

Global macro themes and Malaysia

May 2015

Sin Beng Ong^{AC}
Chief ASEAN economist
+65 6882-1623
sinbeng.ong@jpmorgan.com
JPMorgan Chase Bank, N.A., Singapore Branch

See end pages for analyst certification and important disclosures, including investment banking relationships. J.P. Morgan does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as a single factor in making their investment decision.

J.P.Morgan

Agenda

Setting the global stage	1
ASEAN in perspective	19
Malaysia	29
Risks	44

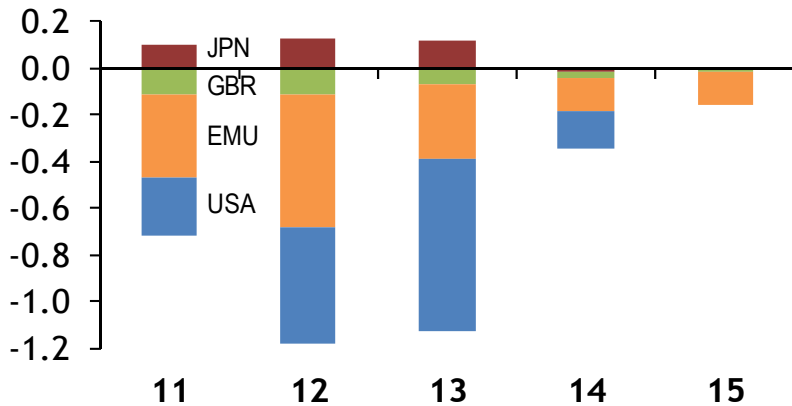
Main points

- Central banks will drive global divergences
 - ECB embarks on sovereign QE
 - BoJ to overheat Japan significantly to try and achieve its goals
 - We expect Fed to tighten in 2H15, with fed funds at 2.0% by end-2016
- The dollar's rise matters – with impact on commodities, liquidity and EM stress
- Longer-term: Labor supply growth is anemic and productivity is weak. US potential is 1.75% and possibly lower. Global news on potential growth is disturbing

Divergent regional impulses a persistent theme

Fiscal thrust, developed markets

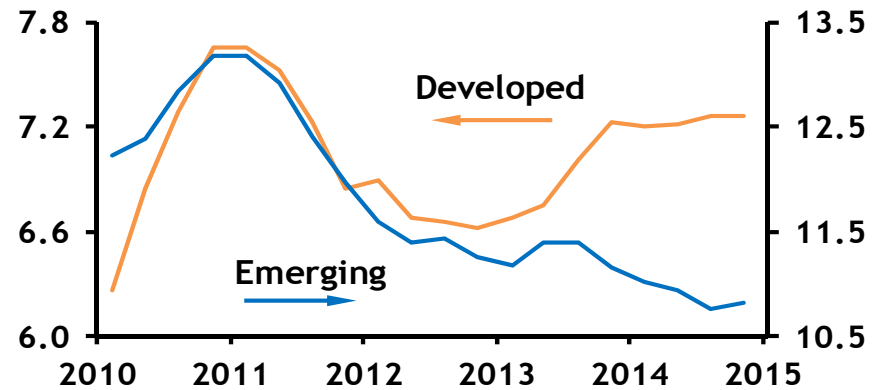
%-point impact on Dev Mkt GDP (GDP wgted)



Source: OECD, J.P. Morgan

Corporate profit margins

Profits as % of revenue, both scale



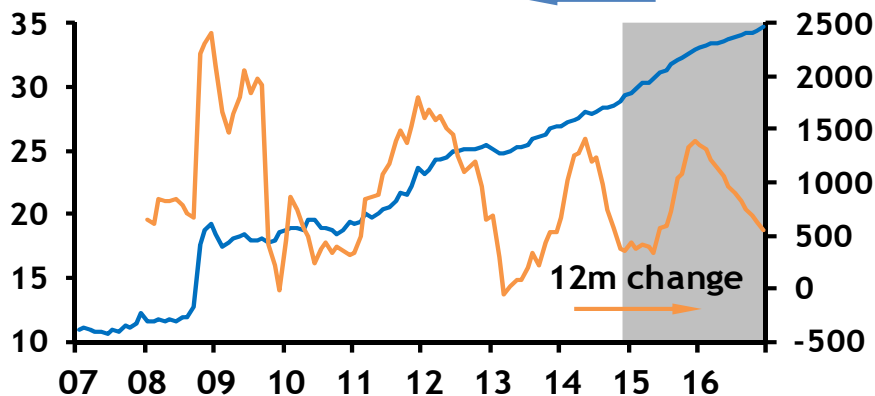
Source: J.P. Morgan

G-4 central bank balance sheet

% of GDP

% of GDP

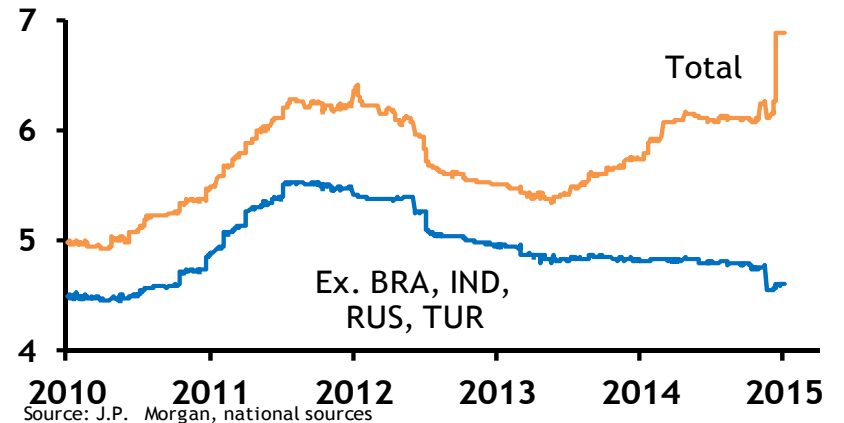
Bn USD



Source: J.P. Morgan

EM policy rates

Percent per annum; both scales

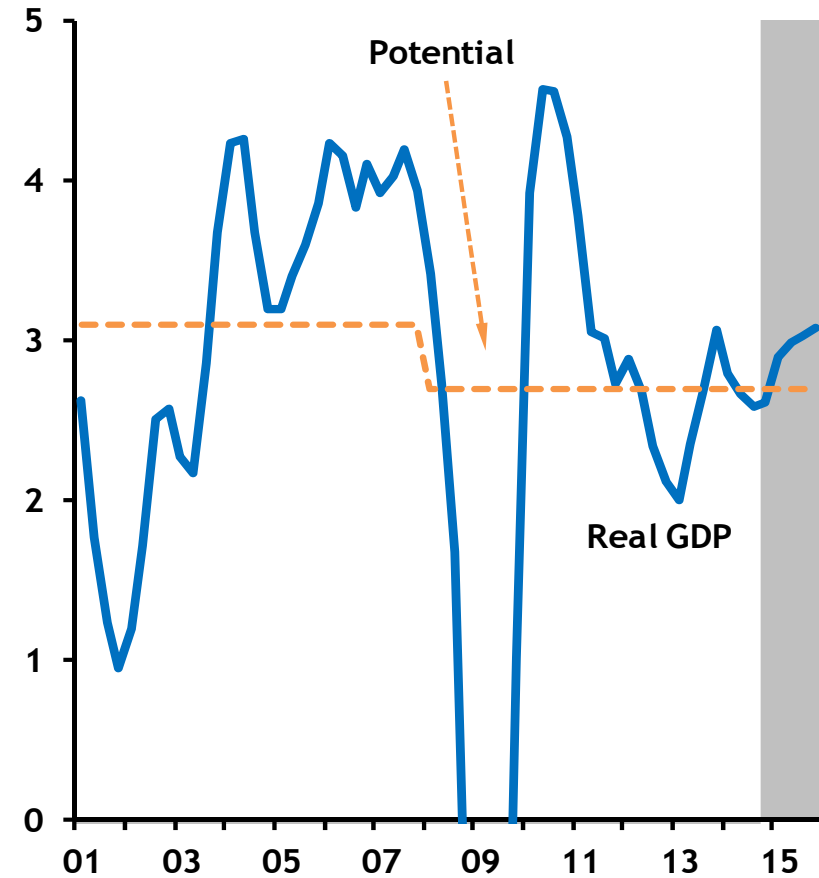


Source: J.P. Morgan, national sources

Forecast of improving but bounded growth challenged by oil shock

Global GDP

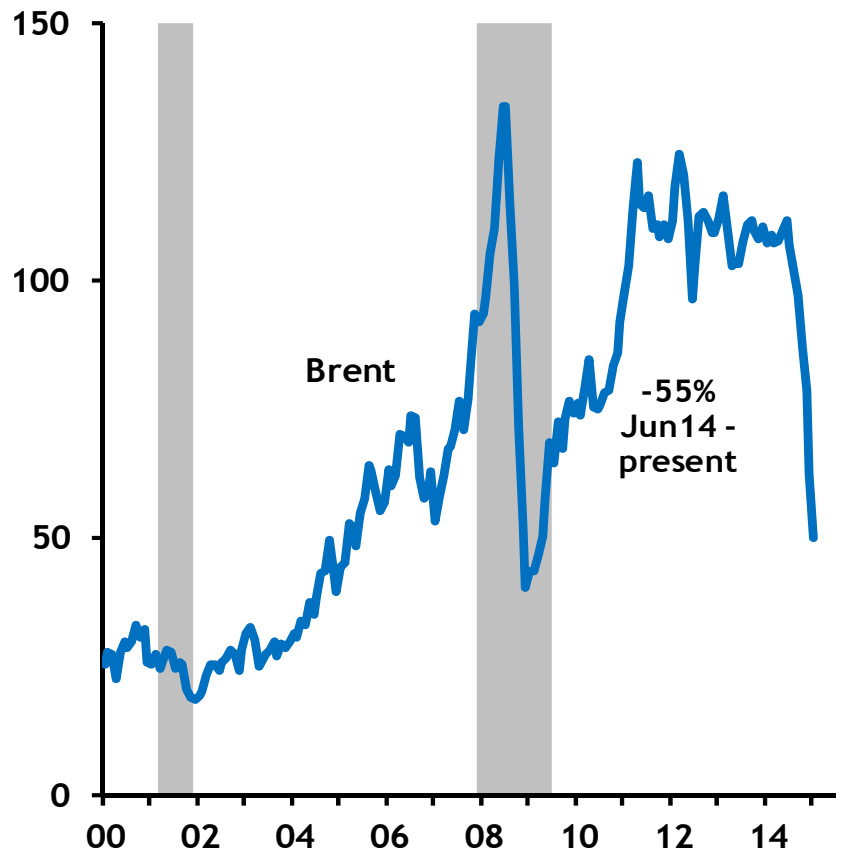
%oya



Source: J.P. Morgan

Crude oil prices

US\$/bbl

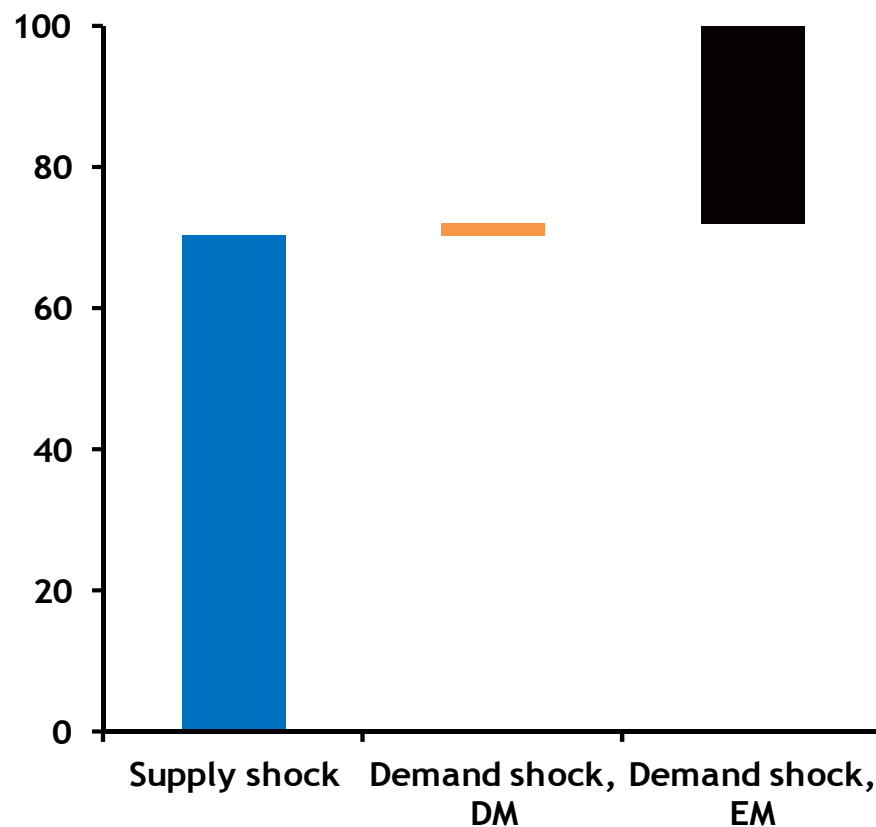


Source: Platts

Allocating the oil shock to supply and weak EM demand

Contribution of supply and demand shocks to oil price decline

Share contrib to 55% fall in Brent 4Q13 avg to current

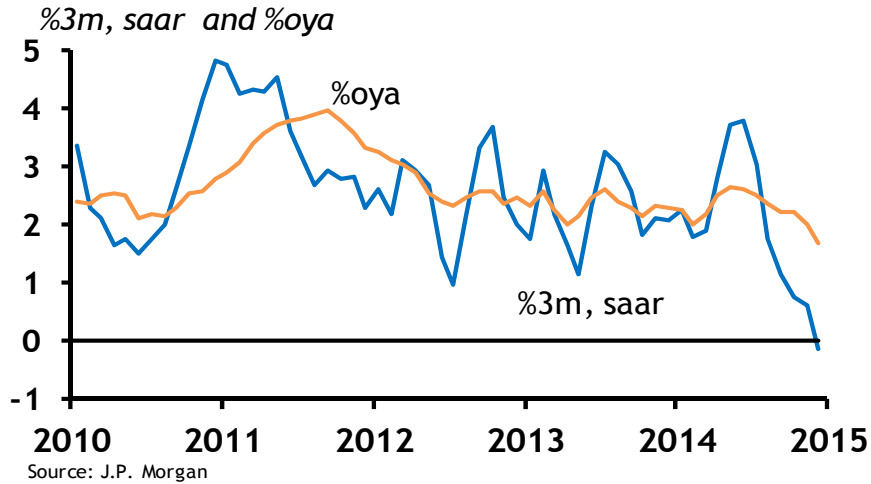


Source: J.P.Morgan

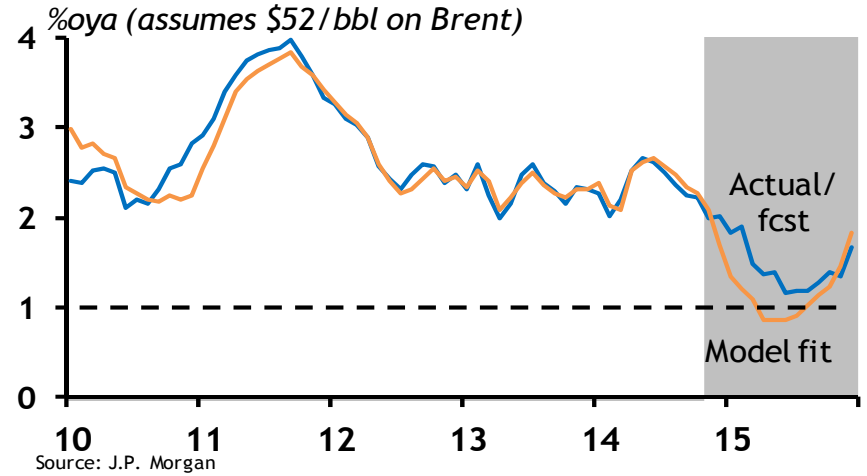
- Attributing 2/3 of price decline to supply increases and shift in OPEC reaction function
- 1/3 of shock reflects weaker EM demand
- Global GDP lift estimated at 0.6% for 2015. Global headline inflation to be depressed by 1.2% in year ending 2Q15
- Both headline inflation and growth impacts are concentrated in DM

Inflation to fall to its lowest level during an expansion

Global consumer prices

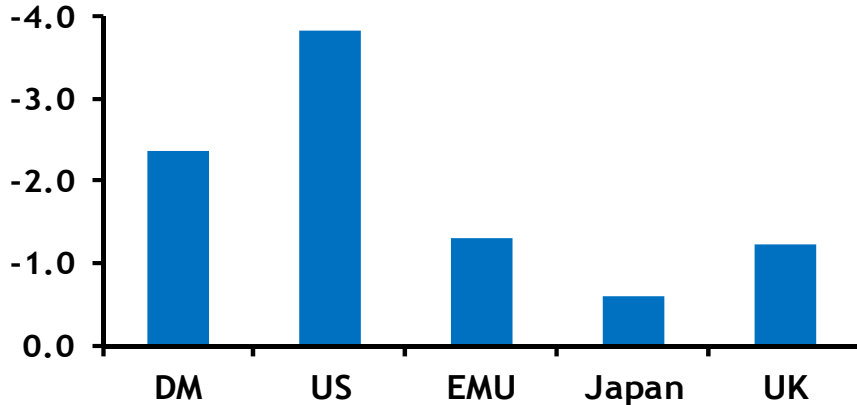


Global consumer prices



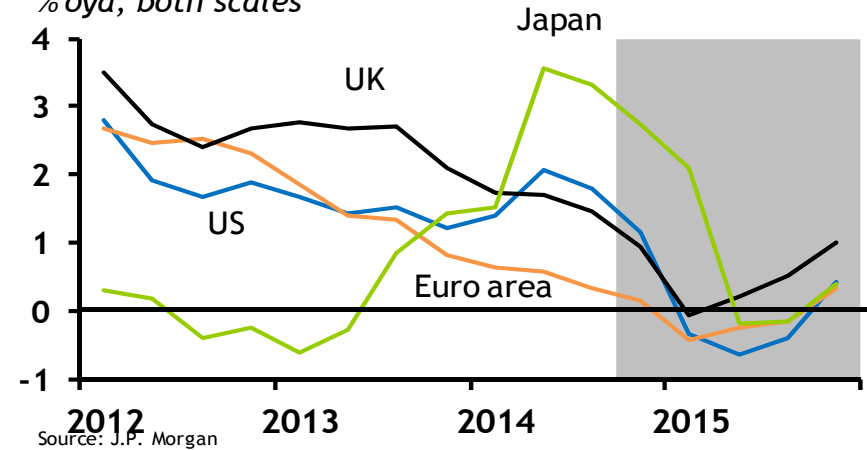
Effect of oil prices on headline consumer inflation

%3m, saar, thru Dec; EMU and UK are actual, rest are est



G4 consumer prices

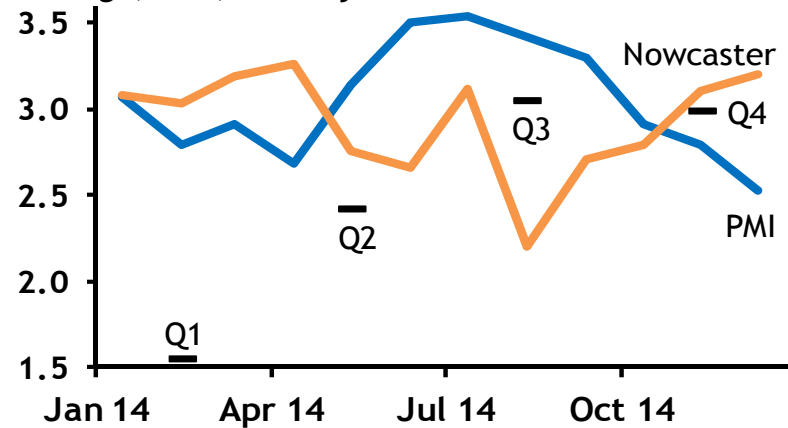
%oya, both scales



Curbing our enthusiasm: PMI surveys and limited monetary flex

Global GDP growth proxies

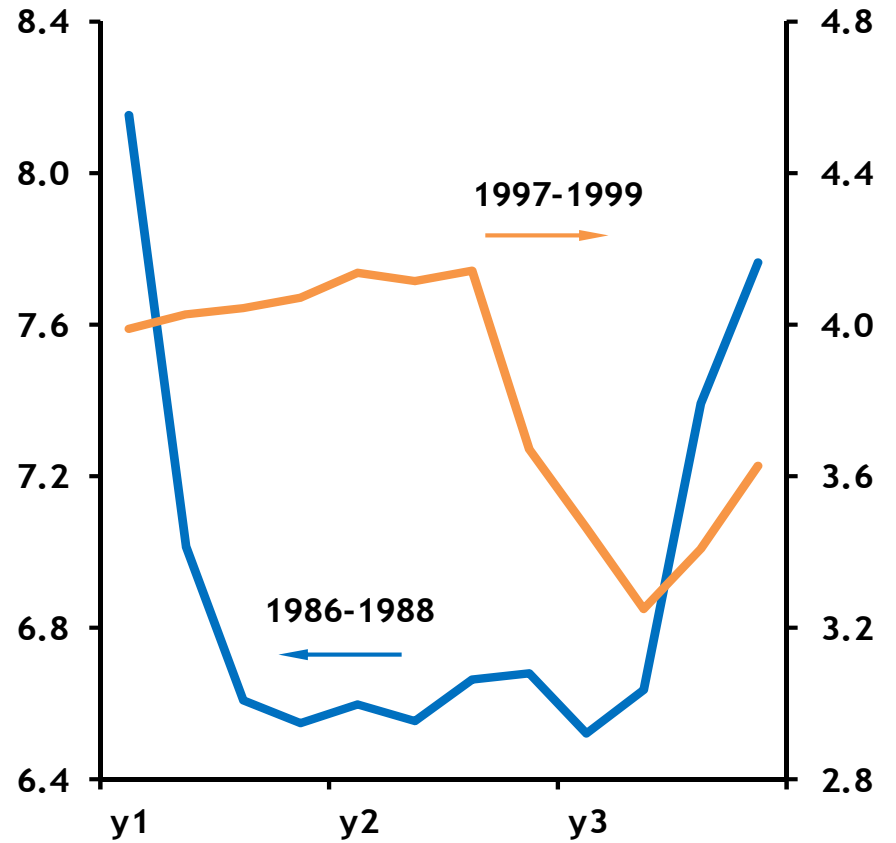
%change, saar; monthly data



Source: J.P. Morgan

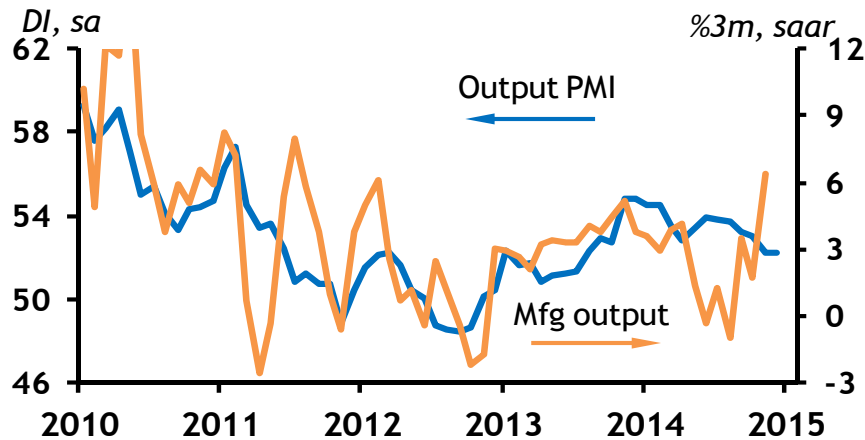
Monetary policy rate, developed markets

% p.a.; both scales



Source: J.P. Morgan

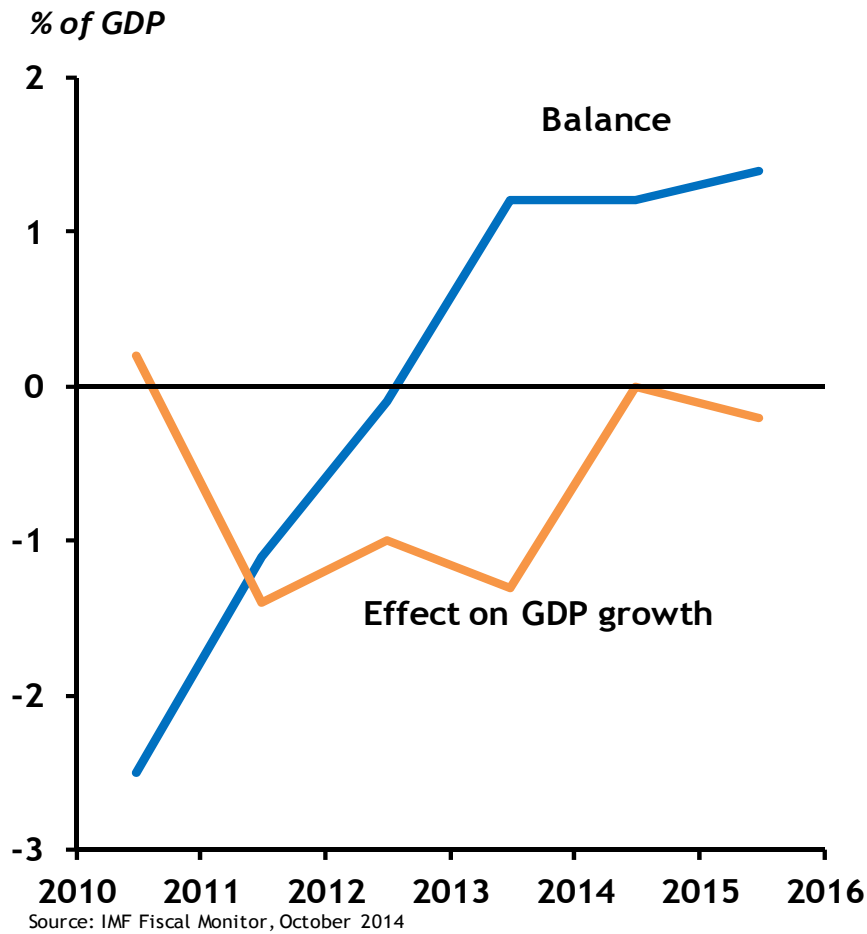
Global manufacturing output PMI and actual output



