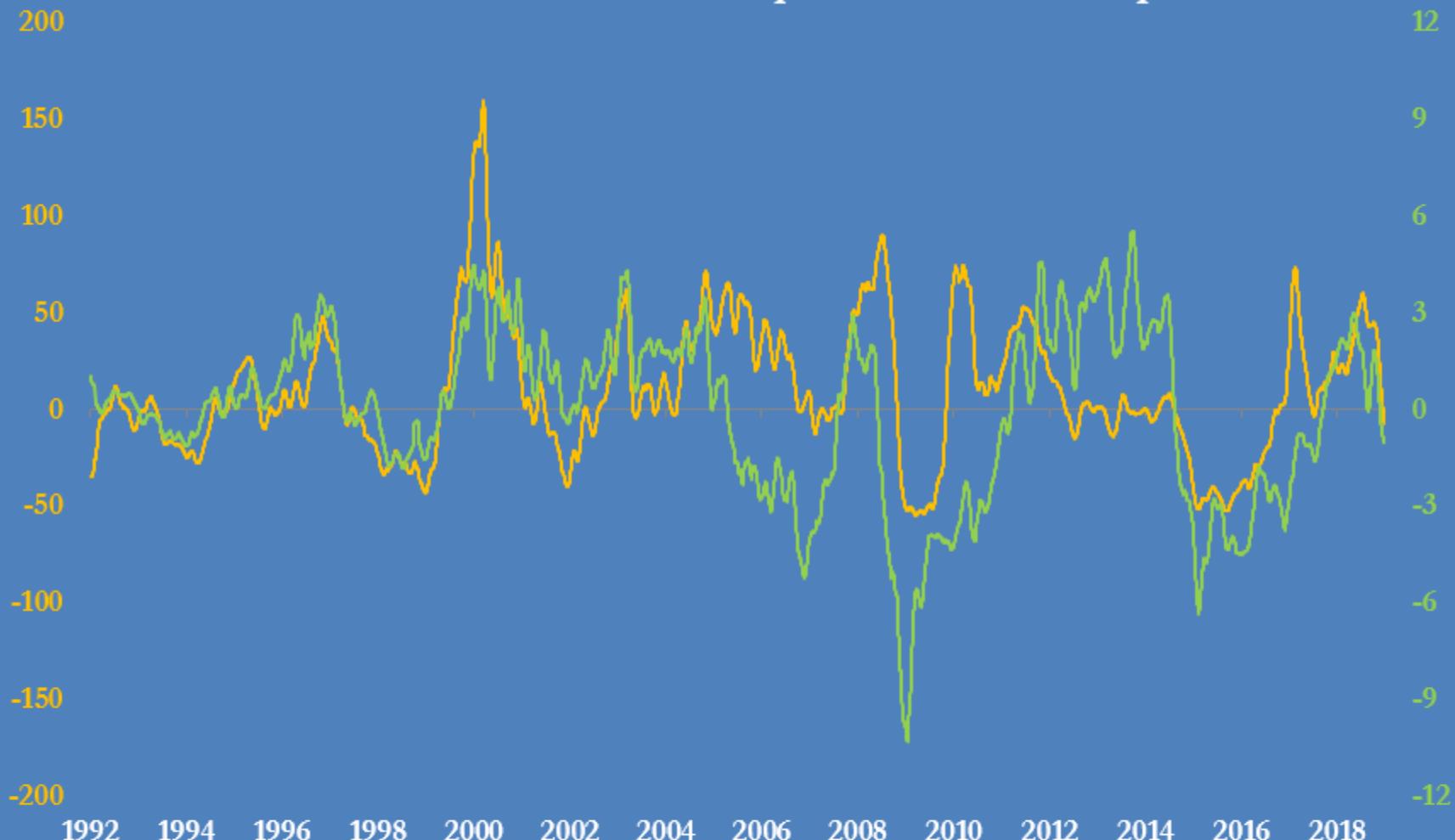
China purchasing managers' index, 2005-2018

Manufacturing sector, monthly and 12-month average



Cyclical indicators in the oil market

Brent crude: front-month futures prices and calendar spreads



— L-axis: Brent front-month futures prices (percent change year-on-year)