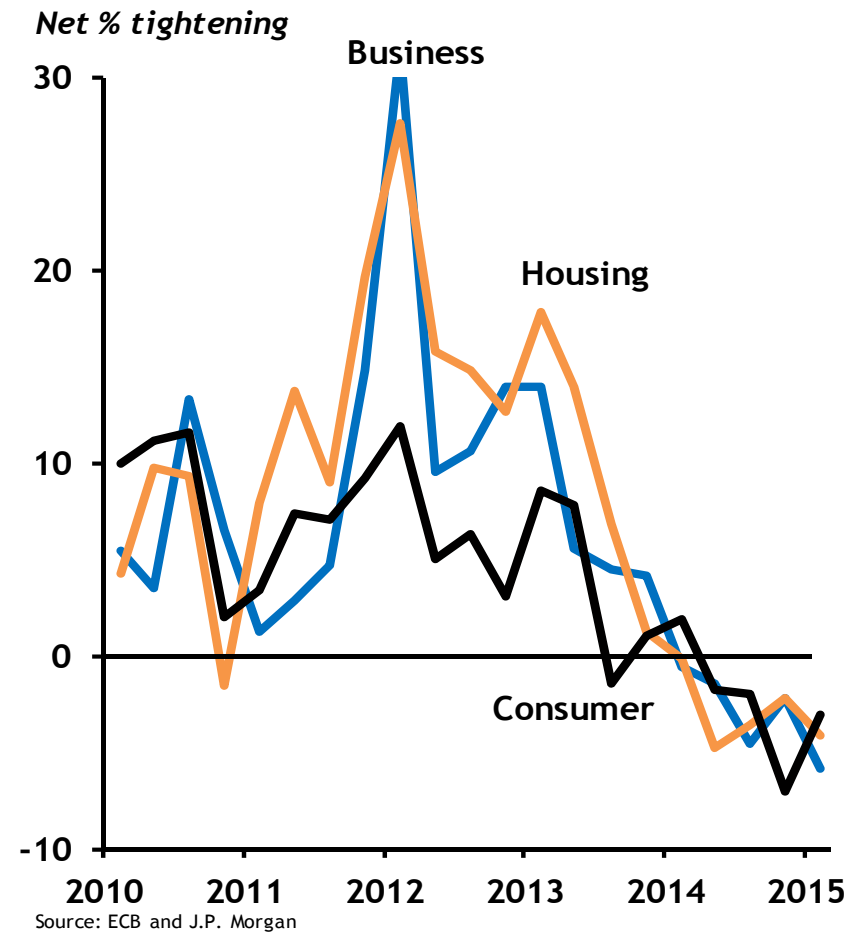
Source: J.P. Morgan

Expecting Euro area growth to rebound

EMU cyclically adjusted primary balance

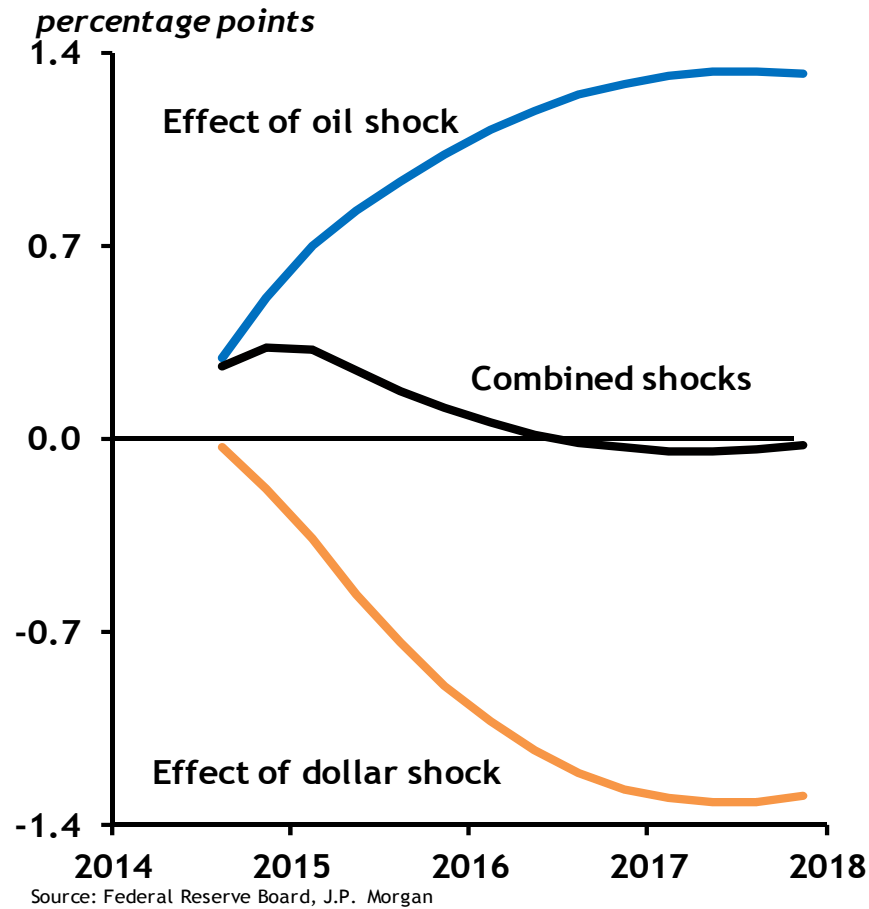


Euro area bank lending standards

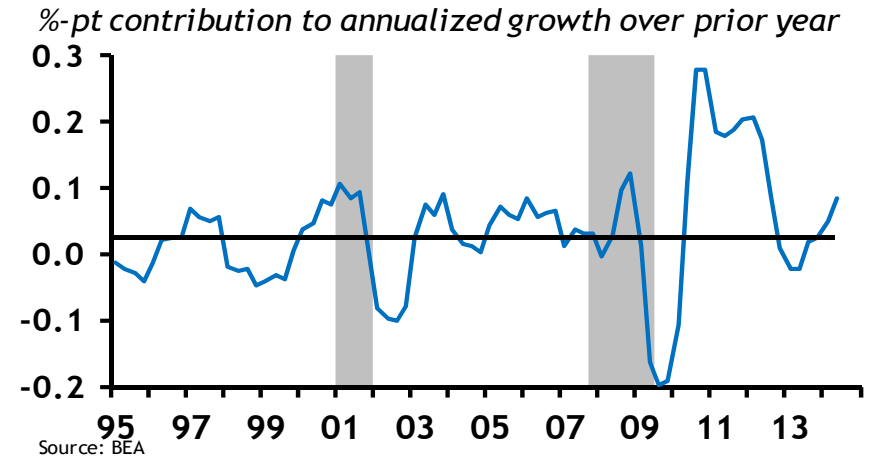


US: The dollar and energy investments to temper lift

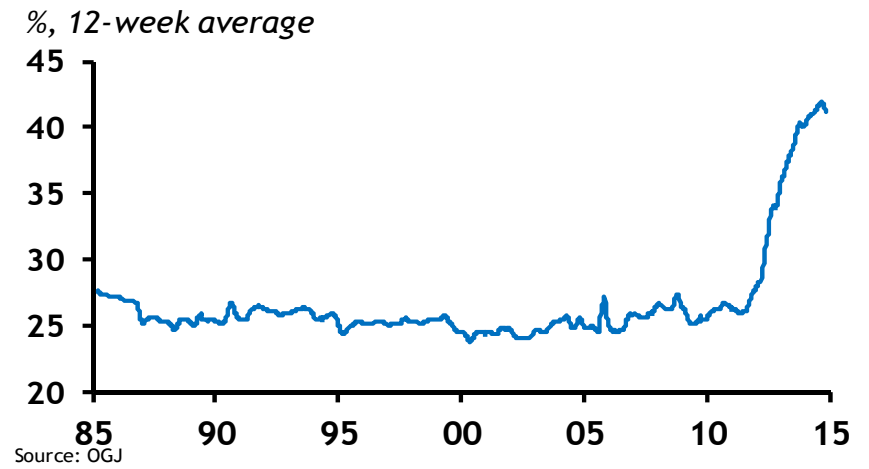
Effect of oil and dollar shocks on level of real GDP in FRB/US model



US oil and gas investment contribution to real GDP growth

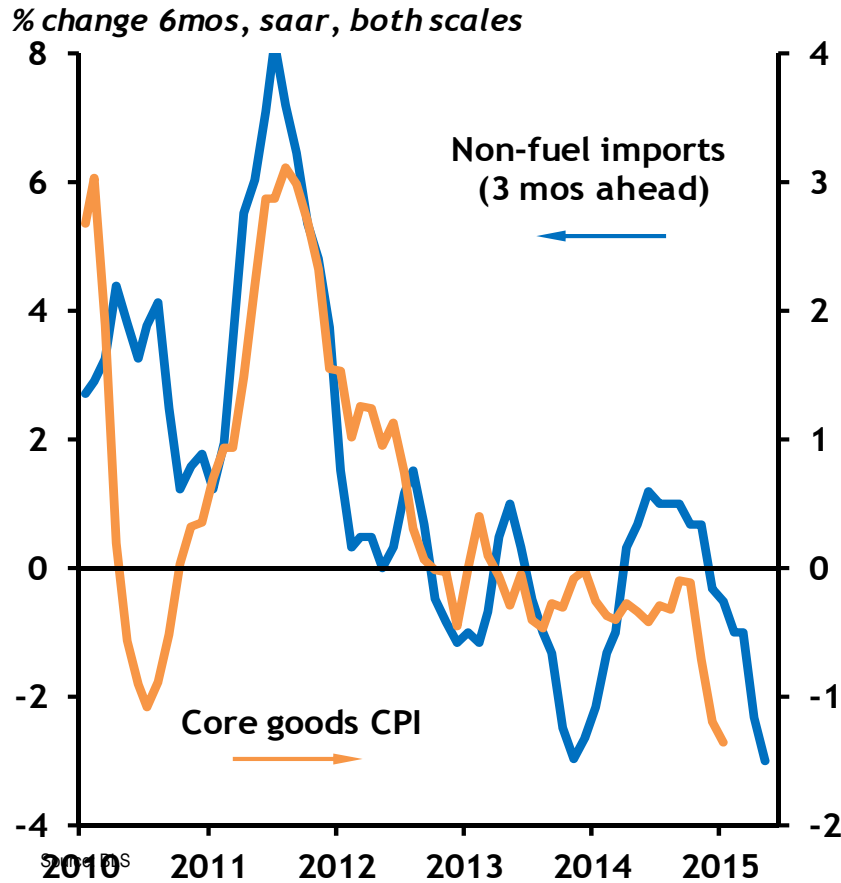


Texas' share of US crude oil production

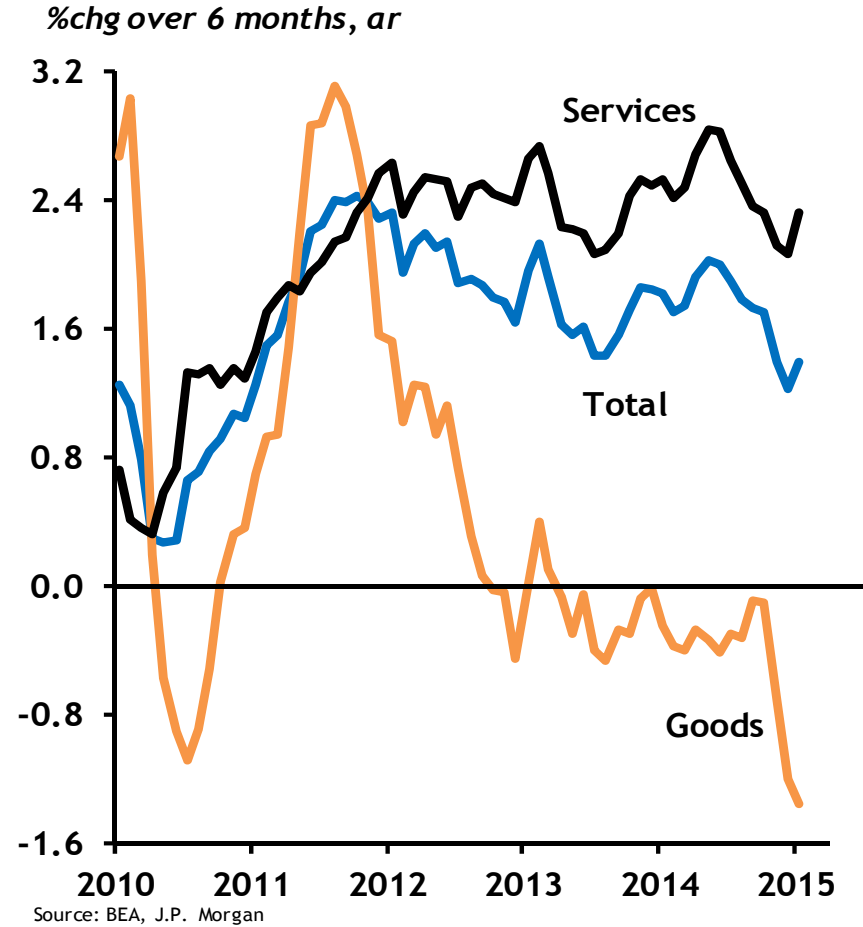


Dollar is driving US core goods prices lower

US import prices and core goods CPI

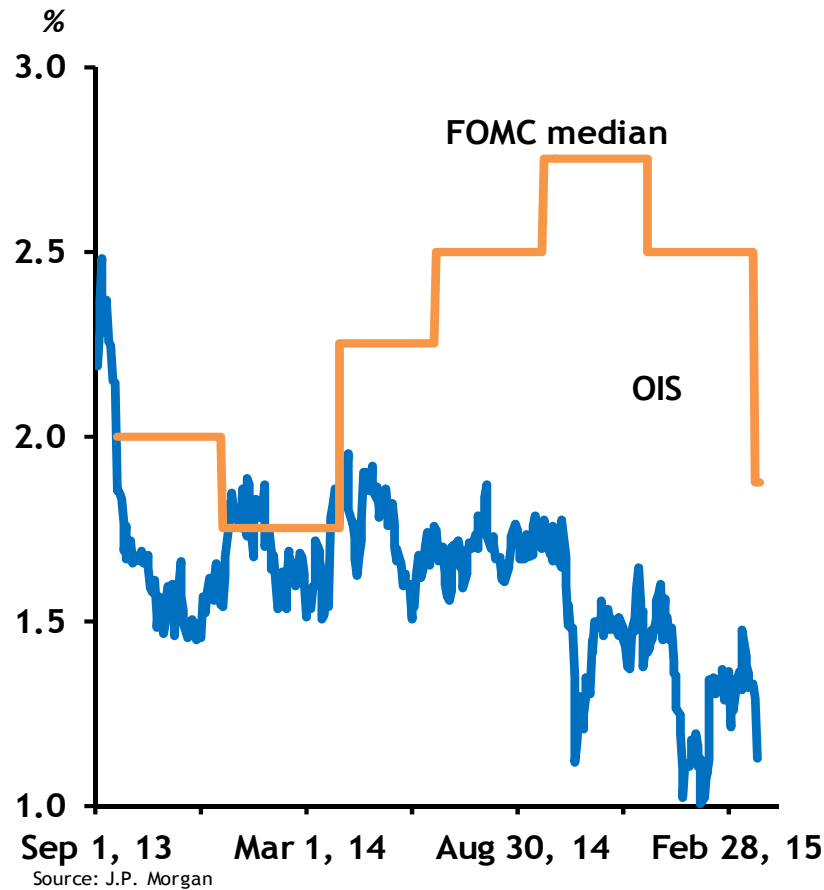


US core CPI

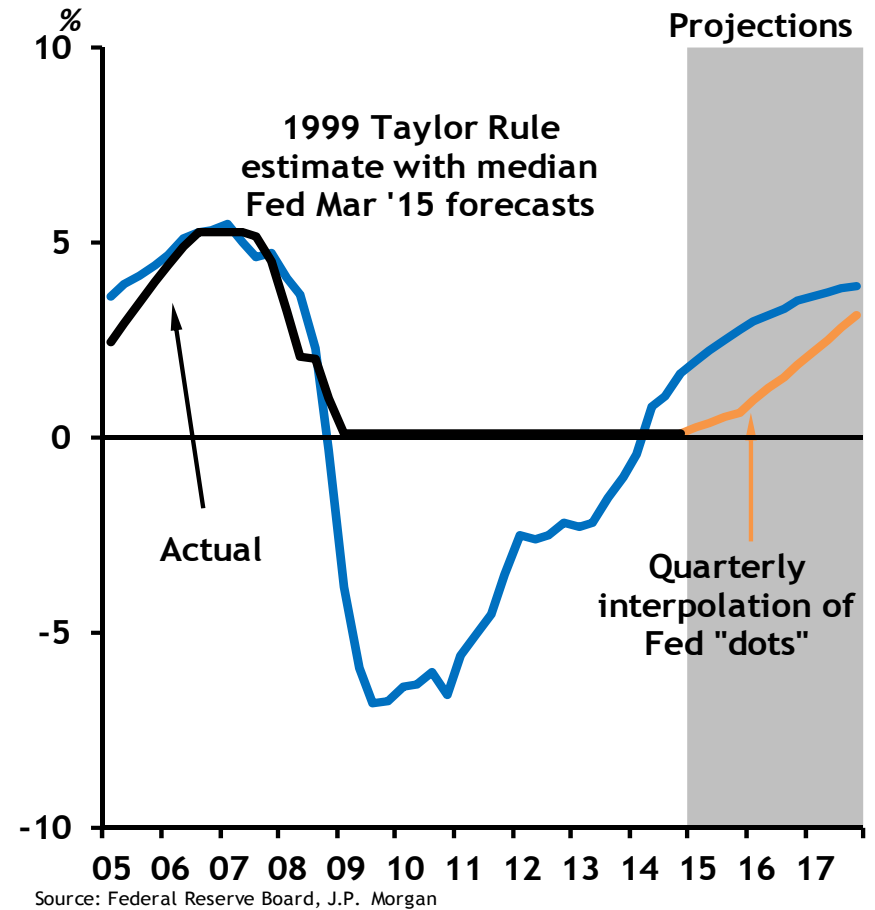


The Fed: A close call for June, but a lot to do over two years

Market pricing and FOMC, end-2016

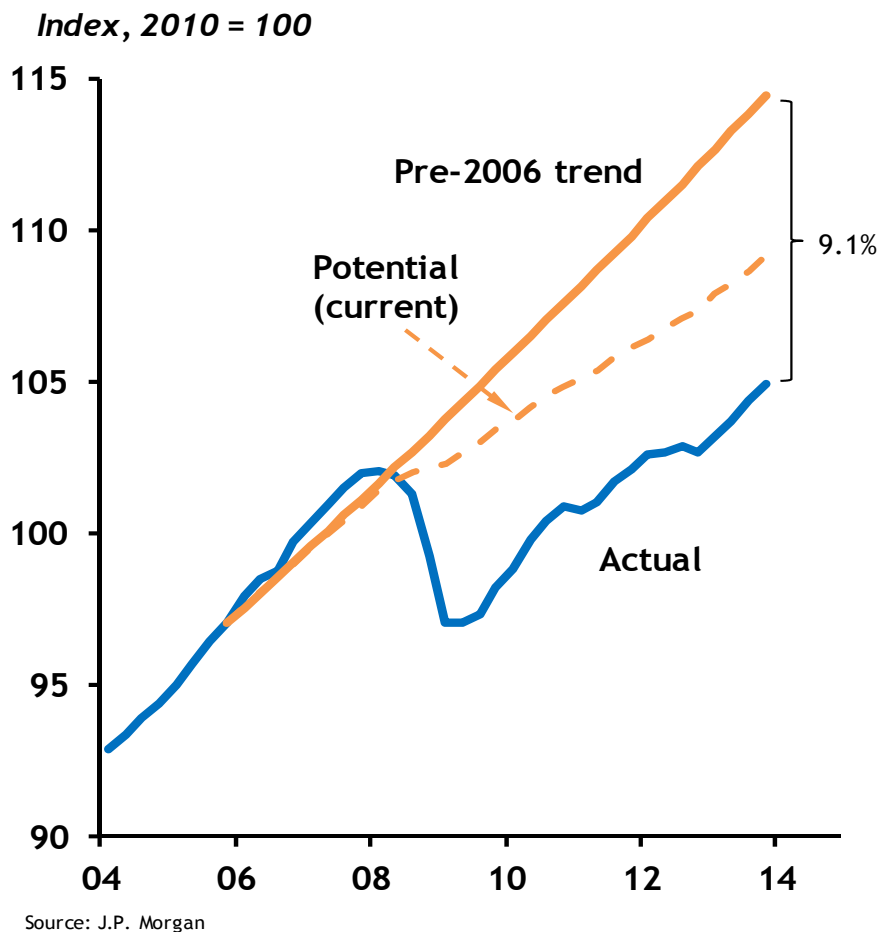


Fed funds rate projections: 1999 Taylor Rule and Fed "dots"

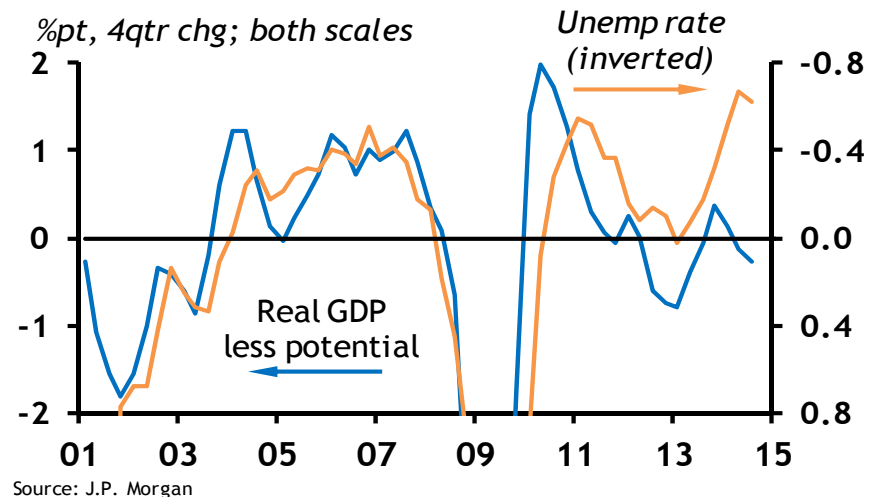


A less upbeat longer-term picture: A global supply side crisis

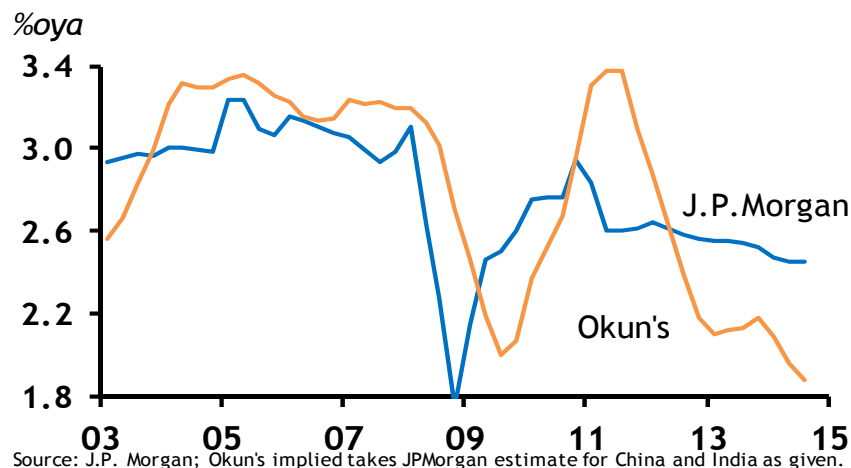
Real GDP, developed markets



Global: Okun's law

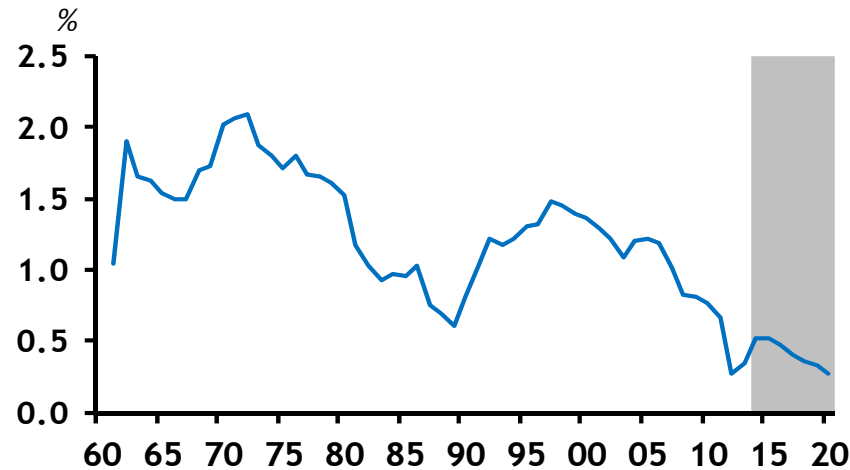


Potential real GDP, Global



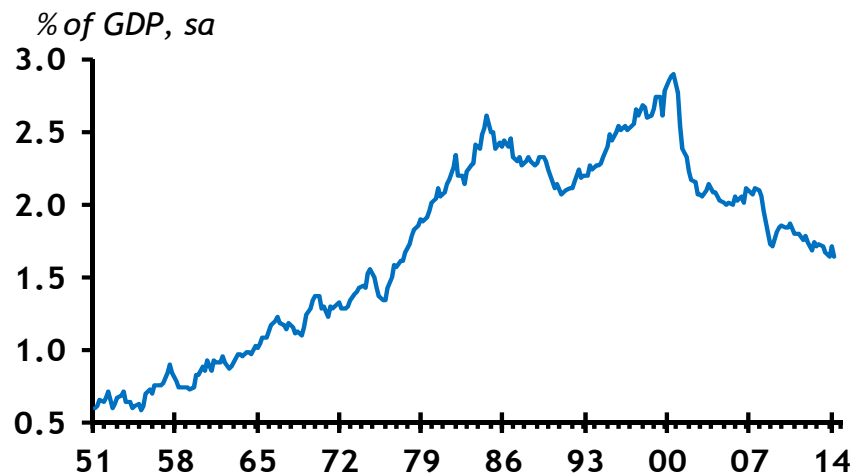
US potential estimated at 1.75%, Euro area at 1% and could be lower

US growth in resident working age population



Source: Census Bureau

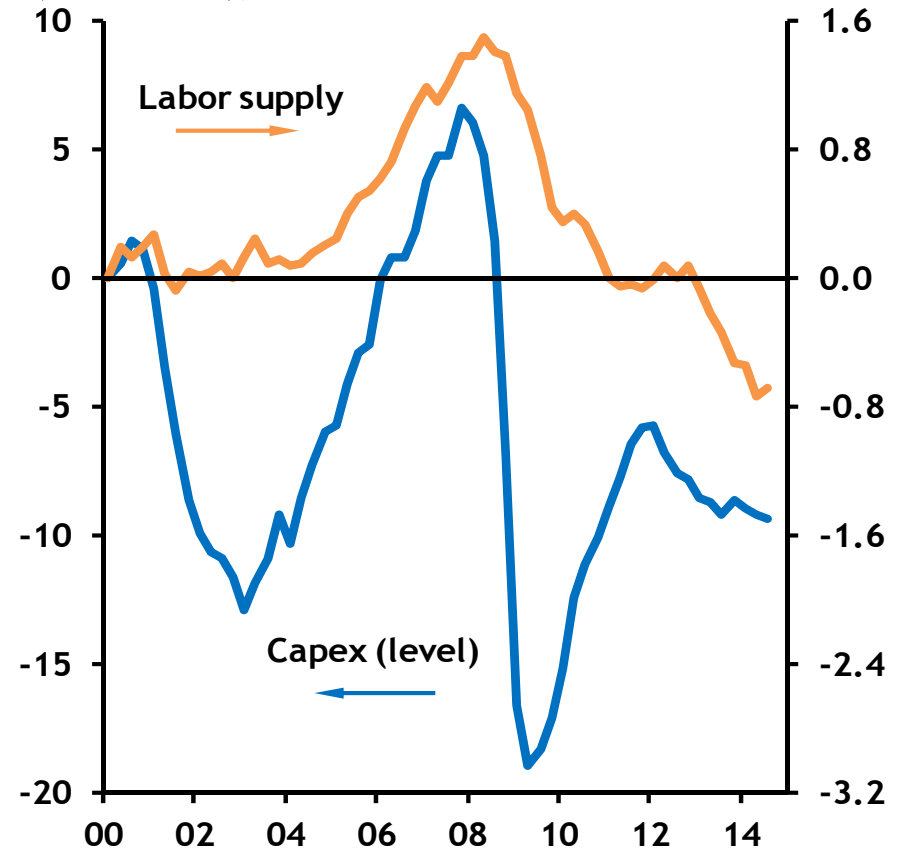
US high-tech equipment investment



Source: BEA

Global capex and labor supply

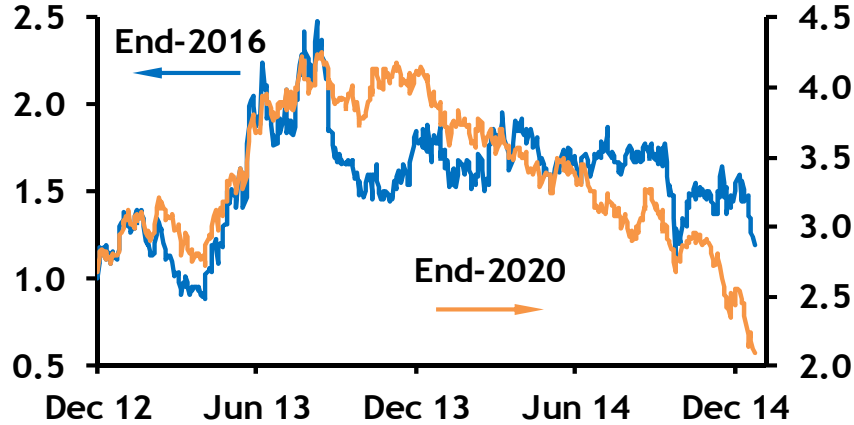
% deviation from historical trend average (1Q00-3Q14); both scales



Source: J.P. Morgan

The debate about long-term neutral

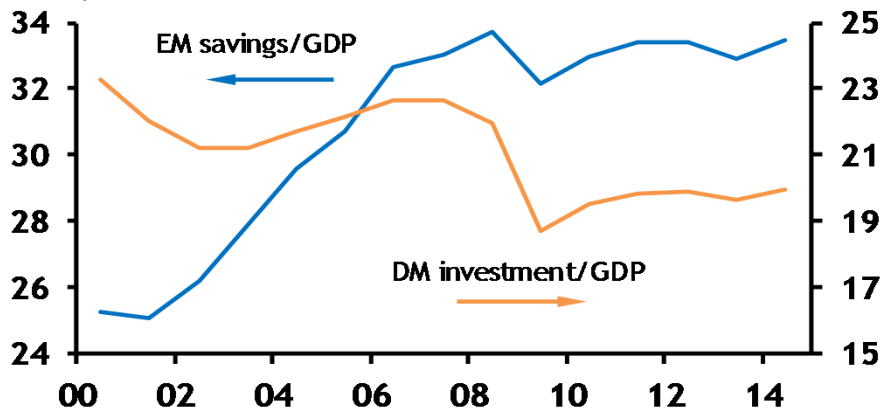
US 1-mo OIS forwards
%p.a., both scales



Source: J.P. Morgan

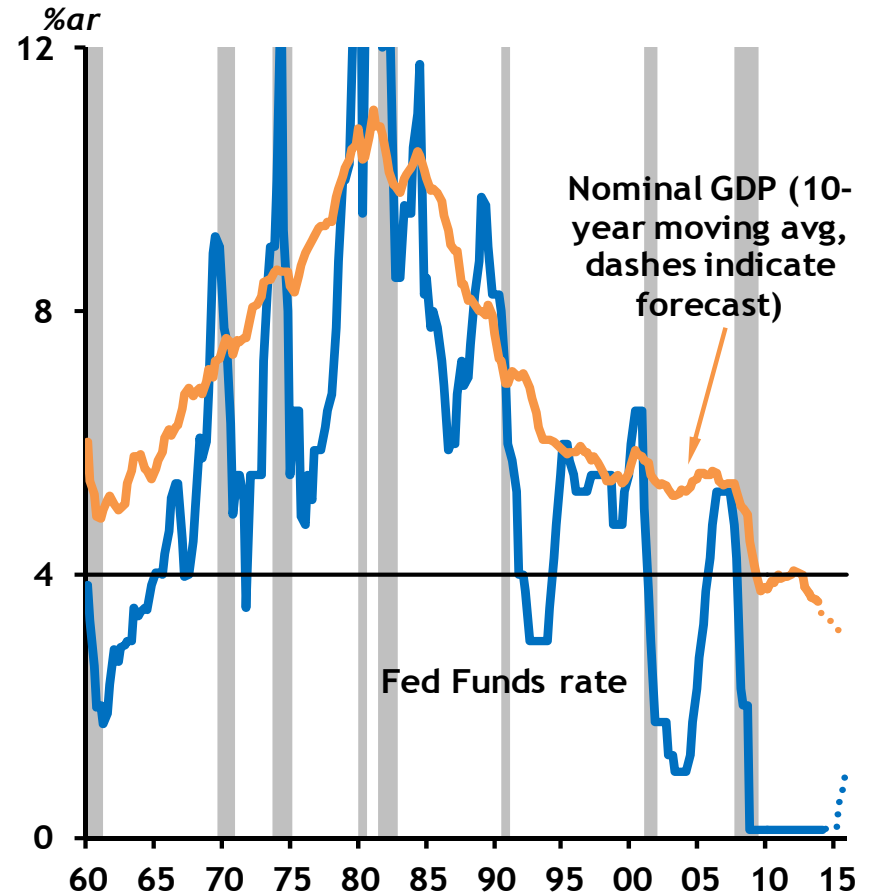
DM investment and EM savings

% of GDP, both scales



Source: IMF WEO, last update April 2014

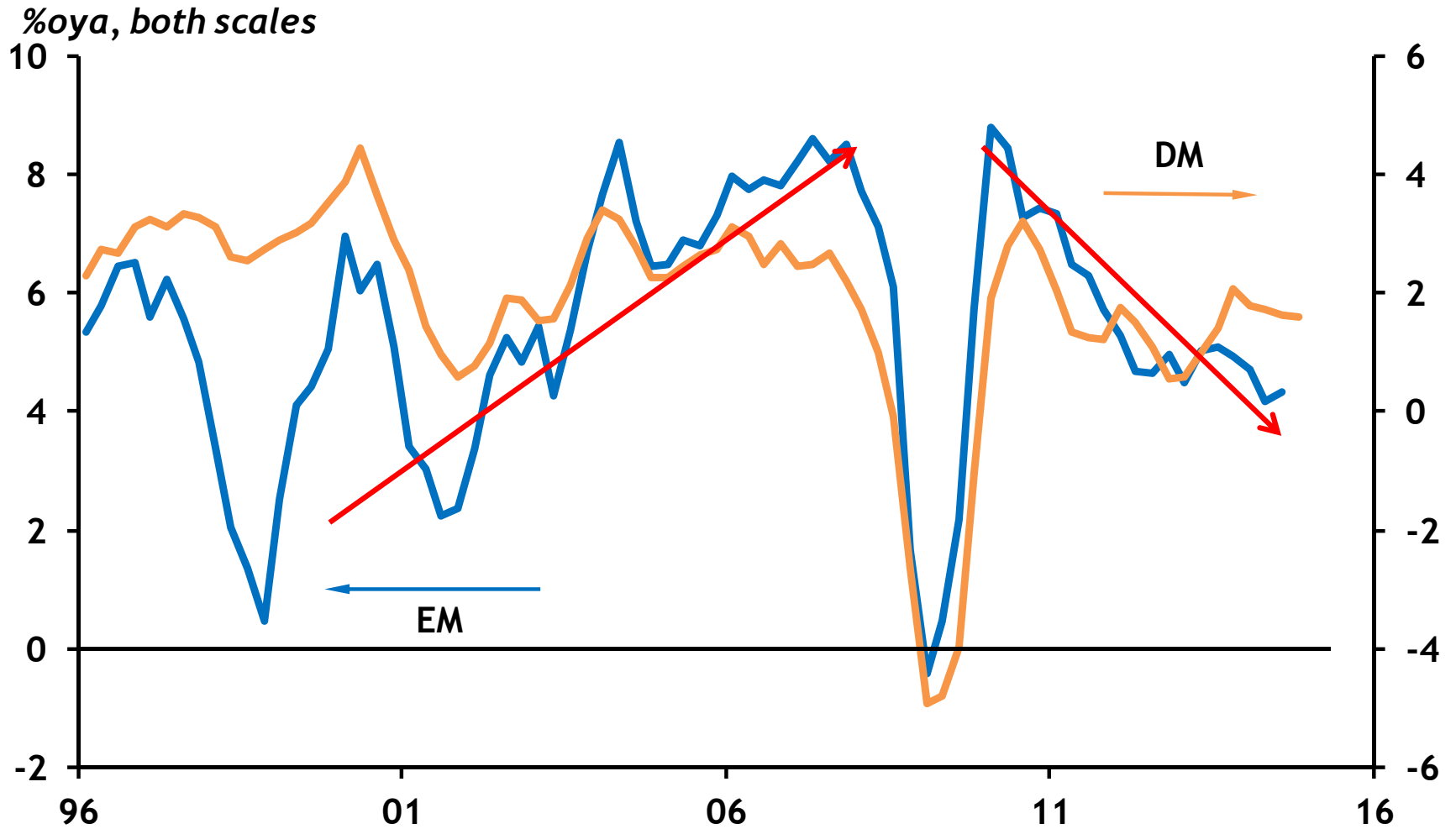
Fed funds rate and nominal GDP growth



Source: J.P. Morgan

EM -DM growth differentials narrowing since 2012

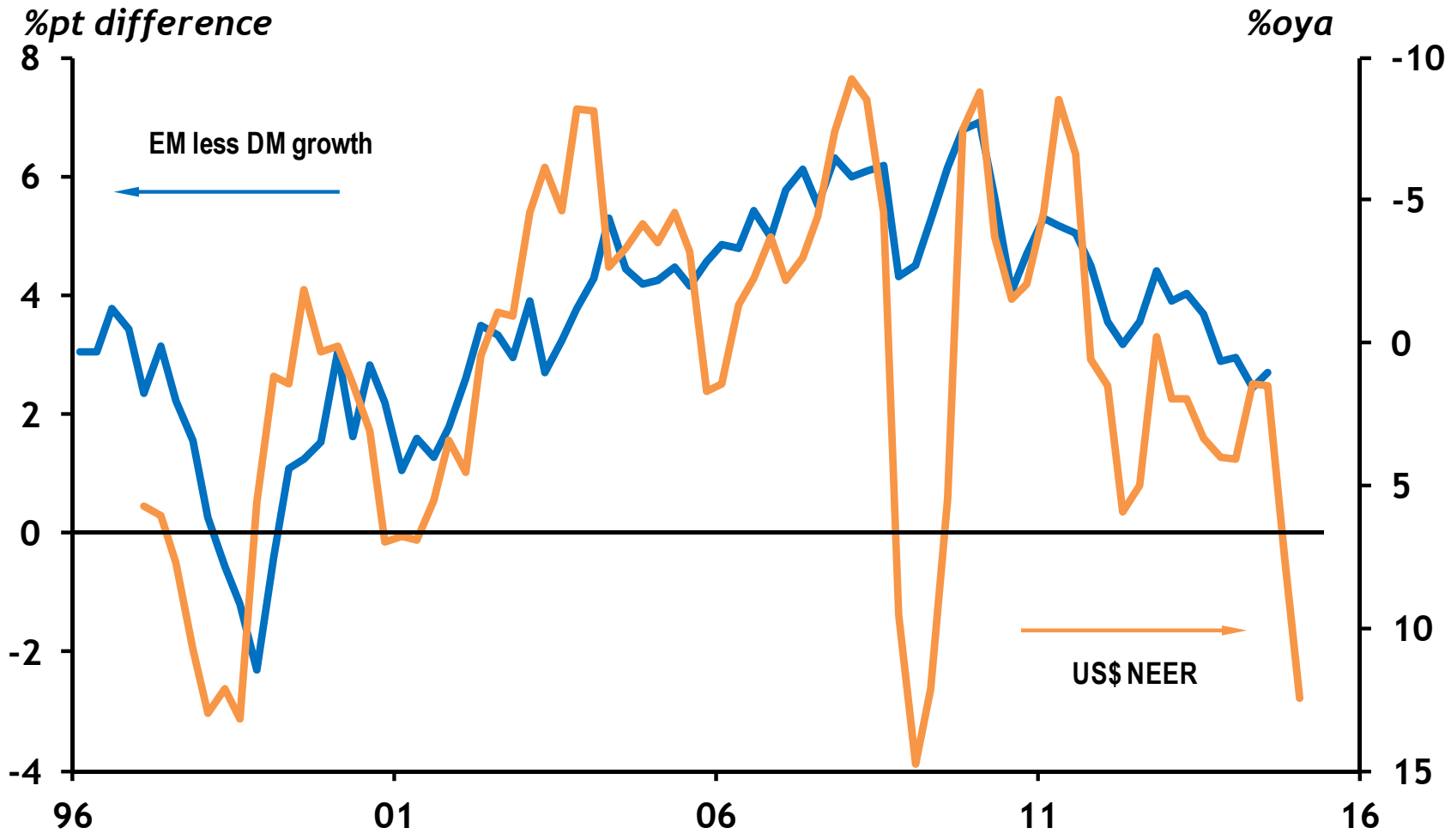
EM and DM: real GDP



Source: J.P. Morgan and country statistical agencies

US\$ NEER appreciation expected to continue as Fed moves...

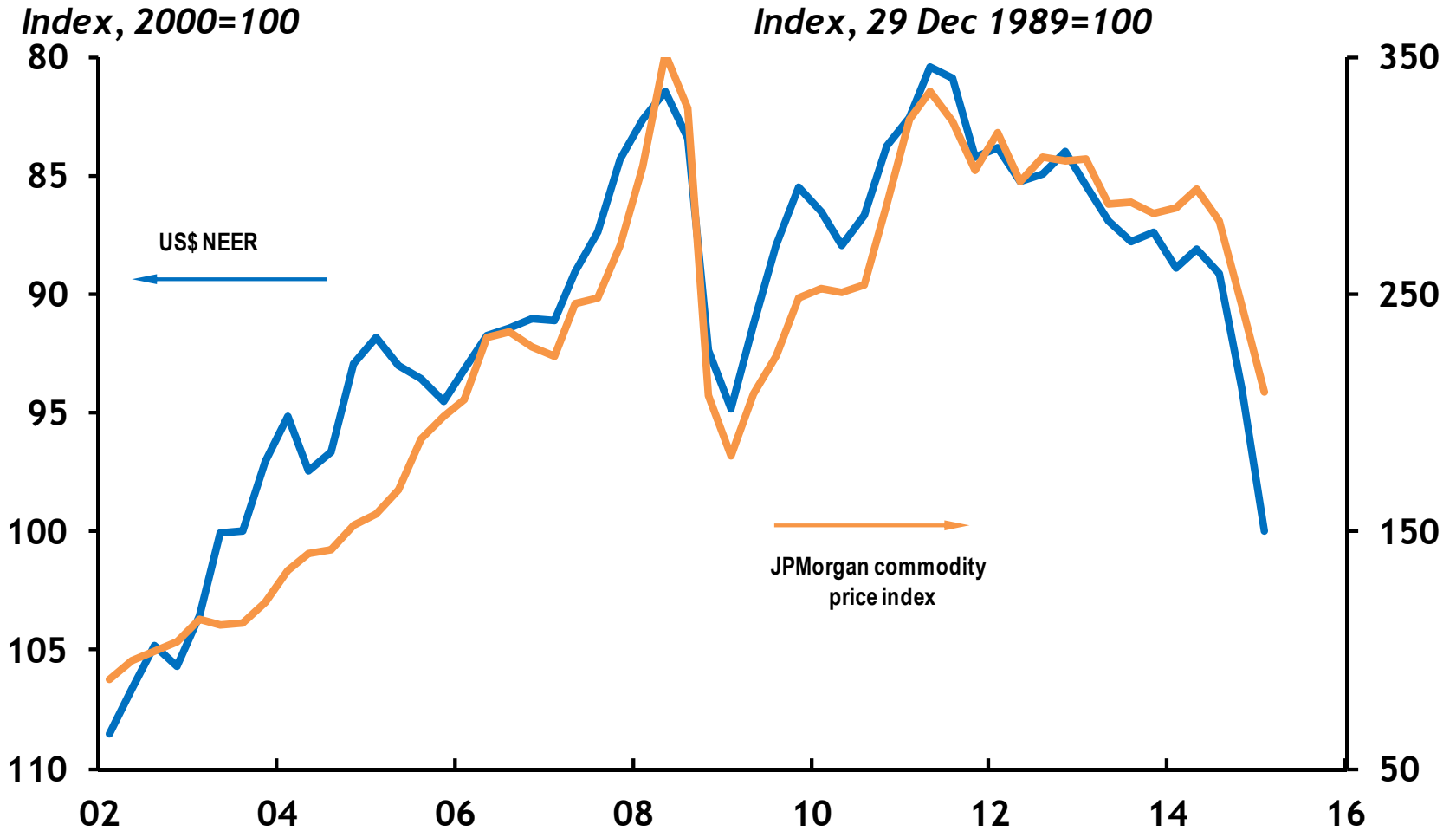
EM-DM growth differential and US\$ NEER



Source: J.P. Morgan and country statistical agencies

US\$ NEER and commodity prices – a striking link...