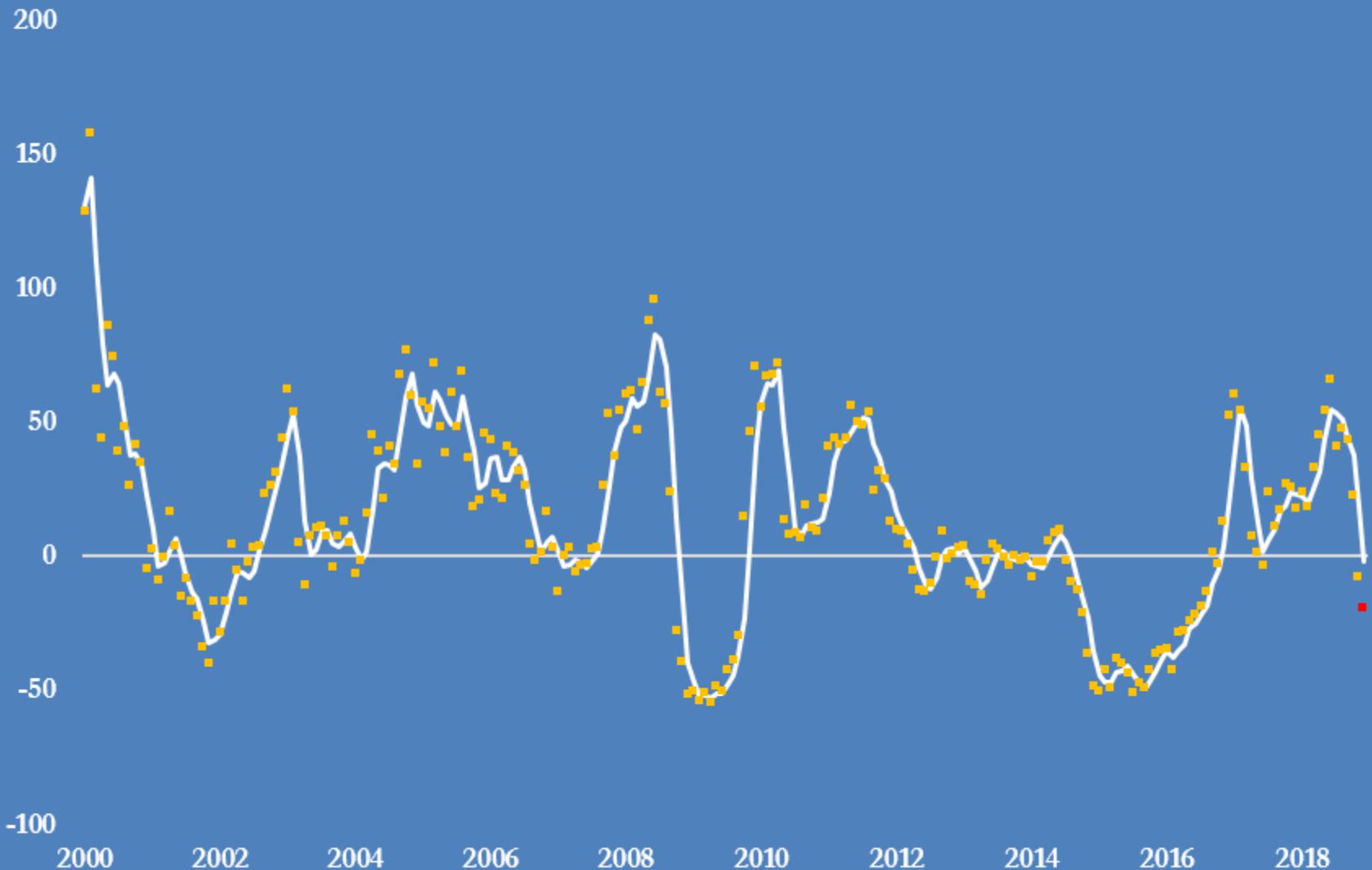
— R-axis: Brent calendar spread (1st month - 7th month future price, U.S.\$ per bbl)

Both series are averaged over 30 trading days to smooth short-term volatility

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Brent front-month futures prices, 2000-2018