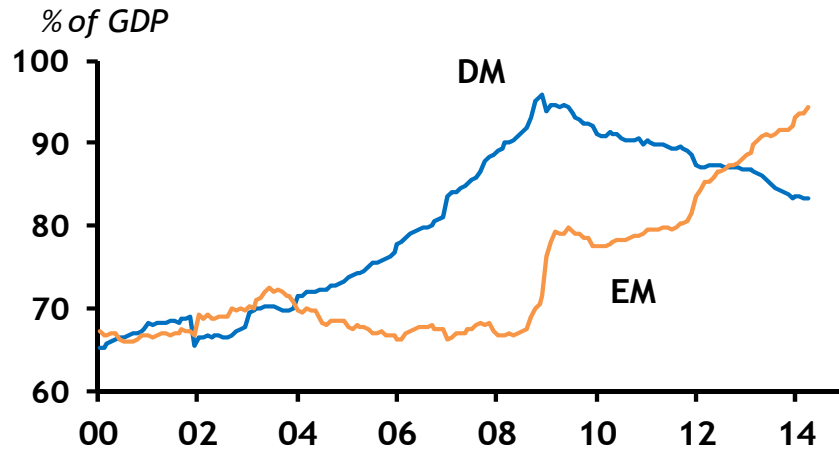
US NEER and JPMorgan commodity price index



Source: J.P. Morgan and country statistical agencies

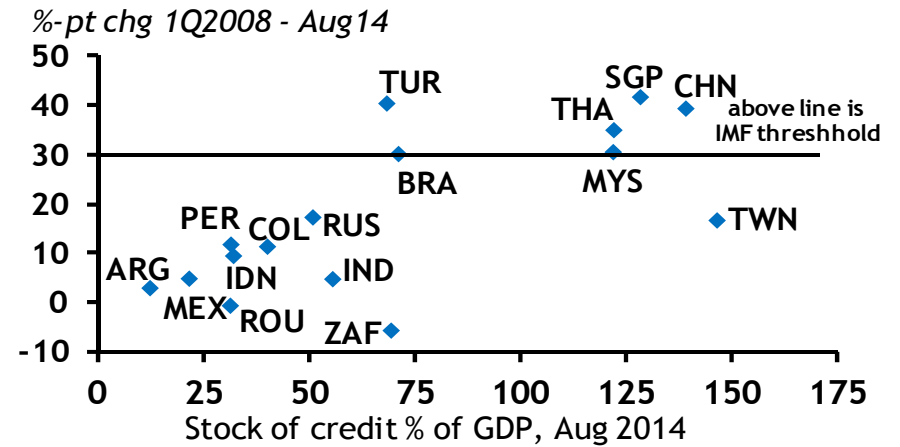
Vulnerability to debt overhangs when Fed tightens

Domestic bank credit



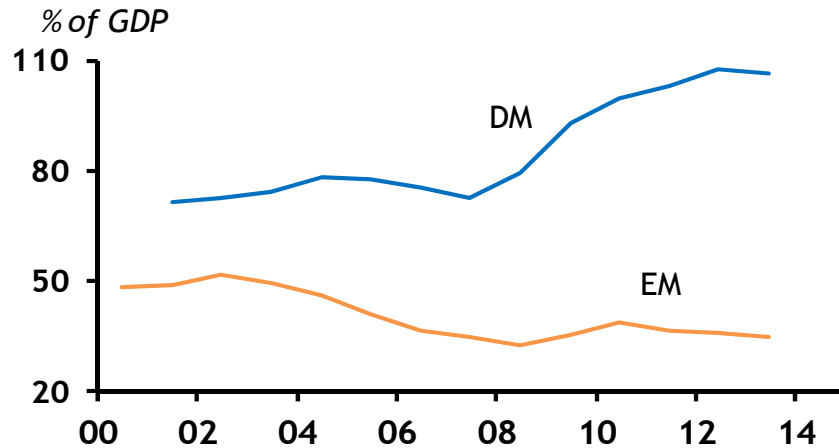
Source: J.P. Morgan

EM domestic bank credit



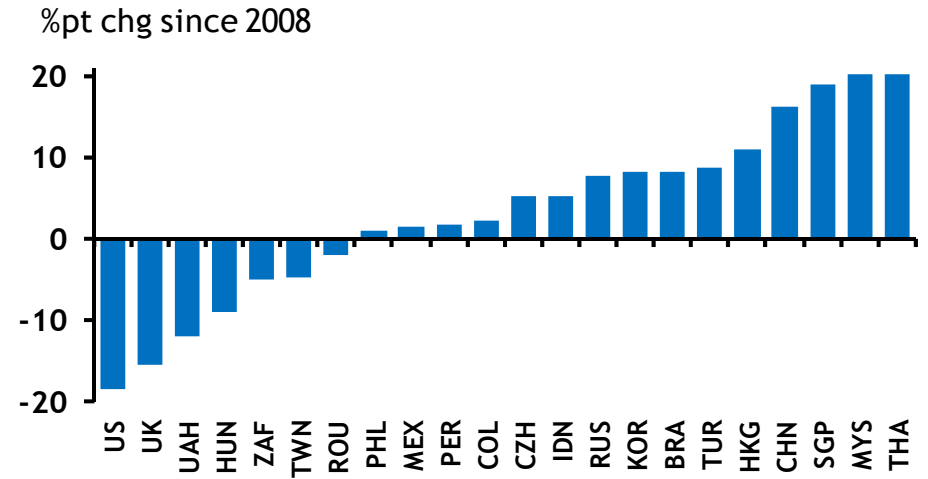
Source: J.P. Morgan, IMF

DM and EM gross government debt



Source: WEO, last update April 2014

Household debt as a share of GDP



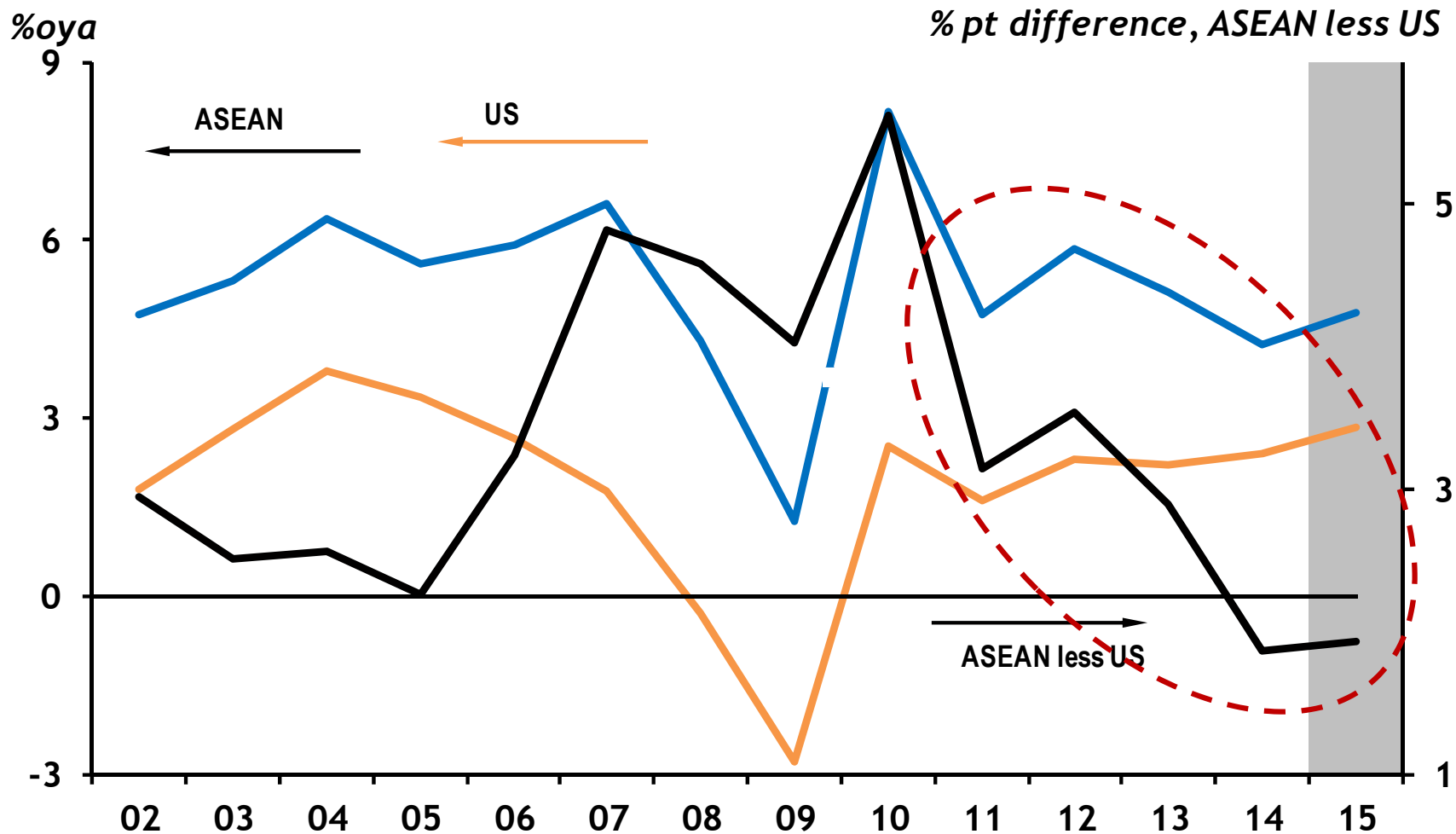
Source: J.P. Morgan, BIS, national central banks

Agenda

Setting the global stage	1
ASEAN in perspective	19
Malaysia	29
Risks	44

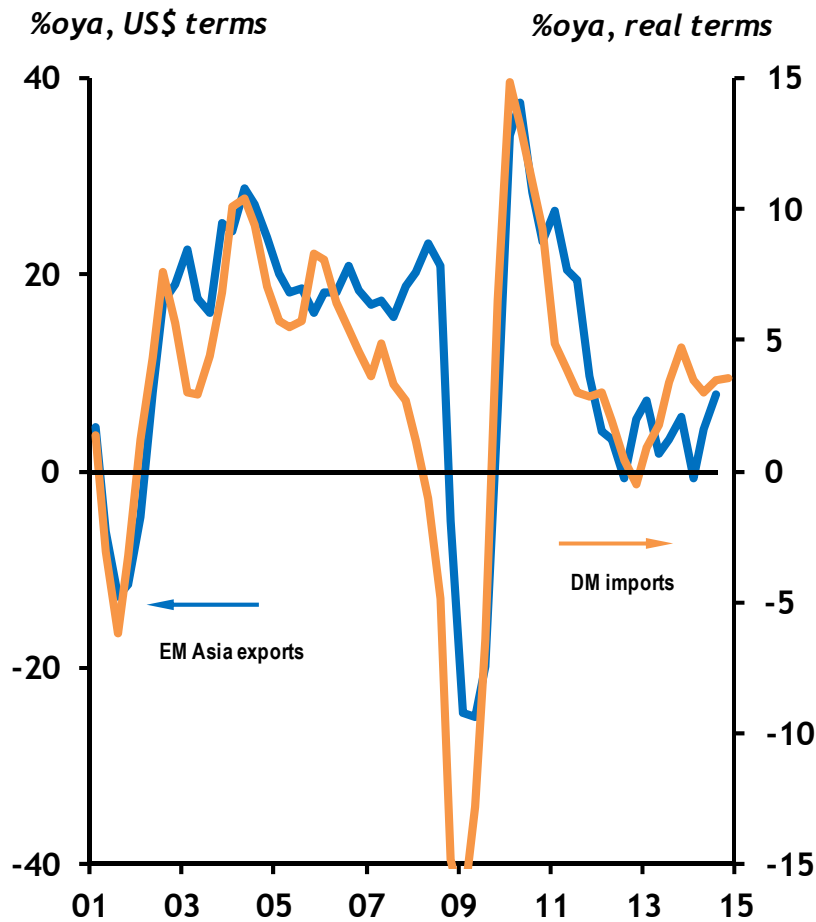
ASEAN-US growth differential expected to compress

US and ASEAN real GDP growth differentials



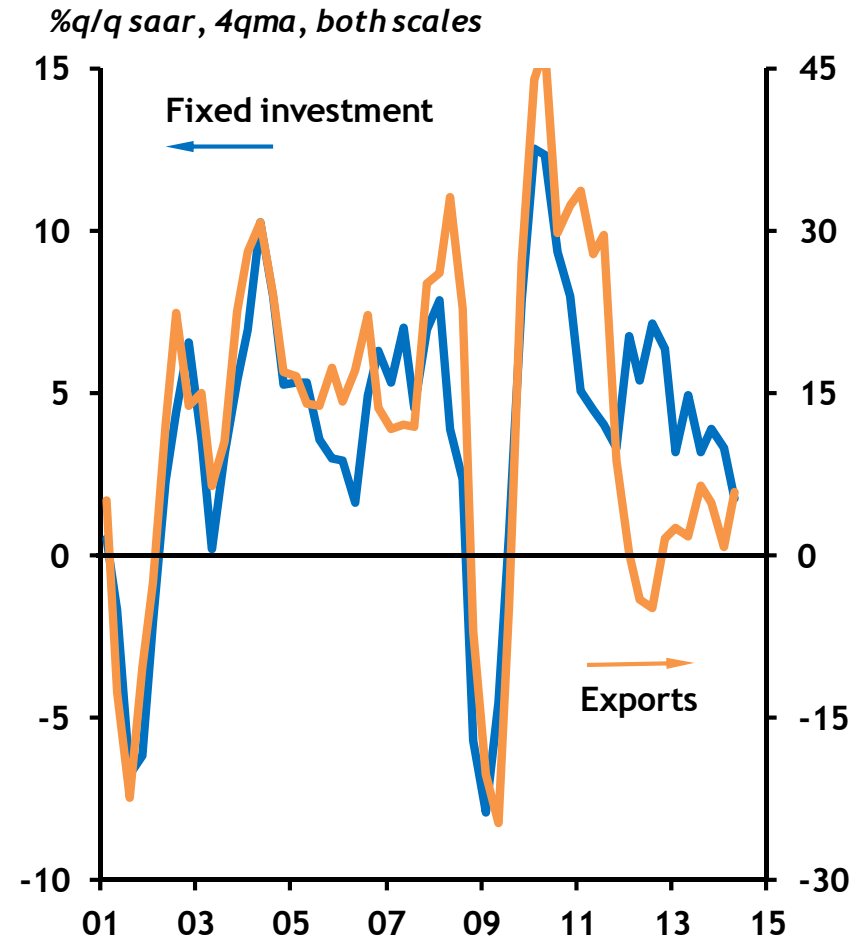
Limited export lift implies limited fixed investment expansion

DM imports and EM Asia exports



Source: J.P. Morgan and country statistical agencies

EM Asia ex CN: exports and FAI



1. Exports may not lift as strongly

ASEAN exports dominated by tech and commodities

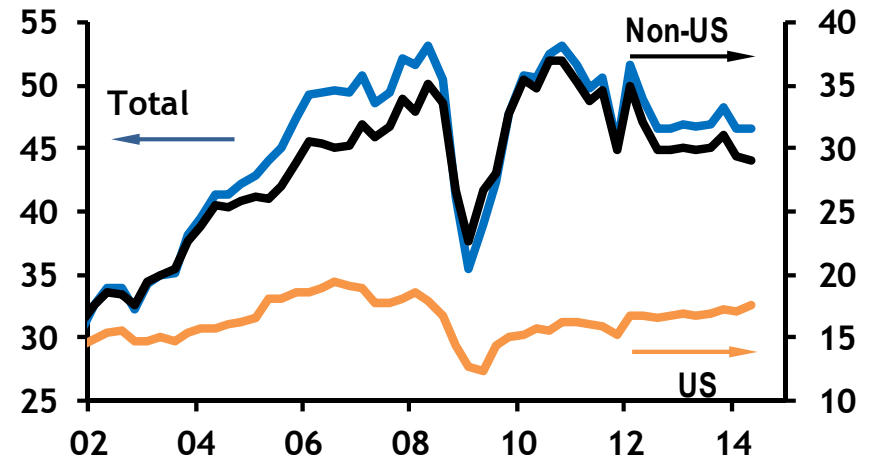
% GDP, unless otherwise noted

	% total, 2013 ¹	2003	2008	2013	Chg ²
ASEAN	912.8	55.7	53.4	42.6	-10.8
Tech	20.3	21.7	14.2	8.7	-5.6
Commodities	39.1	13.6	20.1	16.6	-3.5
Others	40.6	20.5	19.0	17.3	-1.7
Indonesia	182.7	26.0	26.8	21.0	-5.8
Tech	6.1	3.3	2.0	1.3	-0.7
Commodities	59.4	11.9	15.3	12.5	-2.8
Others	34.4	10.9	9.4	7.2	-2.2
Malaysia	228.2	100.7	86.6	72.9	-13.7
Tech	32.8	51.5	33.2	23.9	-9.3
Commodities	35.4	21.4	28.2	25.8	-2.4
Others	31.8	27.9	25.1	23.2	-1.9
Philippines	56.9	45.5	28.3	20.9	-7.3
Tech	42.2	30.4	16.4	8.8	-7.6
Commodities	n/a	n/a	n/a	n/a	n/a
Others	57.8	15.2	11.8	12.1	0.3
Singapore	219.3	89.2	91.4	73.6	-17.8
Tech	19.4	34.0	25.3	14.3	-11.0
Commodities	51.3	16.9	38.2	37.7	-0.5
Others	29.3	38.3	27.8	21.5	-6.3
Thailand	225.8	54.9	64.6	57.9	-6.7
Tech	14.6	12.8	11.9	8.5	-3.5
Commodities	24.3	12.4	16.2	14.1	-2.1
Others	61.1	29.7	36.5	35.4	-1.1

Source: CEIC; 1. Shaded area is US\$ billion; 2. 2013 less 2008

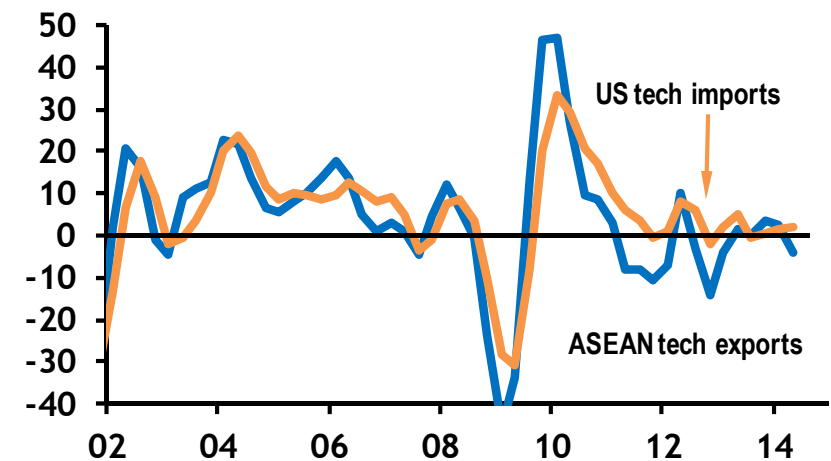
ASEAN tech exports by destination

US\$ bn, sa, both scales



ASEAN tech exports and US tech imports

%2q/2q, saar, US\$ terms



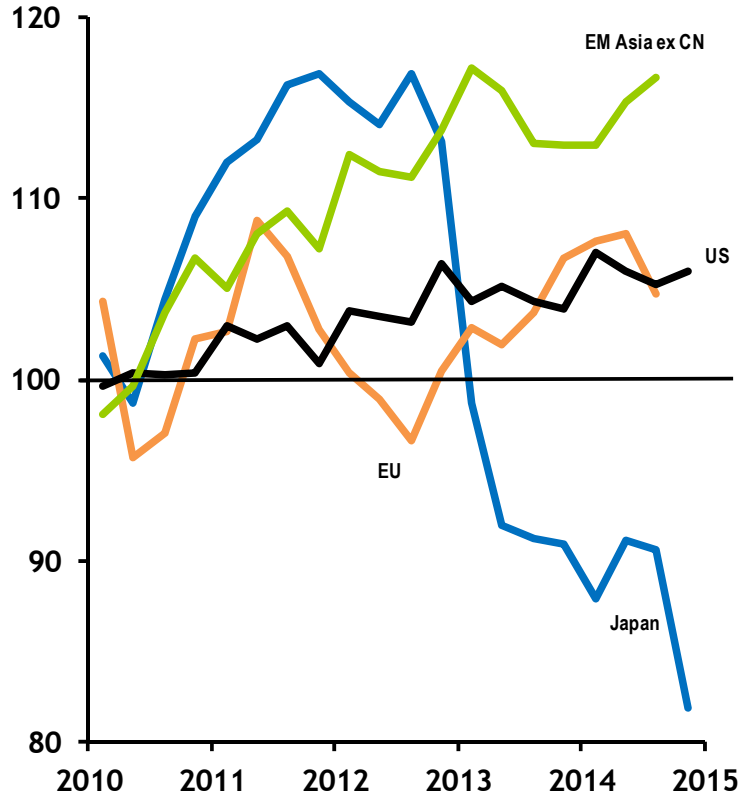
Source: CEIC, J.P. Morgan

J.P.Morgan

REER appreciation is striking

Unit labor cost

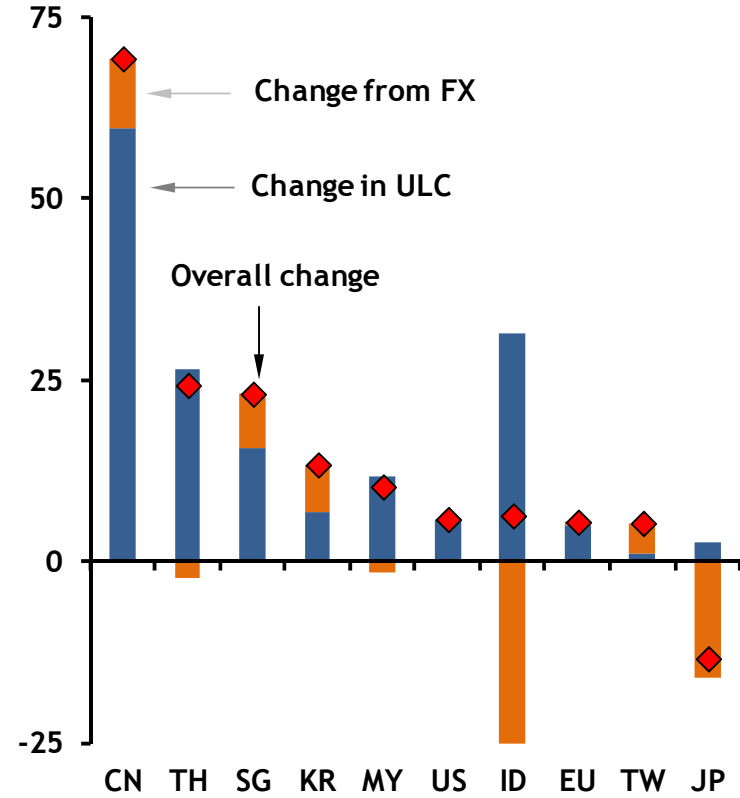
Index, 1Q10=100, US\$ terms, sa



Source: J.P. Morgan and country statistical agencies for all charts

Emerging Asia: US\$ unit labor cost

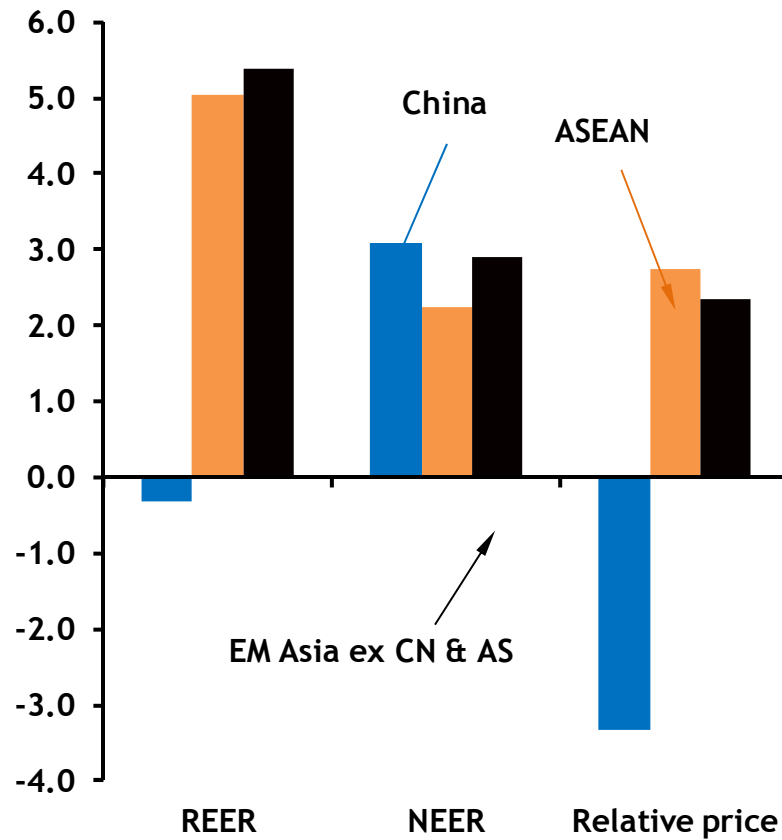
%-pt cont. to rise in ULC between 2010 and 2014



FX appreciation could be a drag

EM Asia: trade-weighted FX

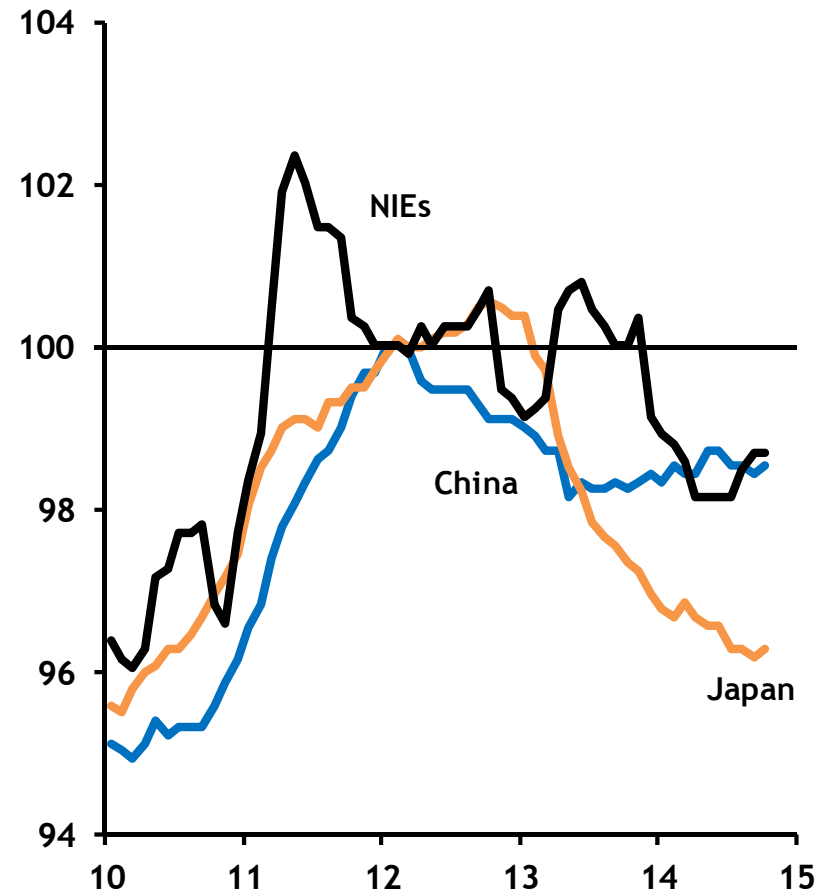
% cumulative change since Dec13



Source: J.P. Morgan and country statistical agencies for all charts and tables

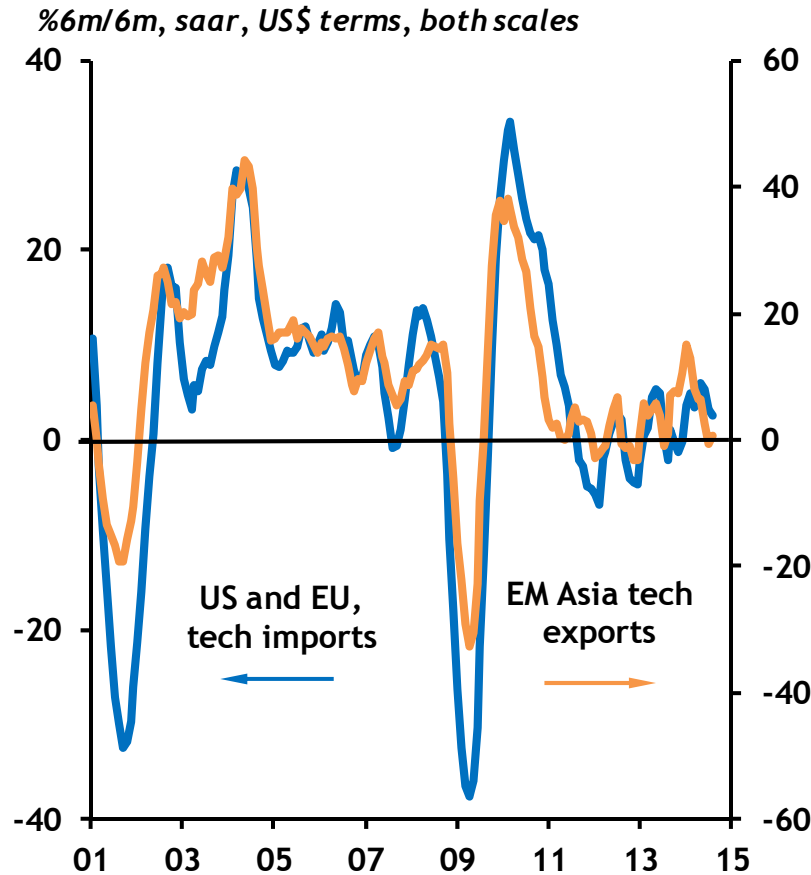
EM Asia: US import prices

1Q2012=100, sa, US\$ terms

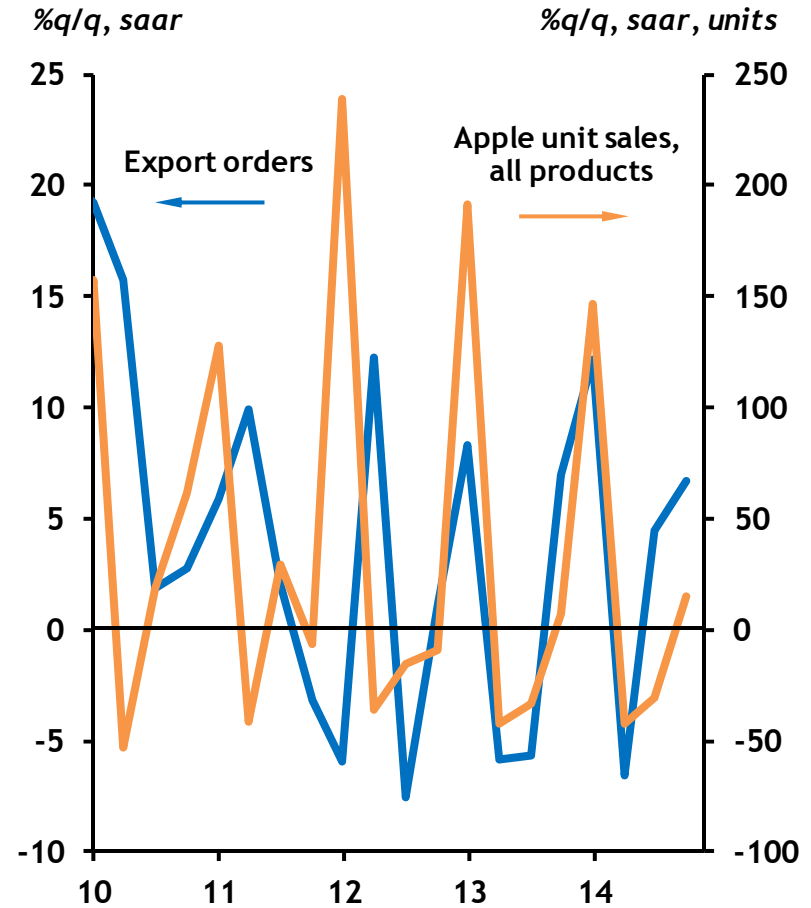


DM tech demand a key driver of EM Asia's exports

G-2 tech imports and EM Asia tech exports



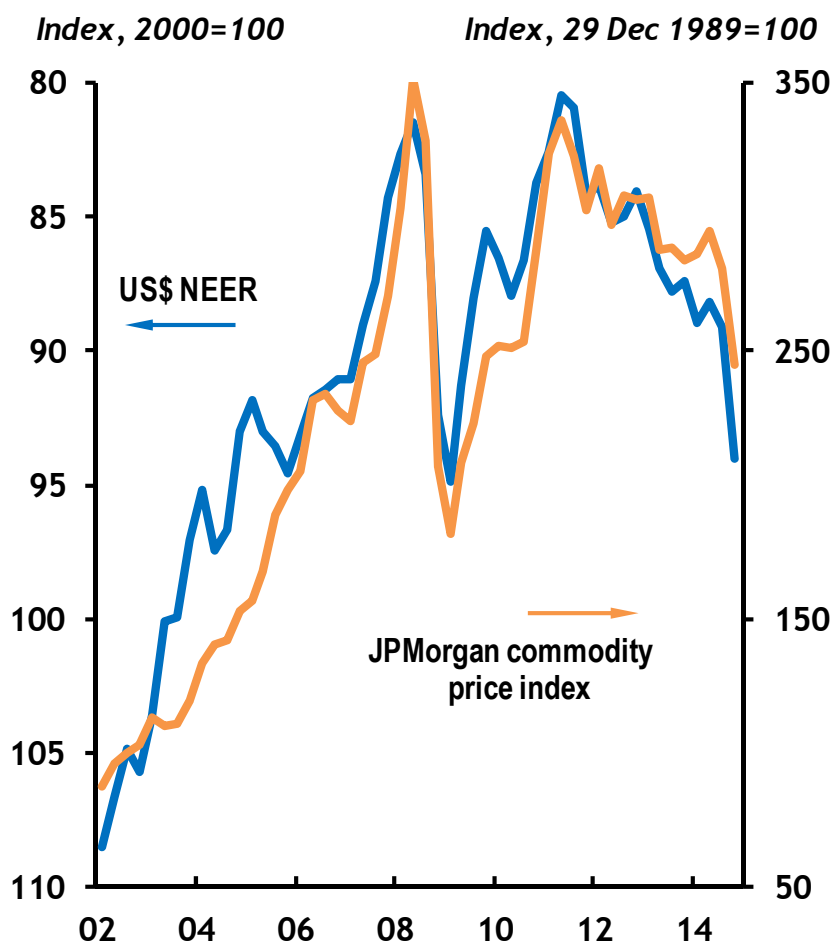
Taiwan export orders and Apple sales



Source: J.P. Morgan and country statistical agencies for all charts and tables

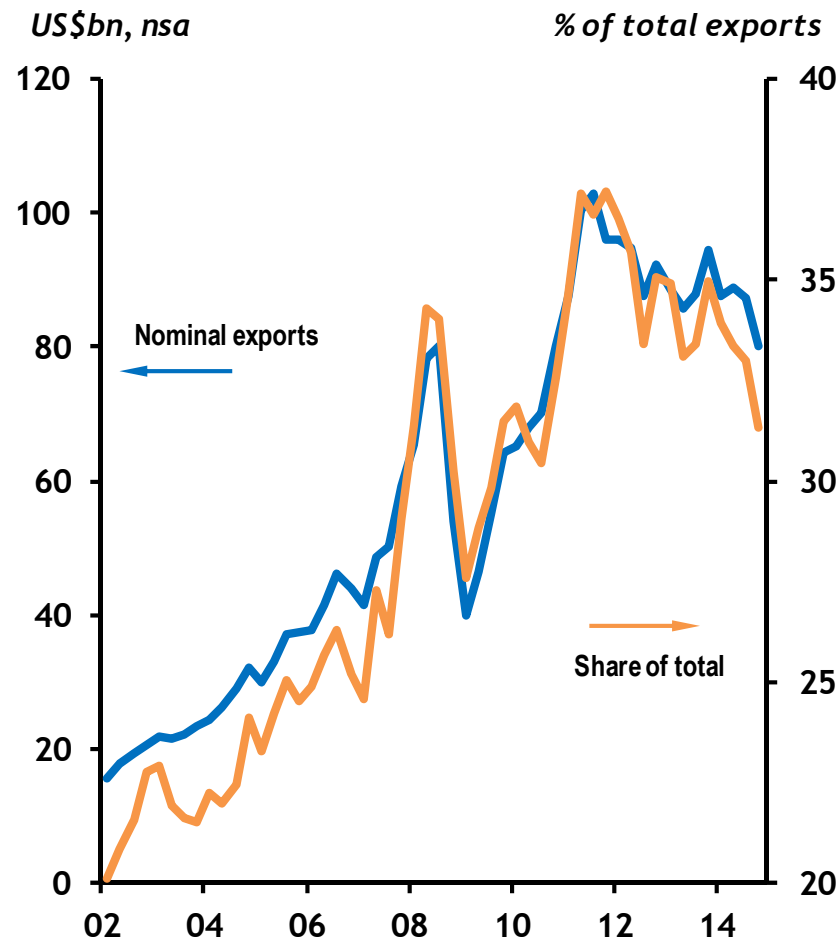
Commodity exports could soften further on US\$ and supply factors

US NEER and JPM commodity prices



Source: CEIC, J.P. Morgan

ASEAN commodity exports

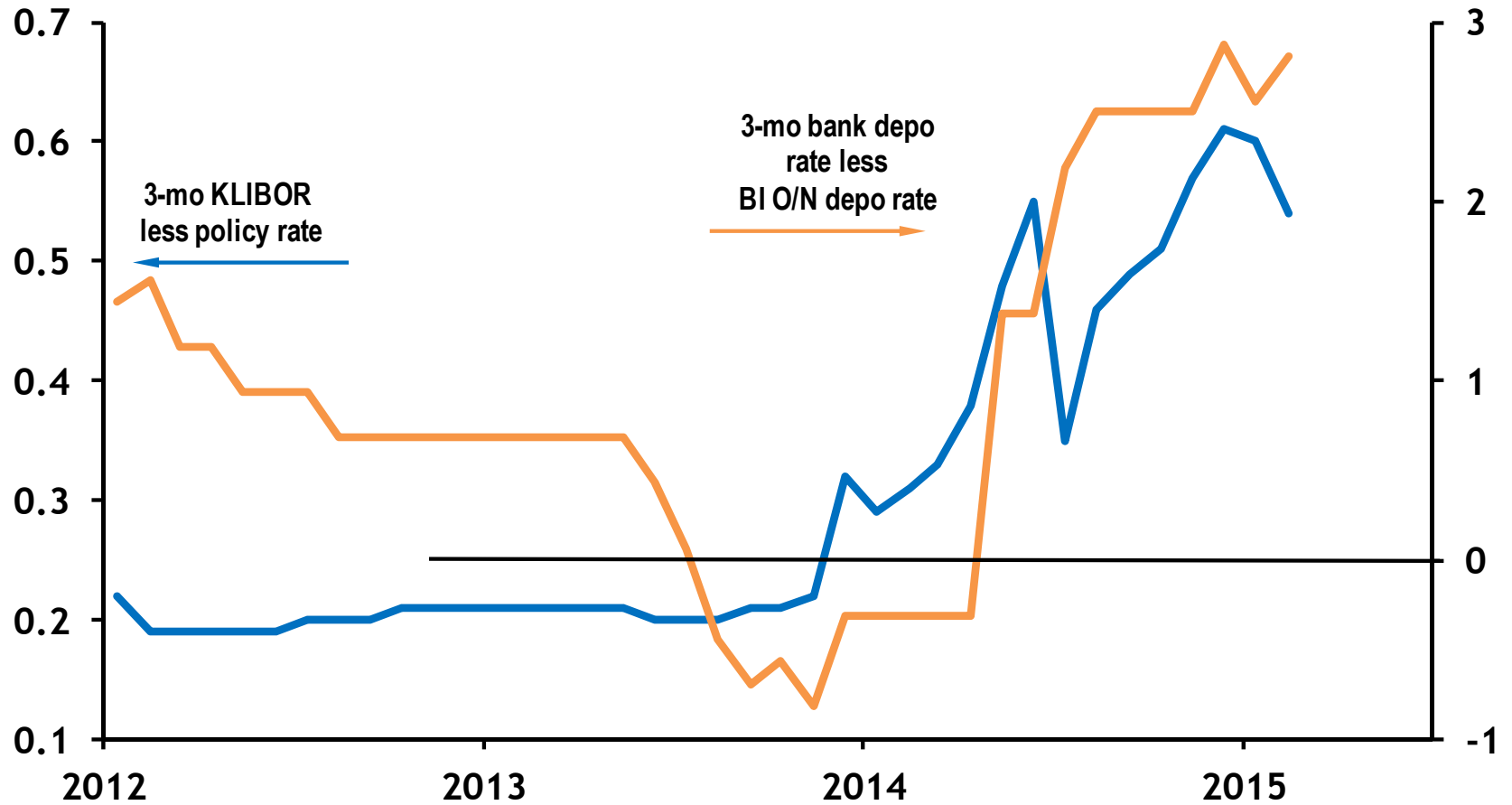


Source: CEIC, J.P. Morgan

2. Banking liquidity also tightening

Indonesia and Malaysia: cost of funds

%p.a., eop, both scales

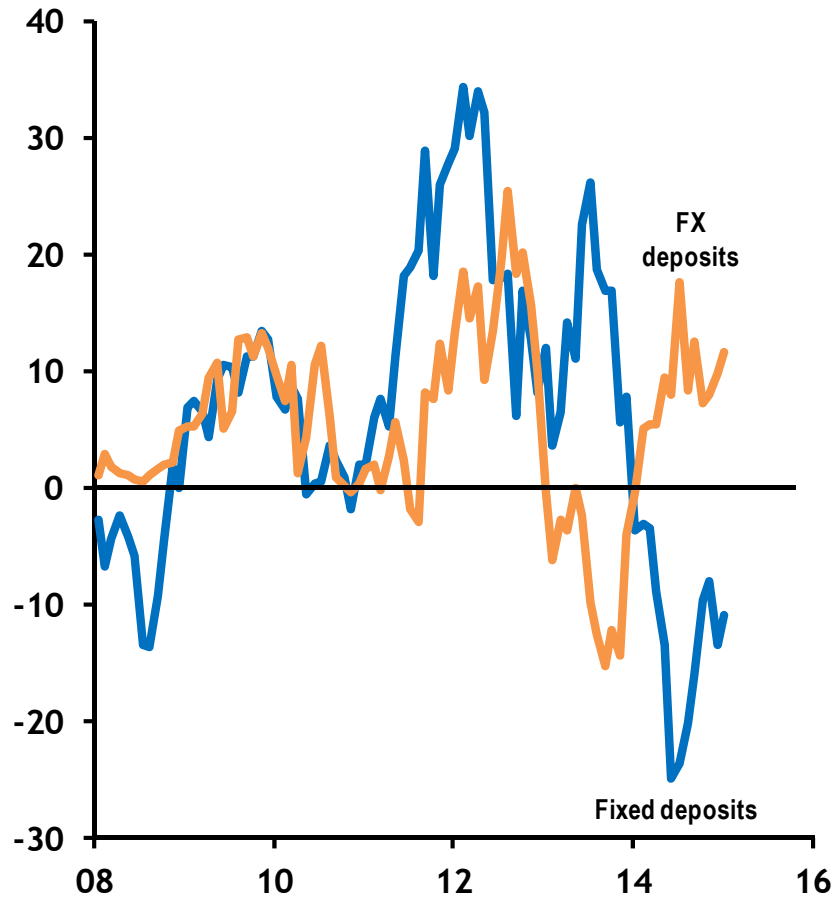


Source: CEIC, J.P. Morgan

Due to shifts in deposits

Malaysia: corporate deposits

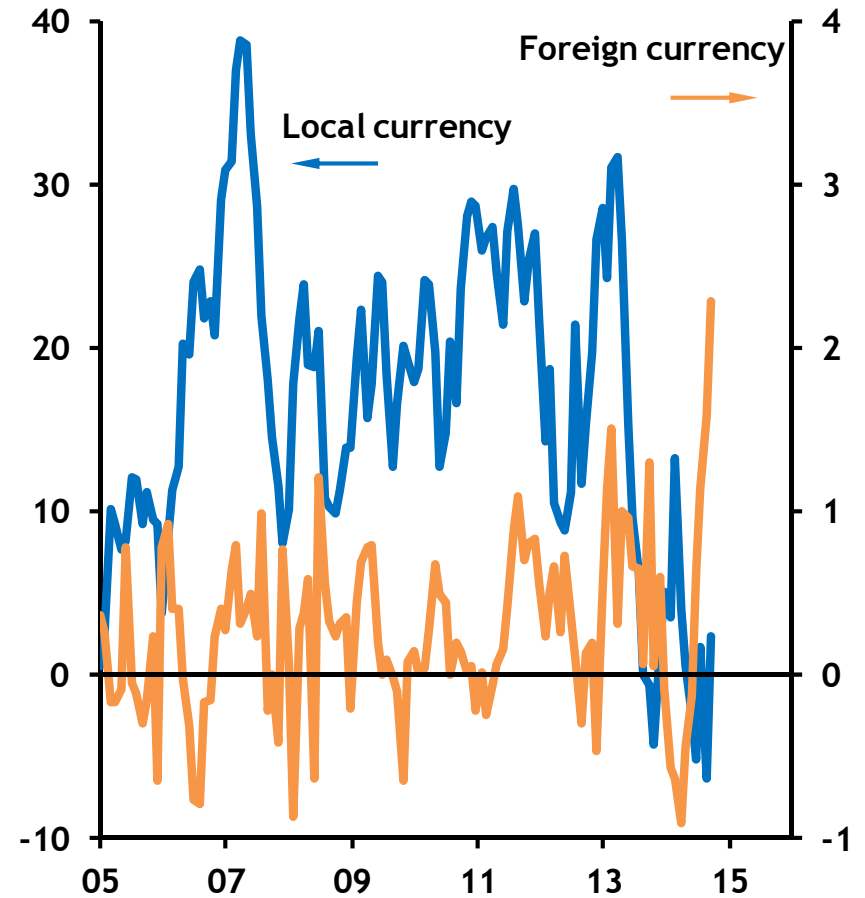
MYR bn, change from year ago



Source: CEIC, J.P. Morgan

Singapore: banking sector deposits

SGD bn, change over 6-mo, both scales



Agenda

Setting the global stage	1
ASEAN in perspective	19
Malaysia	29
Risks	44

Malaysia: macro view

Malaysia: economic indicators

	Average			
	2008-12	2013	2014e	2015f
Real GDP, % change	4.3	4.7	6.0	4.6
Consumption ¹	3.8	4.5	4.3	3.5
Investment ¹	2.0	1.3	0.4	1.7
Net trade ¹	-1.6	-1.1	1.4	-0.6
Consumer prices, %oy a	2.5	2.1	3.1	1.1
% Dec/Dec	2.4	3.2	2.7	1.1
Producer prices, %oy a	3.3	-1.9	5.0	1.0
Government balance, % of GDP	-5.4	-4.0	-3.5	-3.2
Merchandise trade balance (US\$	44.9	34.3	38.2	28.1
Exports	202.3	215.5	221.9	228.6
Imports	157.4	181.2	183.6	200.4
Current account balance	30.1	12.7	15.1	5.9
% of GDP	11.8	4.0	4.6	1.9
International reserves, (US\$ bn)	110.2	135.0	124.5	109.6
Total external debt, (US\$ bn)	70.4	61.5	58.5	55.5
Short term	31.3	32.3	32.3	32.3
Total external debt, % of GDP	28	20	18	18
Total external debt, % of exports	28	23	22	20
Interest payments, % of exports	1	2	2	2

2015 growth expected to ease due to slower PCE and fiscal consolidation – PCE post GST will be critical to watch

Inflation to see bump on April 1 but should ease in-line with commodity prices

Current account narrowing reflects both decline in gas export prices and CPO prices

Source: DOS, BNM and MOF

1. Contribution to growth of GDP.

Malaysia: macro view

Malaysia macro highlights

- **Drop in crude oil prices presents headwinds for the BOP, the fiscal position and growth** - The implication of the latest oil price plunge is that the challenges facing Malaysia on the heels of the terms of trade shock are now even greater. As a first order effect, there will likely be further downward revisions to the current account balance, with a US\$10/bbl drop in crude expected to trim around US\$1.5 billion (0.4% of GDP) from the trade surplus. In addition, projections for the fiscal position likely will need to be revised as well. Oil- and gas-related proceeds account for one quarter of the 19.8% of GDP in fiscal revenues forecast in the preliminary budget. It appears that the budget gap will be closed through a combination of cuts in current and development expenditures.
- **Private consumption expected to slow with real estate and credit tightening**- Aside from the expected fiscal tightening, households are also expected to face two headwinds; easing real estate prices and tightening credit conditions. Since the 2008 crisis, Malaysia has enjoyed a resurgent real estate market, with price increases averaging 10% per annum from 2010 to 2013, well above the average increase of 3.5% between 2003 and 2007. This appreciation has likely helped boost wealth effects that have fed into private consumption. In response to the price appreciation, domestic developers have increased supply and this is expected to rise strongly in late 2014 and into 2015. This supply is also coinciding with a net tightening in domestic liquidity conditions. Banks have been tightening credit standards in tandem with tightening liquidity conditions. This tightening also explains the recent easing overall loan growth in 4Q14. The slowing was especially apparent in consumer credit growth in 2H14.
- **BNM easing penciled in for July MPC post GST hike**- We think the policy focus in 2015 will be biased towards maintaining growth, amid tightening credit conditions, expected introduction of the 6% goods and services tax (GST) in April, and declining consumer sentiment. Although the January 28th MPC statement noted risks of financial imbalances, J.P. Morgan assumes that the need to ease monetary conditions further to mitigate the consumption slowdown will be key. Given this forecast shift in the policy reaction function, our expectation is that Bank Negara is expected cut its policy rate 25bps at the July 9th MPC meeting.

Malaysia – continued

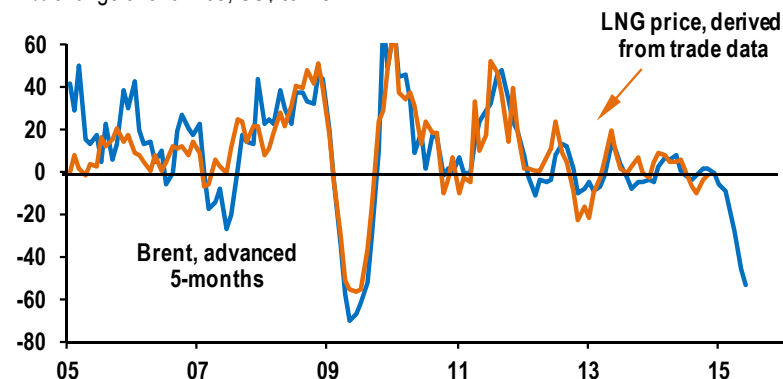
Dealing with a challenging environment

- Macro revisions shadow changes in oil prices** - Following the plunge in Brent crude oil prices to around US\$50/bbl from US\$105 in June, we have materially revised our 2015 forecasts for Malaysia's current account balance, growth, and inflation, revising down GDP growth to 4.7%oya from 5.1%, CPI up to 4.3%oya from 4.0%, and the current account surplus. These revisions reflect the impact of lower natural gas (NG) prices, which in Asia is priced off a crude oil benchmark.
- Capex plans in focus** – One options to stabilize the current account would be to trim capital outlays of government-related companies in the oil and gas sector, which would reduce investment and also bolster the current account surplus, but this seems unlikely at this juncture given the centrality of the RAPID project to the ETP.
- Semantics around government guarantees** - Another issue that has arisen, given concerns around 1MDB, is whether the government guarantees, at 15% of GDP in 3Q14, would become direct government liabilities (see "[Malaysia: An odd decouple](#)," GDW, July 20, 2012 and "[Malaysia: watching for signs of credit disintermediation](#)," GDW, Feb. 22, 2013). A related question is whether the letters of support provided to 1MDB are legally equivalent to explicit guarantees and what the outstanding letters of support to other entities aside from 1MDB amount to.