Percent change from prior year, monthly and three-month average



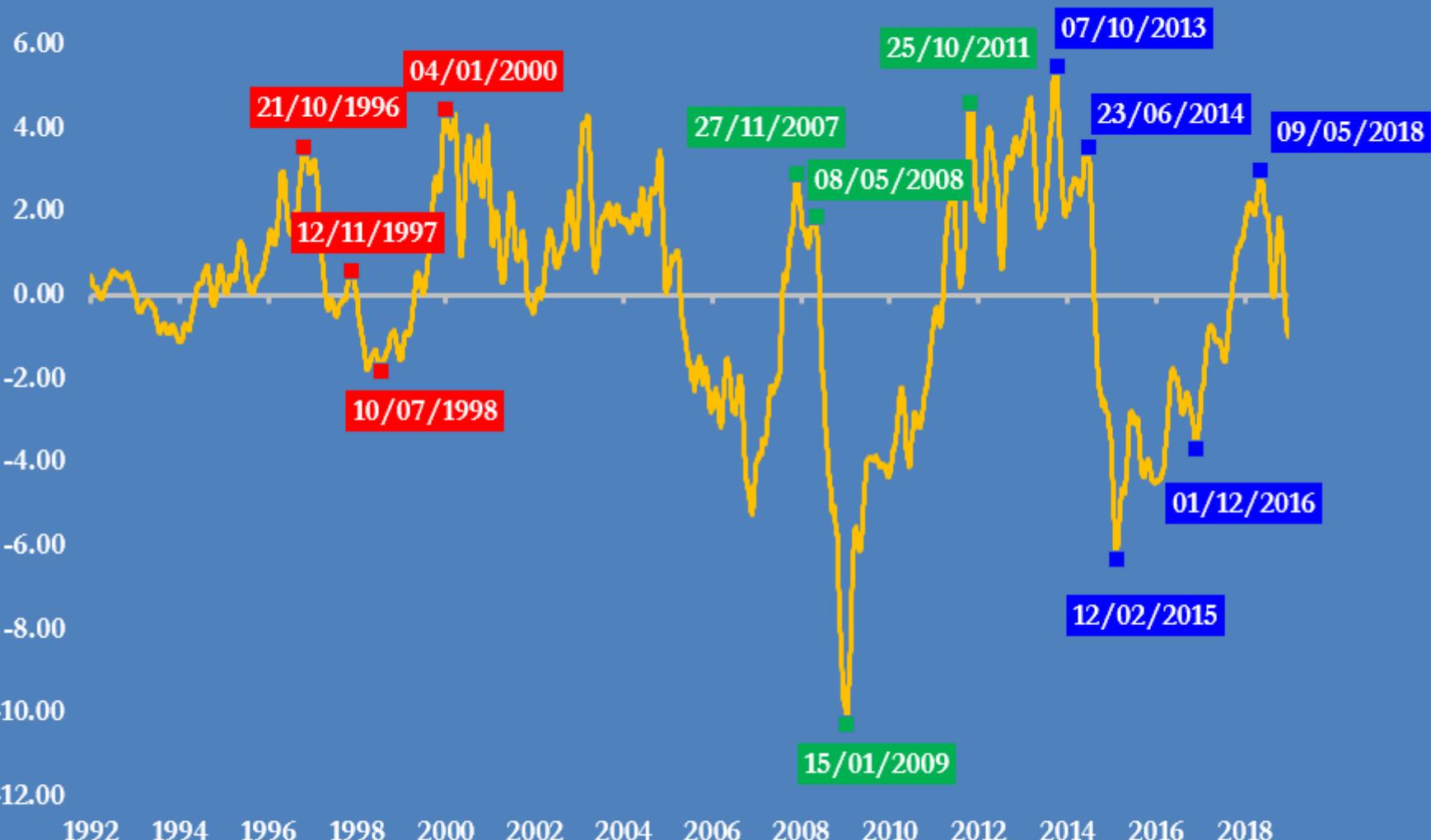
Source: ICE Futures Europe

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Shape of the futures price curve in Brent crude

Contango (-) or backwardation (+) from months 1 to 7 (US\$/bbl)



Price difference between 1st listed contract month and 7th listed contract month for Brent futures (U.S.\$/bbl)
Contango (-) or backwardation (+) averaged over 30 days

Source: Thomson Reuters Eikon, ICE Futures
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