Drop in crude oil prices expected to impact NG prices

Malaysia: LNG price and Brent crude oil price

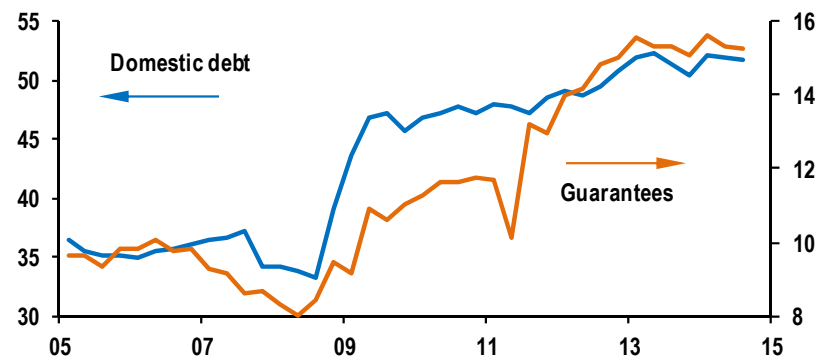
% change over 6-mos, US\$ terms



Fiscal balance sheet bears watching

Malaysia: domestic government debt and guarantees

% GDP, both scales



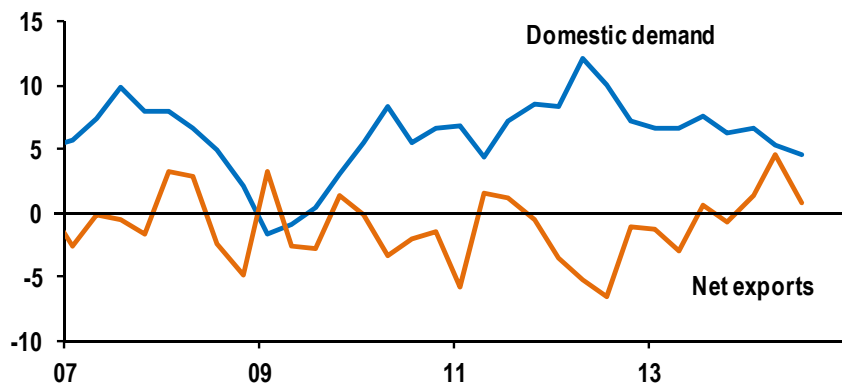
Source: DOS, Bloomberg and MOF

2015 growth faces downside – domestic demand in focus

Domestic demand has been main driver of growth

Malaysia: contributions to GDP

%-pt. contribution to %oaya headline GDP

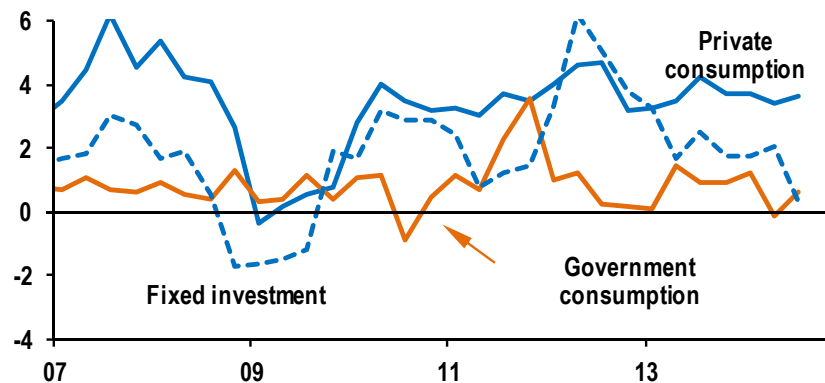


- Malaysia faces terms of trade shock from lower oil and CPO prices
- Weaker FX helps offset but fiscal tightening and GST add downside risks
- Softening real estate and tightening credit conditions add to risks
- Corporate and household sentiment indicators have weakened of late

PCE has been stable, FAI rose in 2011-2012

Malaysia: domestic demand

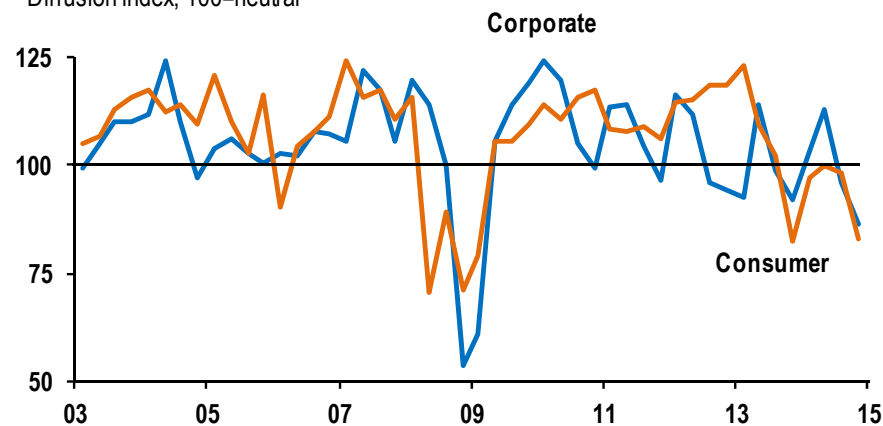
%-pt. contribution to %oaya headline GDP



Sentiment seems to be taking a hit – PCE in focus

Malaysia: corporate and consumer sentiment

Diffusion index, 100=neutral



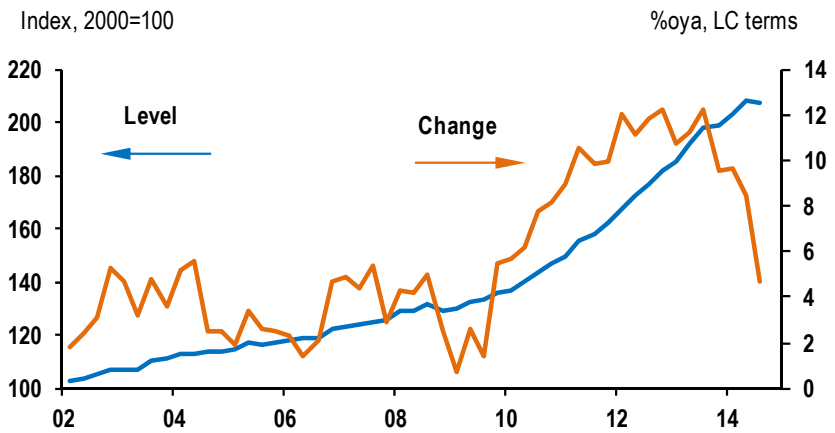
Source for all charts: MIER, CEIC, J.P. Morgan

J.P.Morgan

PCE faces headwinds – FAI remains bright spot

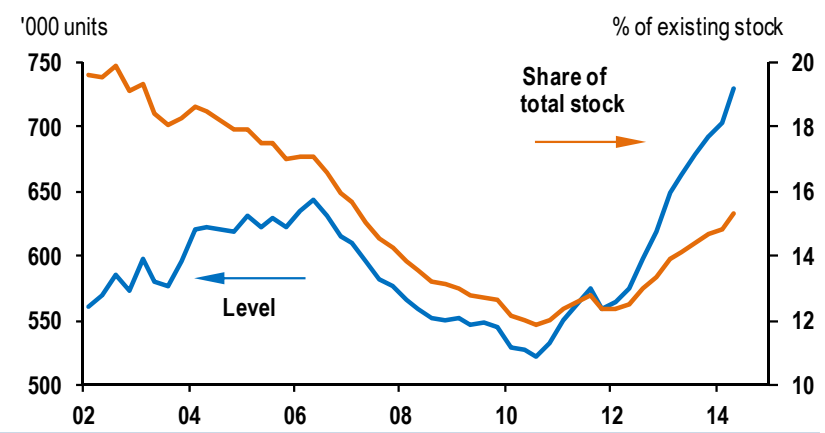
Real estate prices have eased

Malaysia: real estate price



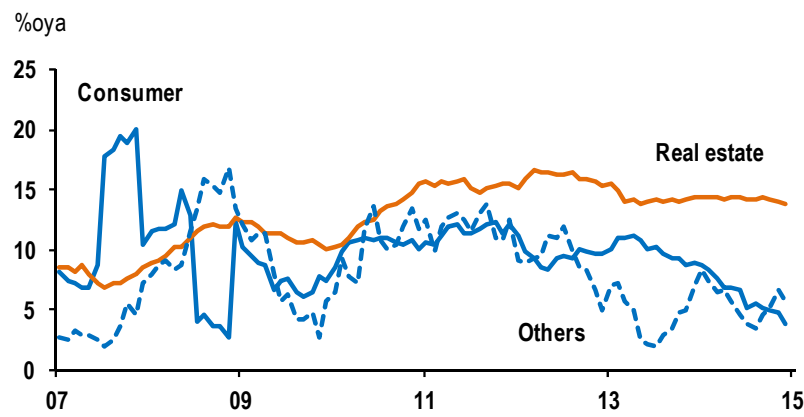
Incoming real estate supply looking elevated

Malaysia: incoming residential supply



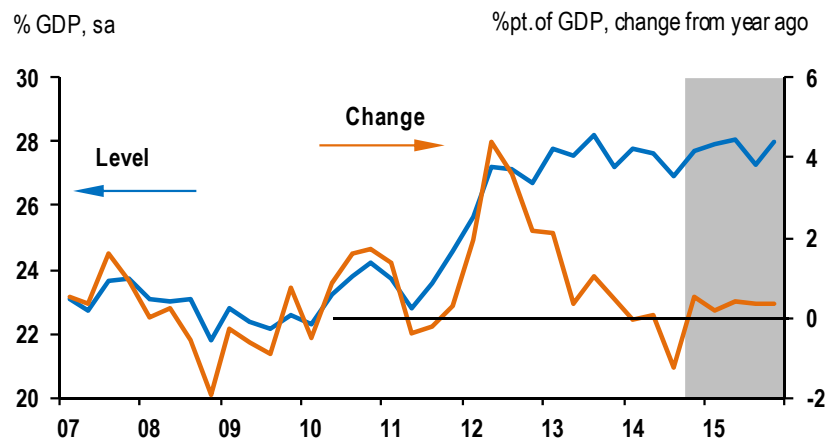
Bank credit slowing

Malaysia: banking system loans



Fixed investment the one bright spot

Malaysia: fixed investment



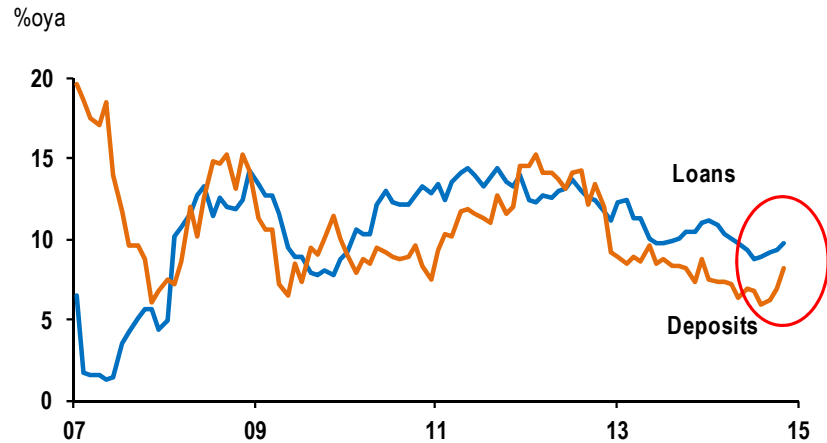
MALAYSIA

Source for all charts: CEIC, J.P. Morgan
ASIA ECONOMIC AND MARKETS RESEARCH

Watching bank balance sheets

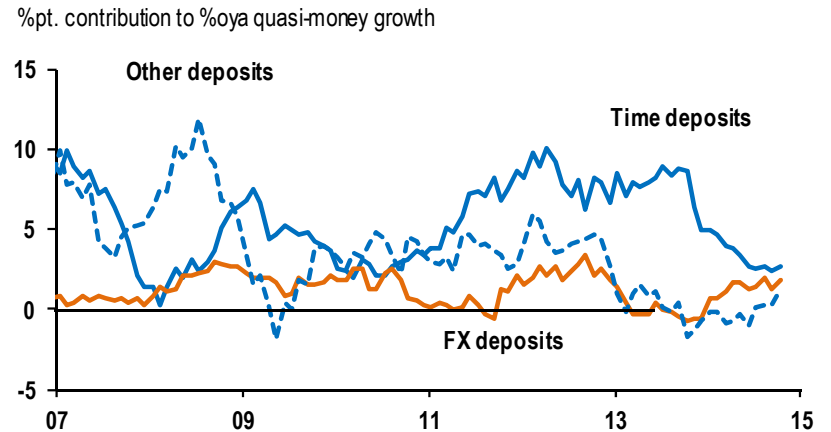
Deposits had been easing from 2013 through 3Q14

Malaysia: commercial bank loans and deposits



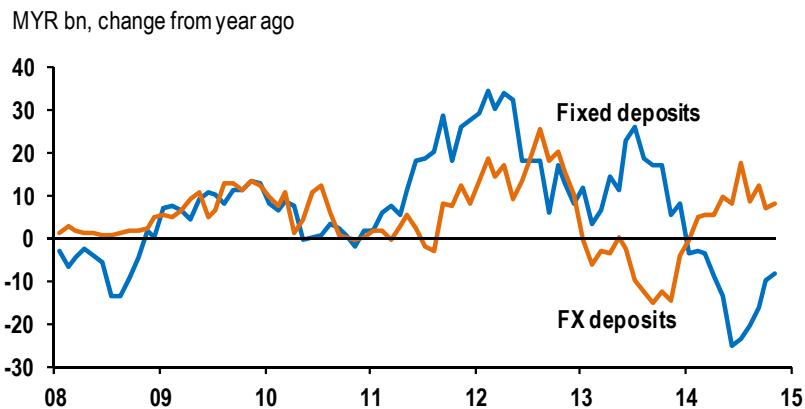
Driven by LC deposits

Malaysia: contribution to quasi-money growth



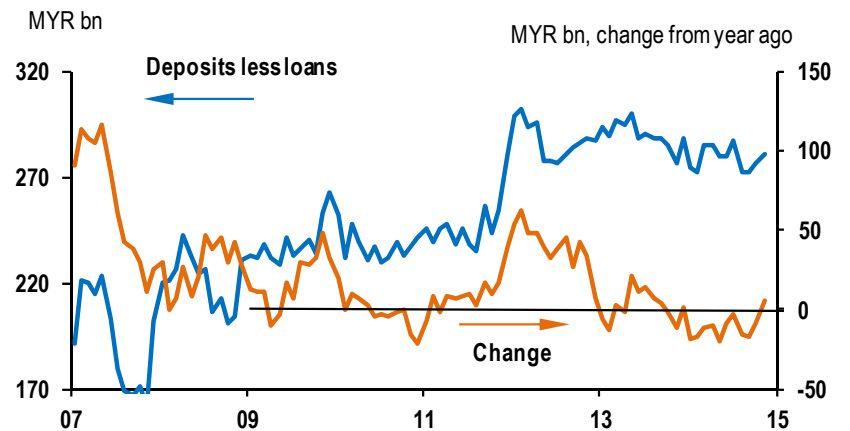
Corporate sector has been main driver

Malaysia: corporate deposits



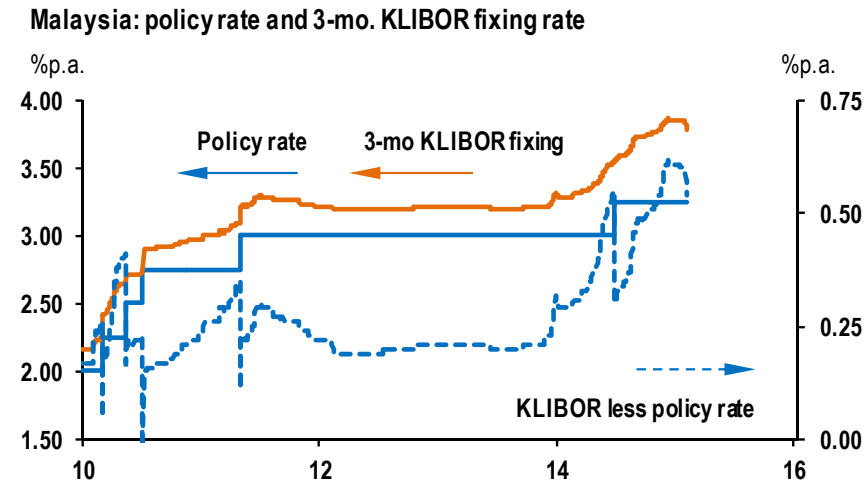
Liquidity has been net tightening – watching deposits

Malaysia: commercial bank excess liquidity and loan-deposit ratio



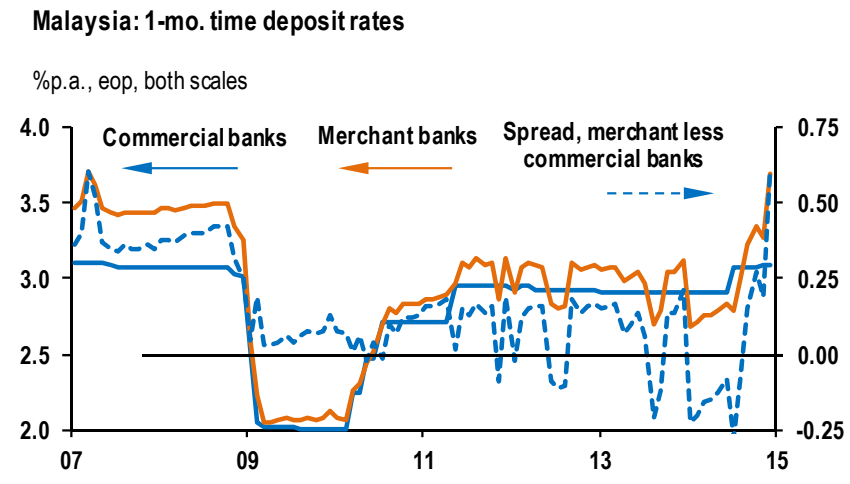
Liquidity had been tightening through 4Q14, eased in 1Q15

Sharp rise in KLIBOR rates since 2013

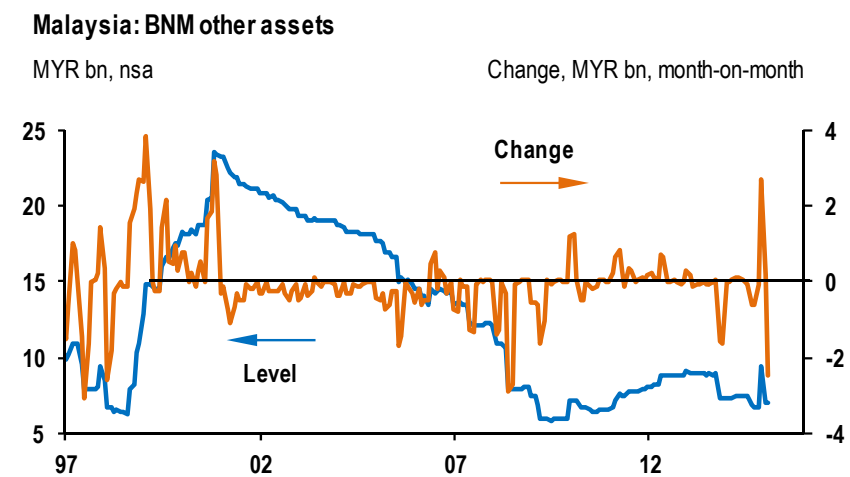


- Liquidity tightness has led to a de facto 35bps rise in the market rate
- Bank liquidity tightness reflected in asymmetry in deposit rates – merchant bank deposit rates rising
- BNM seems to be have been active in December
- Watching for other measures to ease liquidity

Merchant bank deposit rate rising



BNM "other assets" rising at the same time



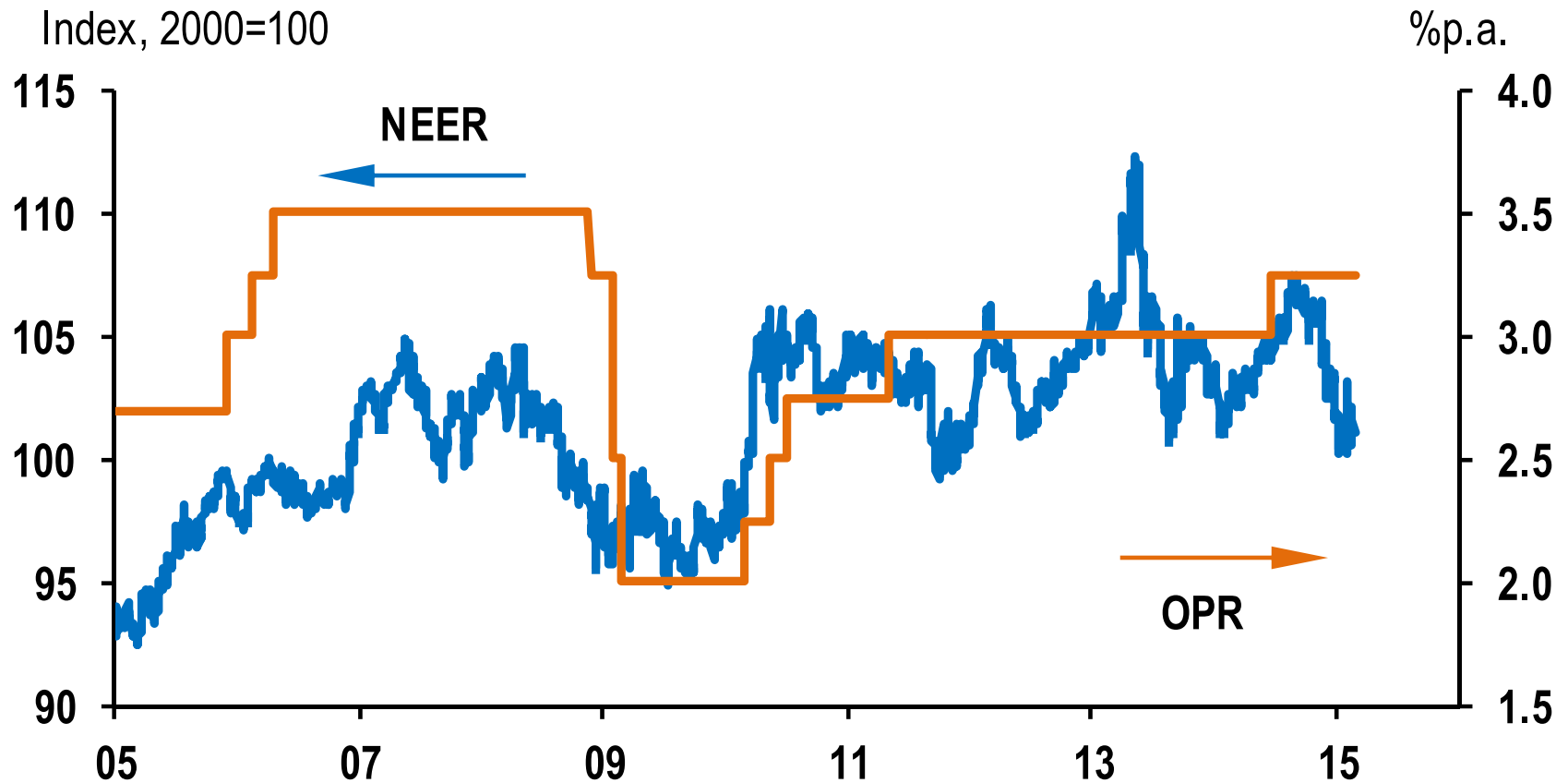
Source for all charts: BNM, CEIC, J.P. Morgan

Monetary conditions easing via FX – rates to follow

BNM expected to cut in 2Q15 then pause

Malaysia: NEER and policy rate

Index, 2000=100



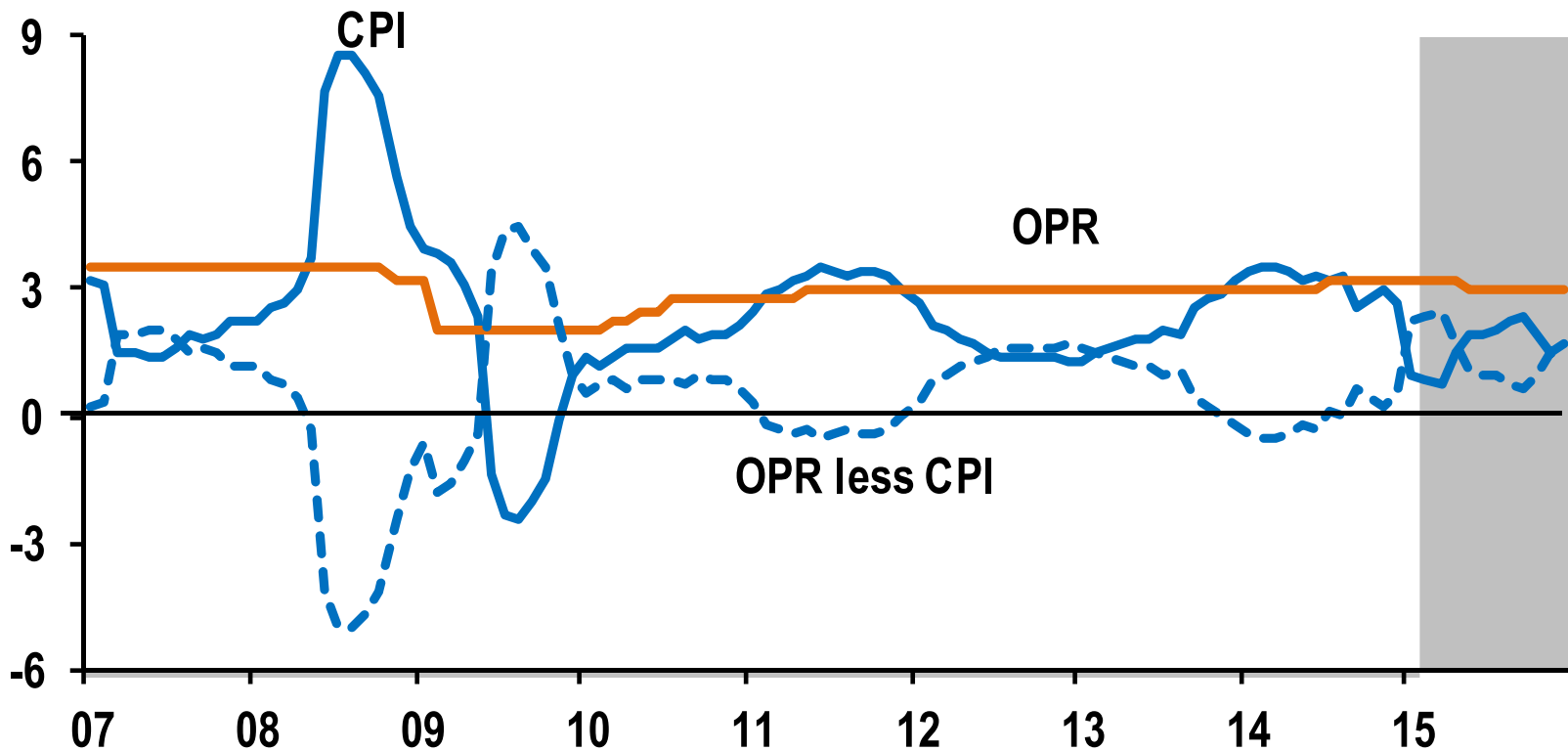
Source: CEIC, J.P. Morgan

CPI expected lift post GST – PCE will be key to watch

BNM expected to cut in 3Q15

Malaysia: OPR and CPI

%p.a., eop and %oya



Source: CEIC, J.P. Morgan

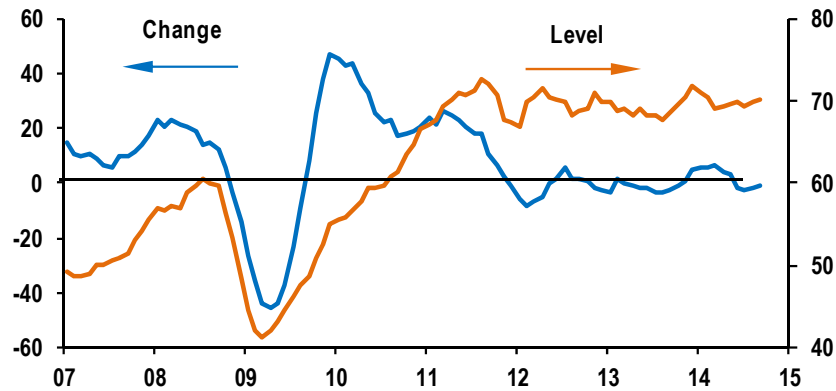
Exports and FAI

ASEAN exports have been sideways since 2011

ASEAN: exports

%6m/6m, saar, US\$ terms

US\$ bn, 3mma, sa



- Investment in Asia tends to be a derived function of exports due to income linkages
- 2011/2012 investment lift due to policy shift, fiscal transfers in Thailand, ETP in Malaysia and private investment surge in Indonesia
- Malaysian investment expected to be sustained on account of ETP continuation – implies less sensitive to relative pricing effects from weaker FX

Exports a key driver of investment – 2011/2012 stood out

ASEAN: fixed investments and exports

%2q/2q, saar, real terms

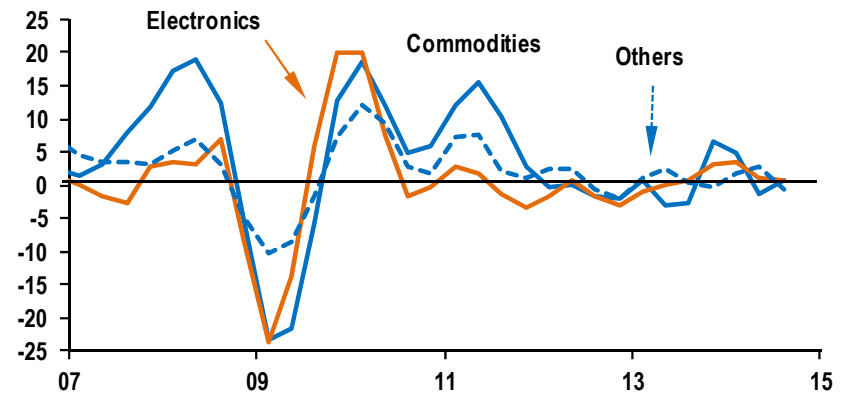
%2q/2q, saar, US\$ terms



Malaysian exports moving in sympathy with region

Malaysia: export composition

%pt. contribution to overall %2q/2q, saar growth, US\$ terms



BOP expected to face headwinds

Balance of payments expected to be in deficit

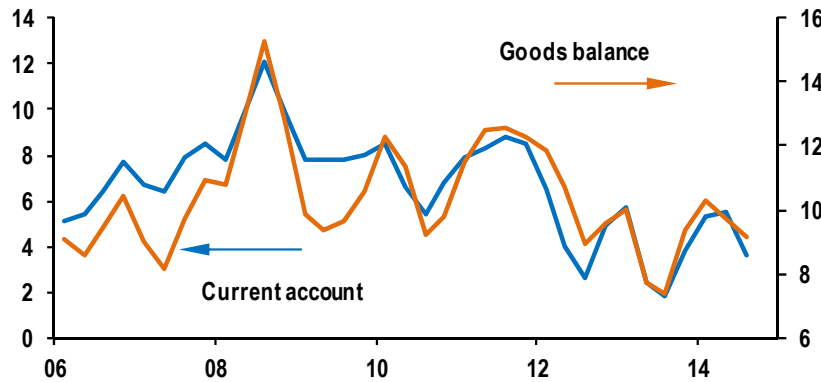
US\$ bn, nsa						
	2011	2012	2013	2014e	2015f	Chg ¹
Current acct.	33.5	18.6	11.7	15.9	5.2	-10.7
Goods	49.5	40.7	32.5	35.9	25.2	-10.7
Services	-2.0	-4.5	-4.8	-4.6	-5.0	-0.4
Income	-7.1	-11.6	-11.2	-10.3	-10.0	0.3
Transfers	-6.9	-5.9	-4.8	-5.1	-5.0	0.1
Financial acct.	7.7	-7.5	-4.6	-19.9	-20.1	-0.2
FDI	-3.0	-7.1	-1.4	-6.6	-4.0	2.7
Portfolio	8.7	18.9	-0.7	-3.9	-10.0	-6.1
Others	2.1	-19.6	-2.4	-9.0	-6.2	2.9
E+O	-10.0	-9.9	-2.6	-5.1	0.0	5.1
Overall	31.3	1.3	4.6	-10.2	-14.9	-4.7

Source: DOS and J.P. Morgan forecast; 1. 2015f les 2014e

Goods balance has been main source of narrowing

Malaysia: current account and goods balance

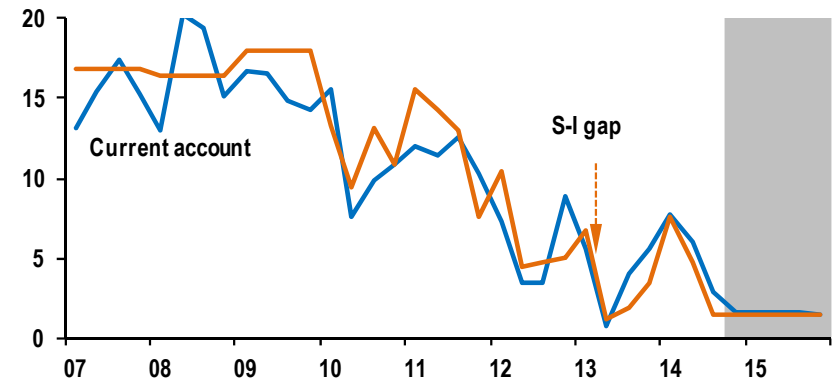
US\$bn, 2qma, nsa, both scales



Due to narrowing current account

Malaysia: current account and S-I gap

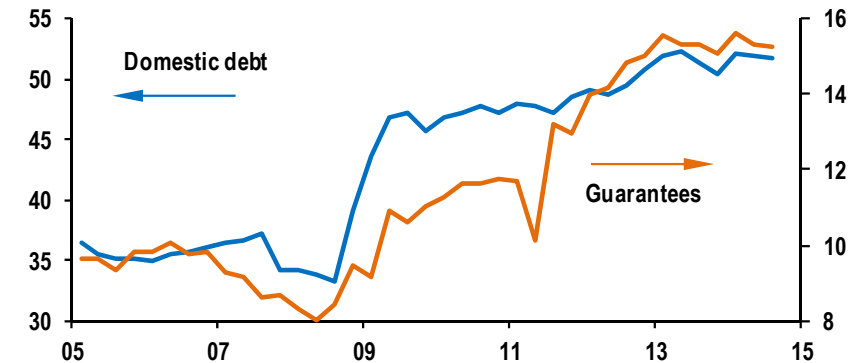
% GDP, nsa



Much of ETP has been supported by guarantees

Malaysia: domestic government debt and guarantees

% GDP, both scales



Source for all charts: CEIC, J.P. Morgan

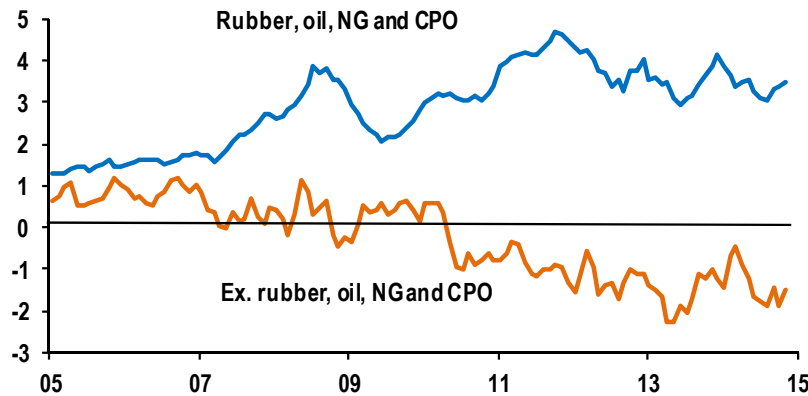
J.P.Morgan

Current account balance expected to narrow

Commodity balance has been driver of goods surplus

Malaysia: trade balance

US\$bn, 3mma, nsa



Price declines take a sizeable bite out of the balance

Malaysia: CPO, oil and natural gas balance

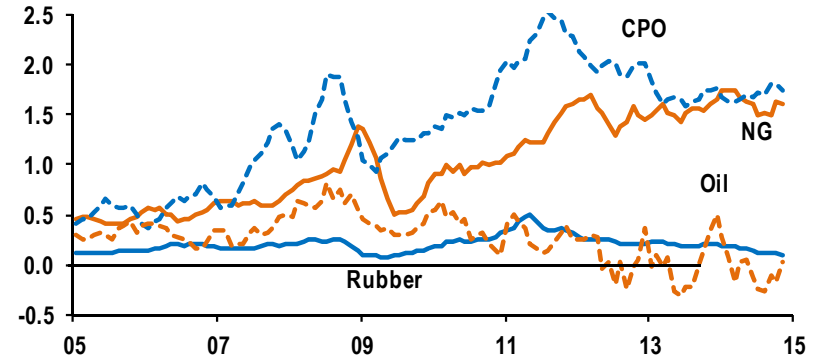
	2010	2011	2012	2013	2014e	2015f	Chg. ¹
NG, oil & CPO (1+2+3)	31.0	43.2	42.0	38.7	39.8	29.9	-13.1
1. NG (US\$bn)	11.9	16.0	18.1	18.6	19.5	9.3	-10.2
mn MT	-16.0	20.1	20.9	21.1	21.0	21.0	0
US\$/MT	662	903	919	891	874	442	-305
2. Oil (US\$ bn)	2.2	3.3	1.6	0.6	-0.8	-0.4	0.4
Vol. (mn bbls)	28.8	29.0	13.7	5.5	-6.9	-6.9	0
Price (US\$ bbl)	77	113	116	113	114	55	-64
2. CPO (US\$bn)	19.2	27.2	23.9	20.1	20.3	17.1	-3.3
mn MT	22.2	25.9	26.6	26.8	27.3	27.3	0.0
US\$/MT	864	1050	897	749	745	625	-120

Source: Bloomberg and DOS; 1. 2015f less 2014e

CPO and LNG are key to commodity balance

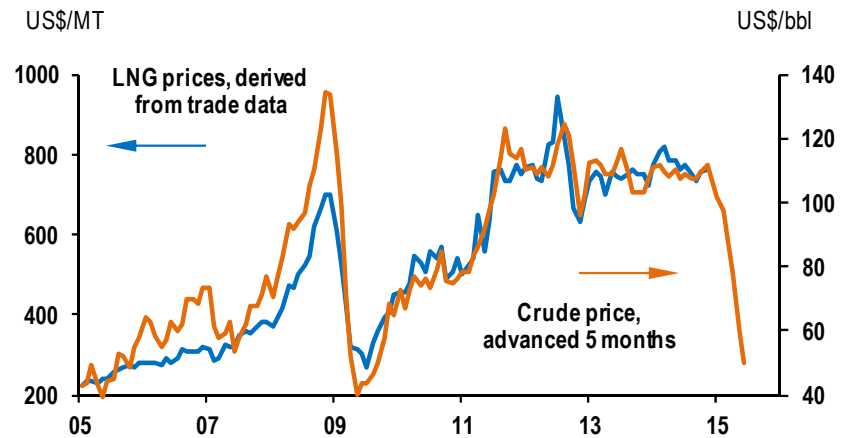
Malaysia: commodity balance

US\$bn, 3mma, nsa



LNG pricing in Malaysia moves in sympathy with crude - JCC

Malaysia: LNG prices and Brent crude price



Source for all charts: CEIC, J.P. Morgan

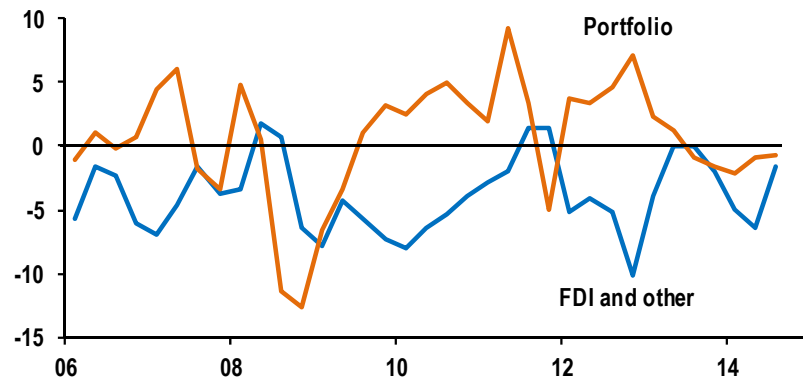
J.P.Morgan

Capital account in deficit outside of portfolio

KA flows in deficit if not for portfolio

Malaysia: capital account

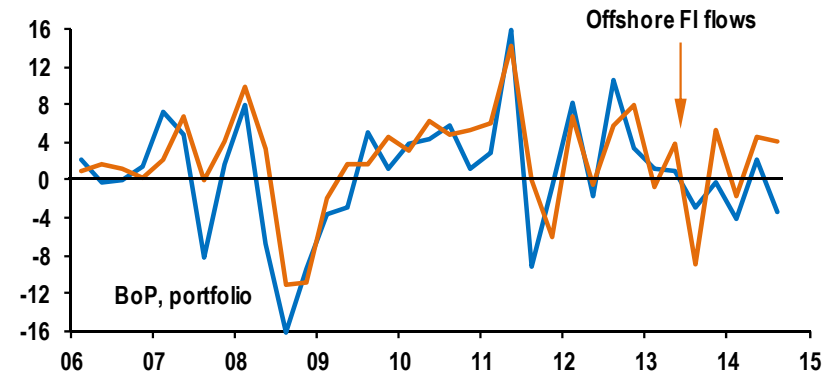
US\$bn, 2qma, nsa



Portfolio flows driven by fixed income

Malaysia: portfolio flows

US\$bn, nsa, net

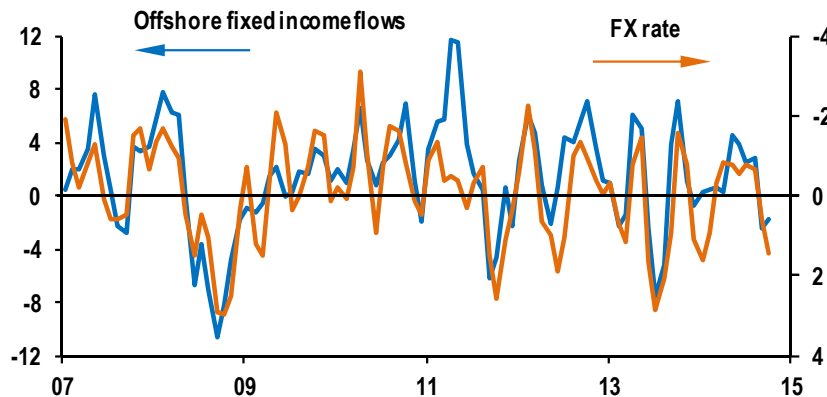


FI flows appear to be marginal price setter for FX in past

Malaysia: foreign fixed income flows and FX rate

US\$bn, monthly change, 2mma

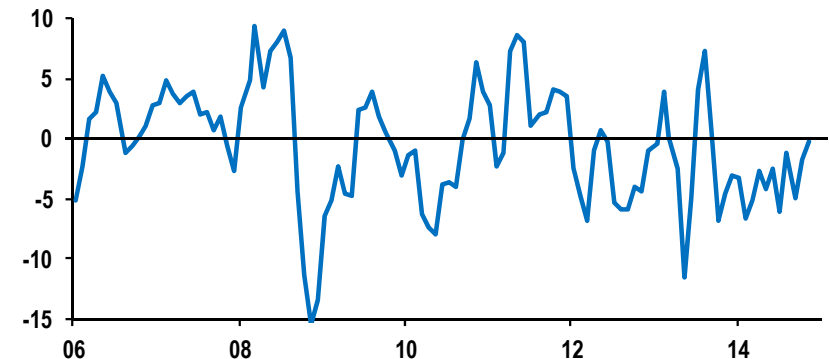
% monthly change, 2mma



FX reserves less FI flows still negative

Malaysia: residual of FX reserves and bond flows

US\$bn, change over 3-mos, FXR less bond flows



Source for all charts: PPP center, CEIC, J.P. Morgan

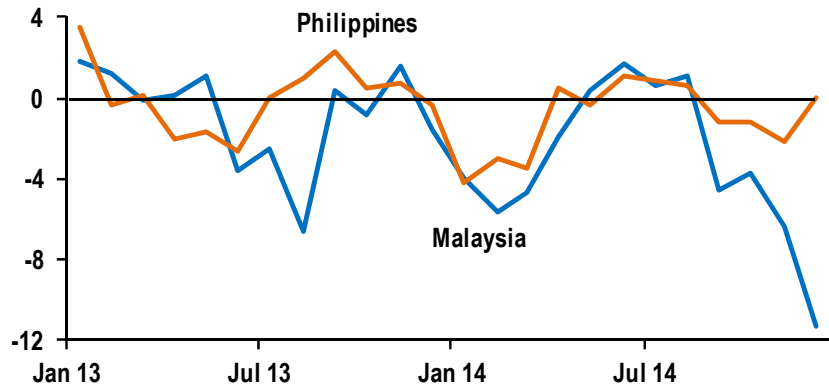
J.P.Morgan

Philippines and Malaysia: a juxtaposition driven by oil

Malaysia and Philippines FX reserves had moved in sympathy

Malaysia and Philippines: FX reserves

US\$bn, change over 3 mos

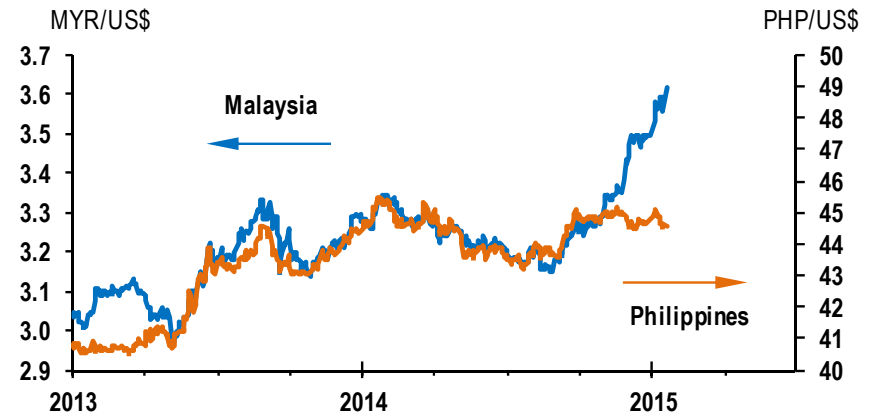


- Malaysia and the Philippines had been two peas in a pod
- Separation between the two occurred in 3Q14
- With MYR depreciating even as PHP has been stable
- Oil prices have played a key role – Philippines sits on the right side of this shock

Source: CEIC, J.P. Morgan

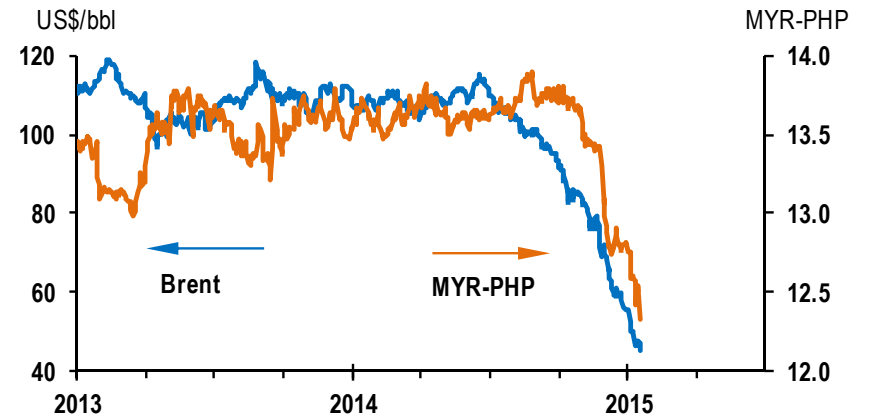
Leading to correlation between MYR and PHP

Philippines and Malaysia: FX rates



With oil prices explaining the recent weakness in MYR

Malaysia and Philippines: FX rate and Brent oil price



J.P.Morgan

Agenda

Setting the global stage 1

ASEAN in perspective 19

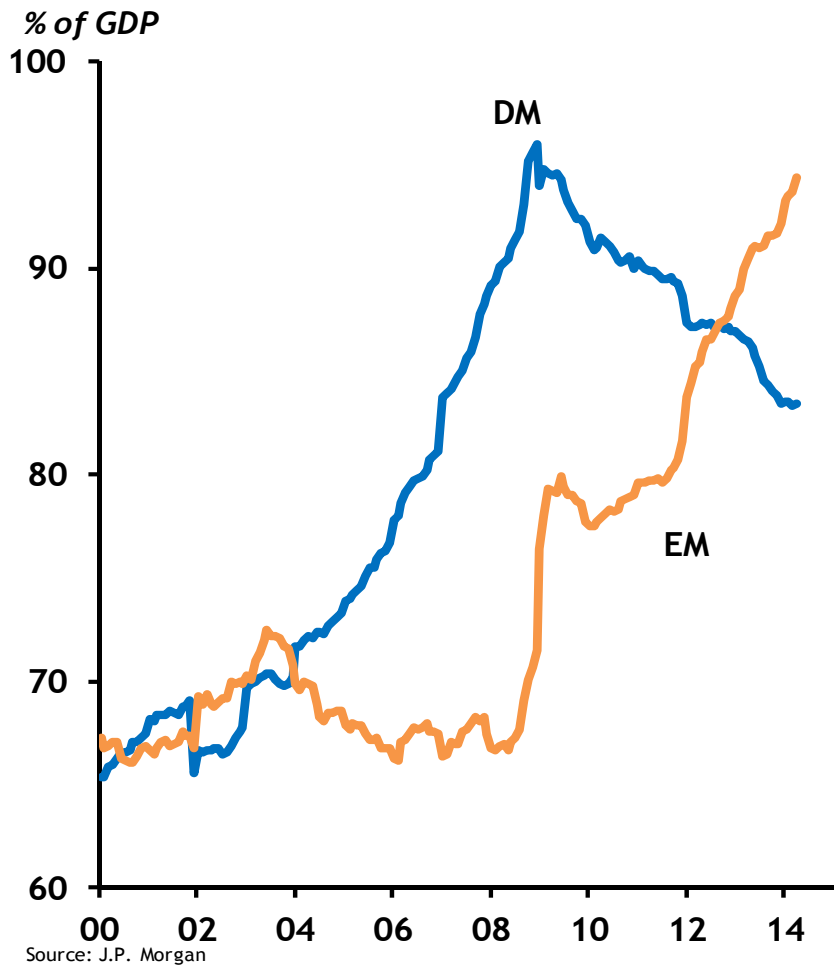
Malaysia 29

Risks 44

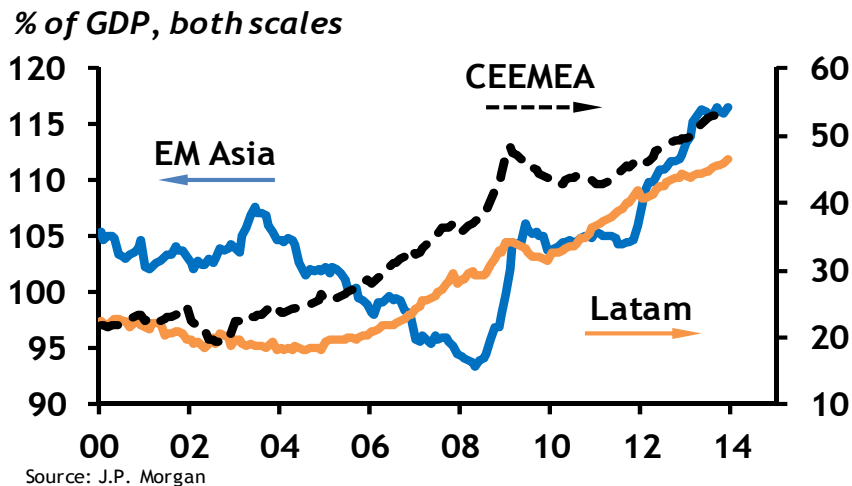
- 1. China credit
- 2. Financial linkages
- 3. Trade linkages into China

Priority for EM – stabilizing the credit cycle

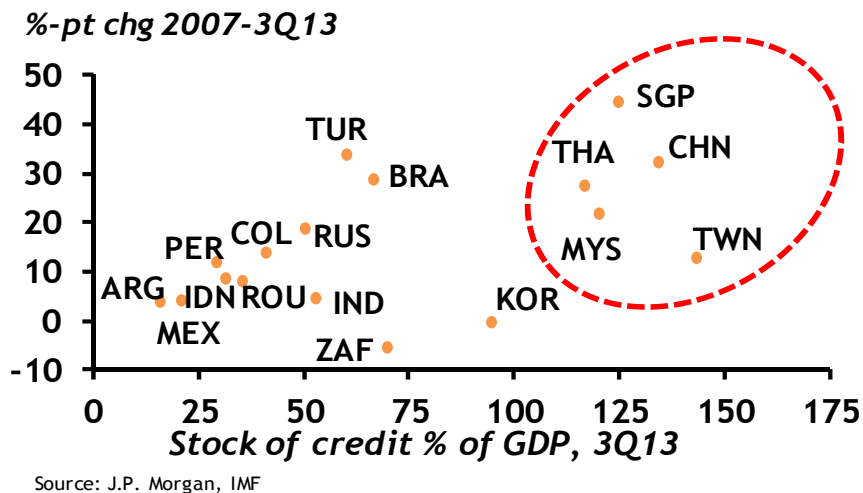
Domestic bank credit



EM domestic bank credit



EM domestic bank credit



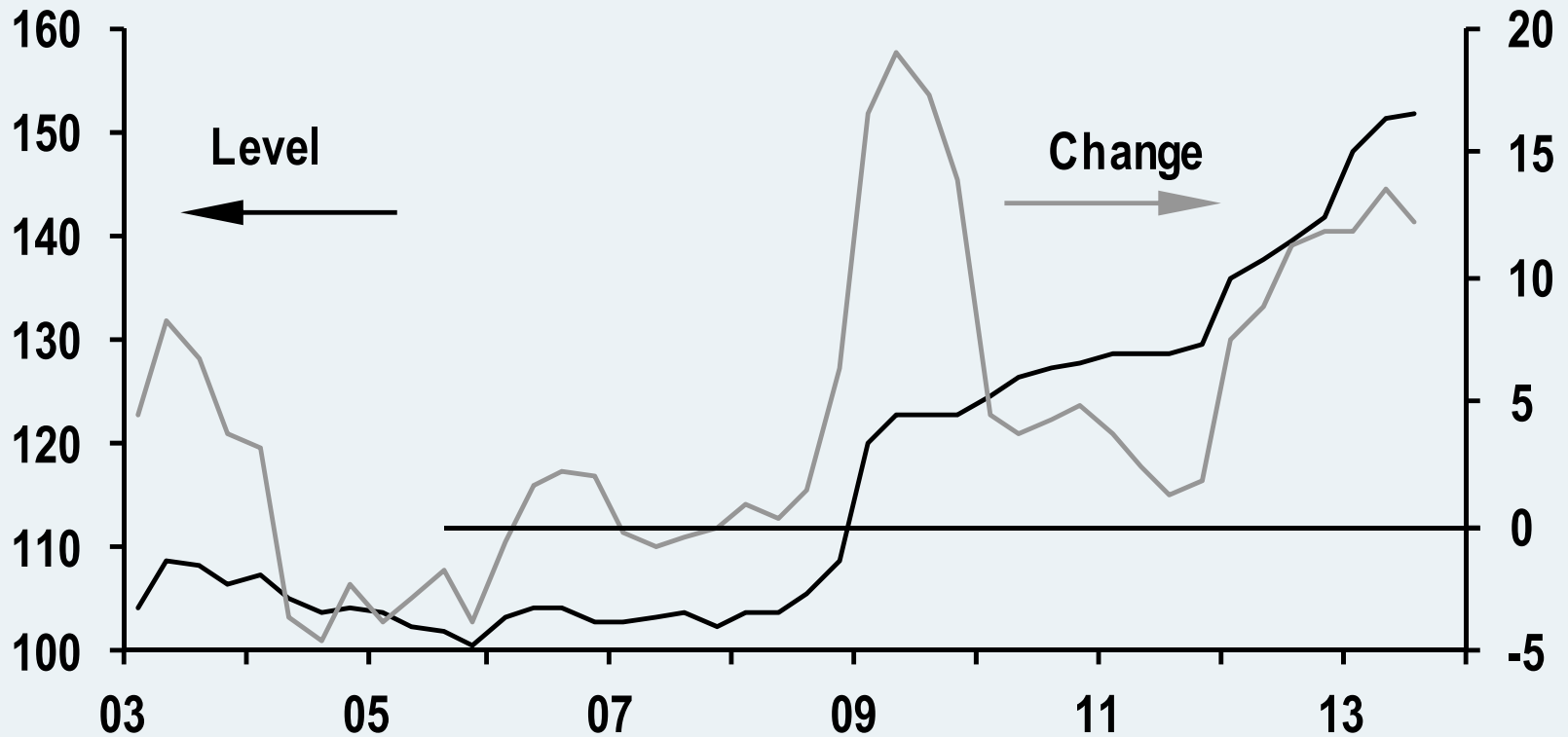
1. Strong regional credit cycle

Total private sector reaching all time highs in the region

EM Asia: total private credit to non-financial sector

% GDP

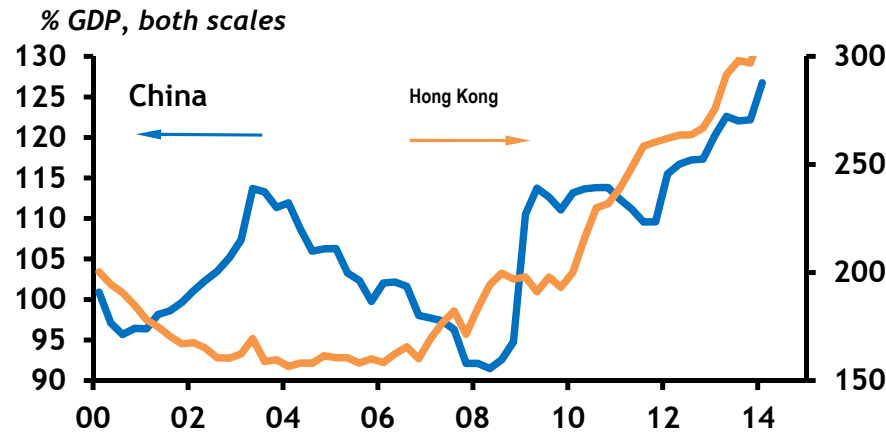
%pt. of GDP change from year ago



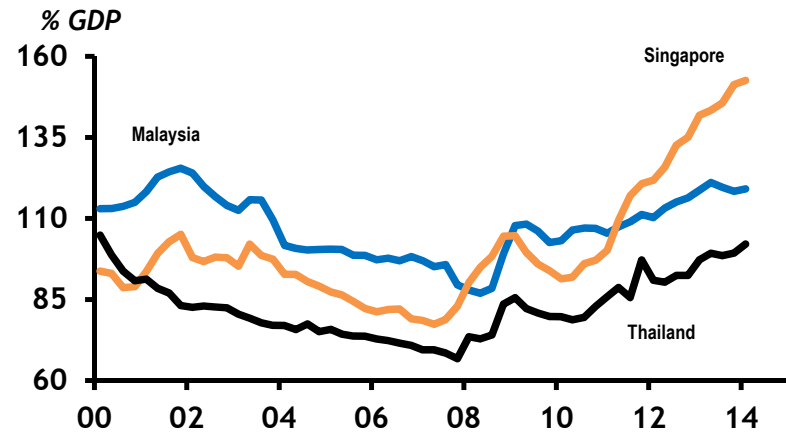
Source: BIS, J.P. Morgan

And it is not just China

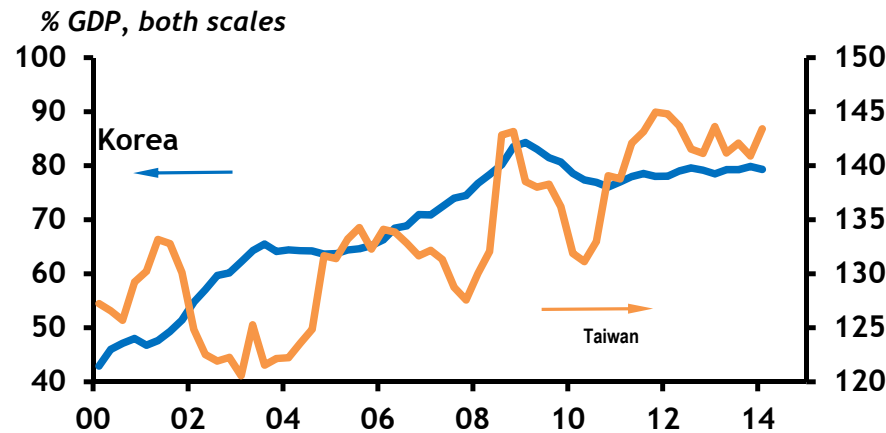
China and Hong Kong: bank credit



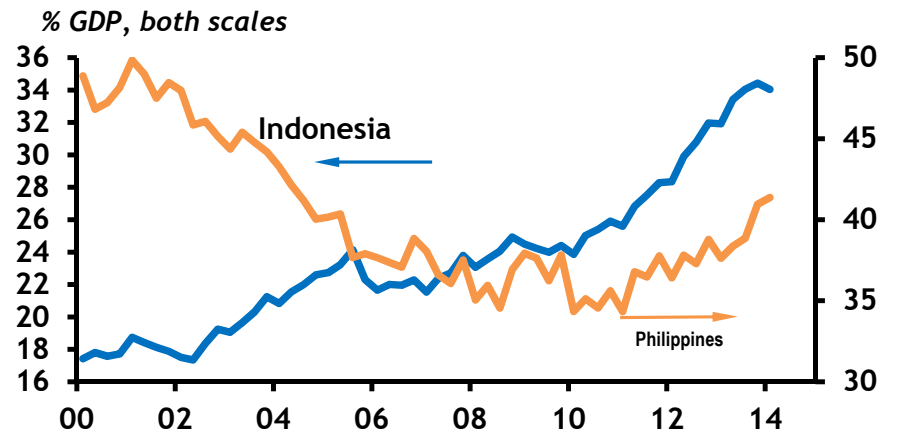
ASEAN-3: bank credit



Korea and Taiwan: bank credit



Indonesia and Philippines: bank credit



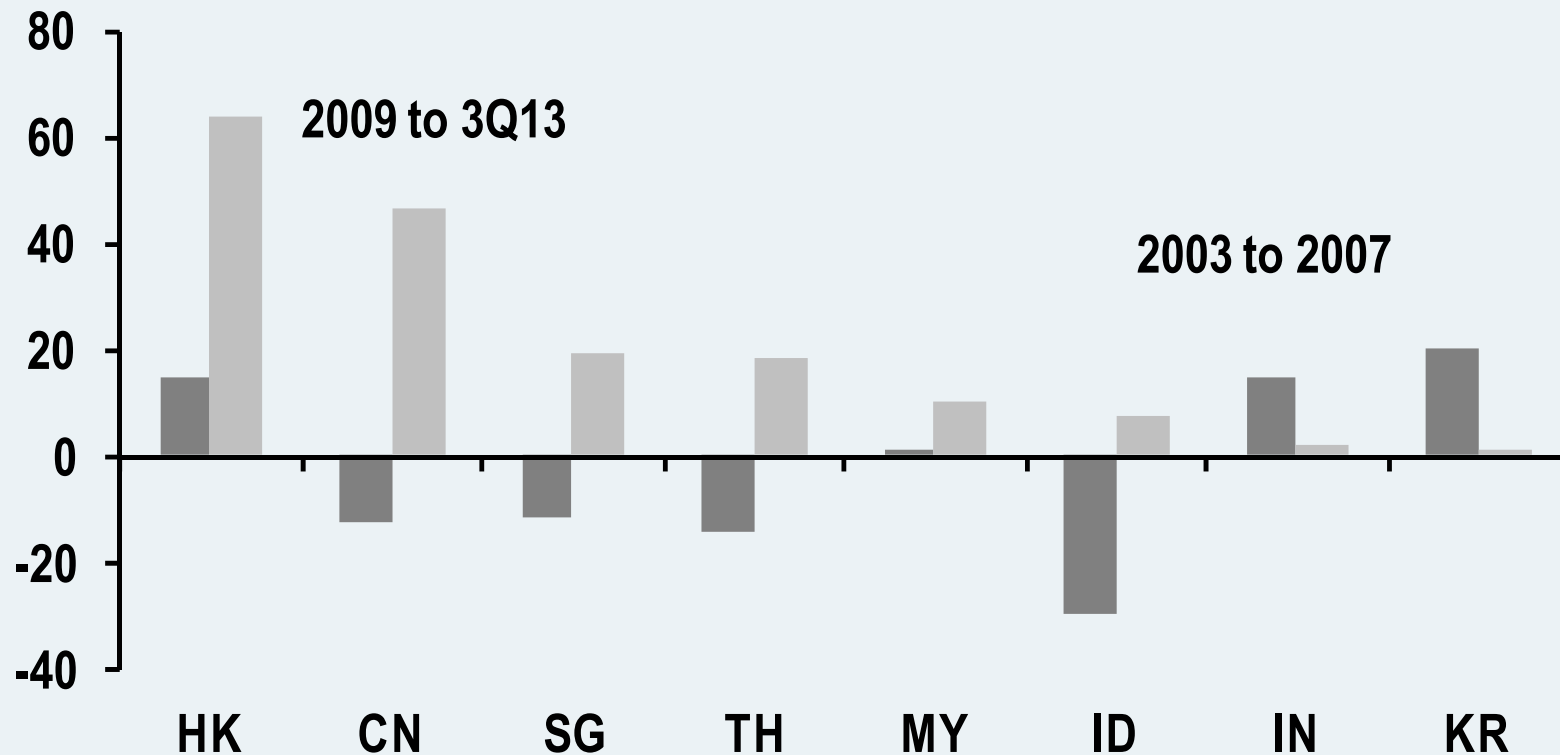
Source for all charts: J.P. Morgan and CEIC

Driven by Greater China and ASEAN

China, Hong Kong and ASEAN credit expansion has been remarkably strong

EM Asia: total private credit to non-financial sector

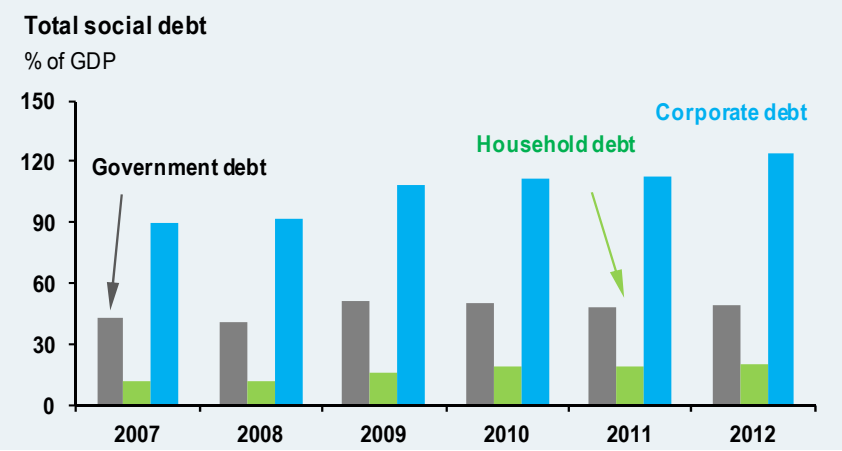
%pt. change in credit to GDP



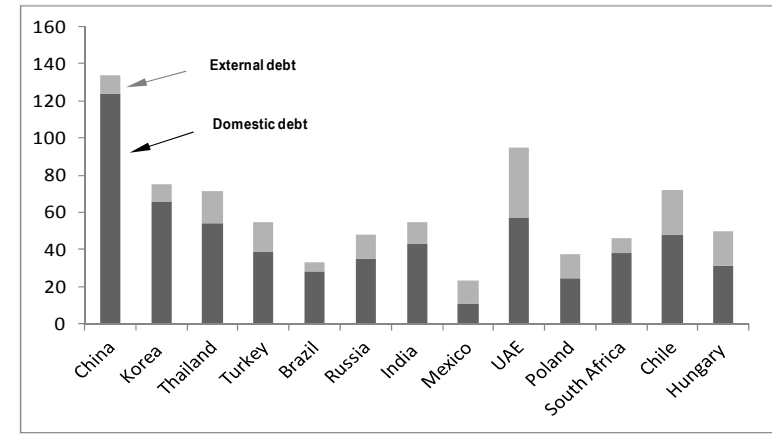
Source: BIS, J.P. Morgan

Financial risks in China

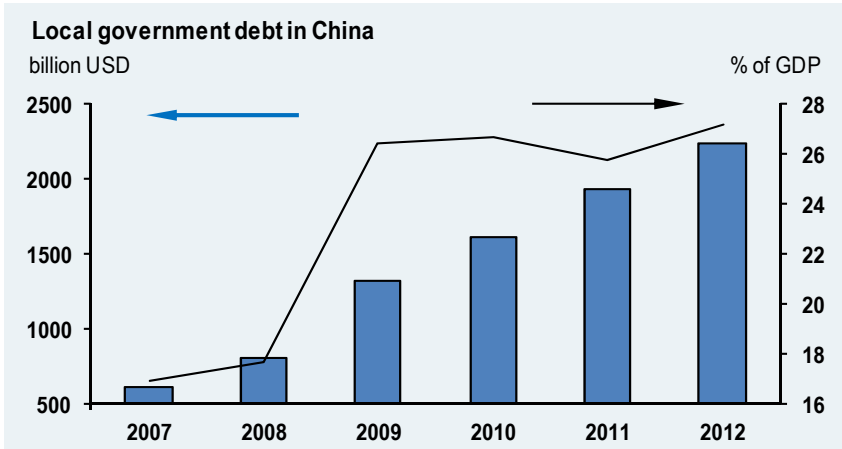
Total debt/GDP rose by 50%-pts since 2009



Corporate debt tops EM world

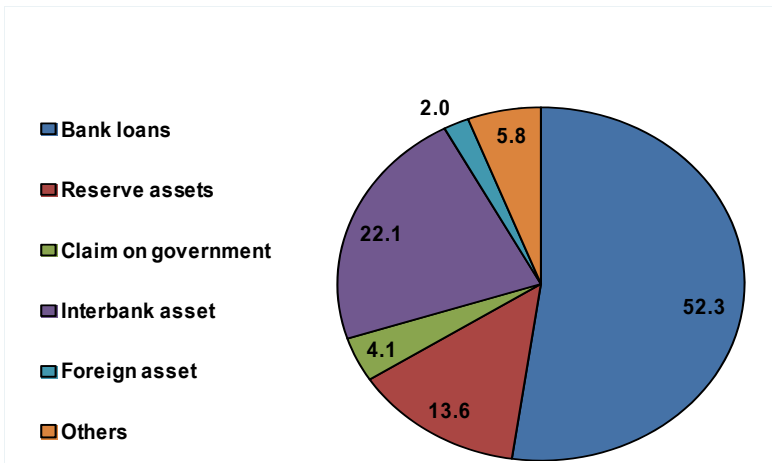


Local government debt needs to be contained

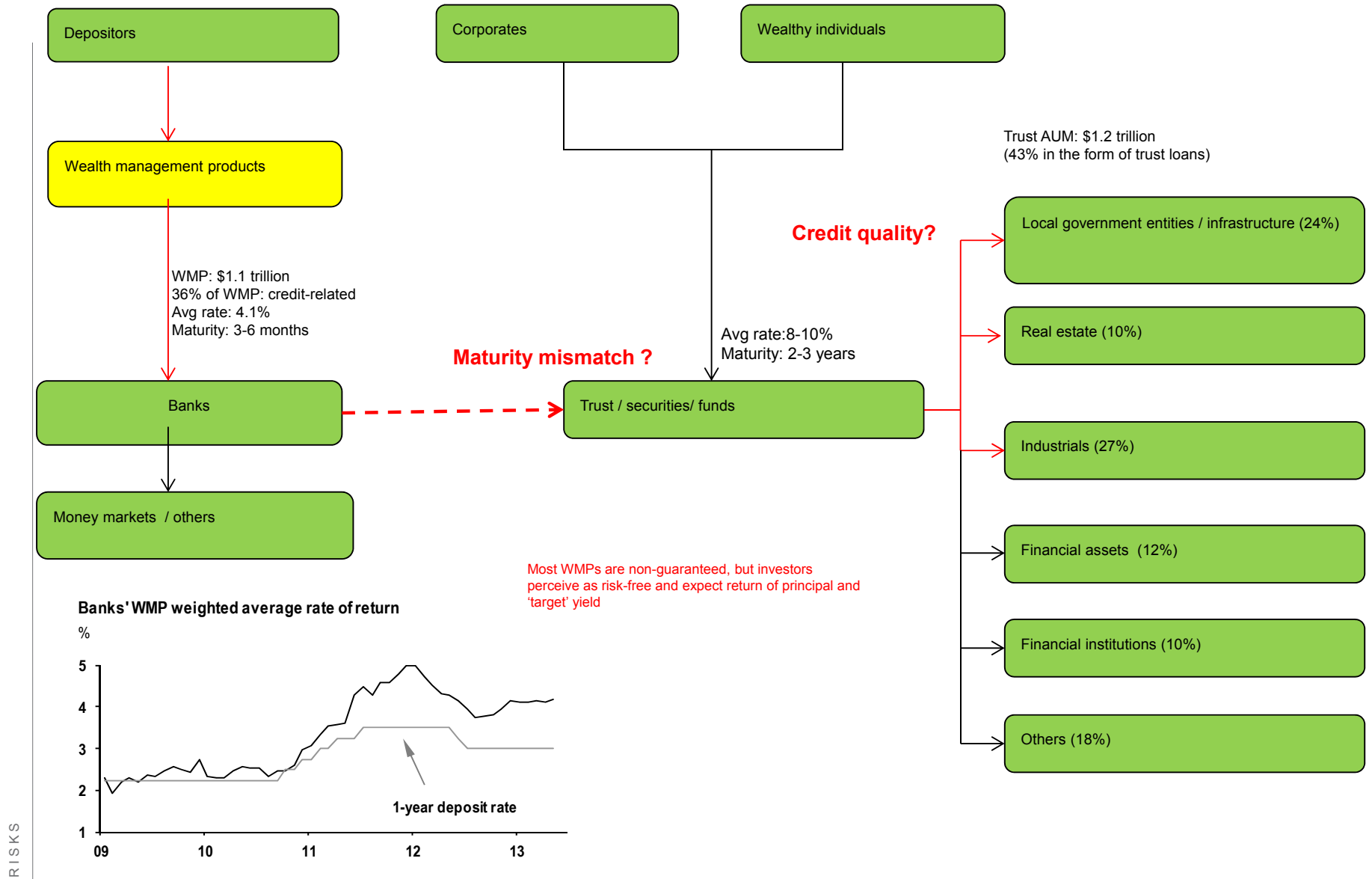


Source: CEIC, J.P. Morgan

Large interbank assets related to shadow banking



Shadow banking: unclear where credit/liquidity/legal risk ultimately lies



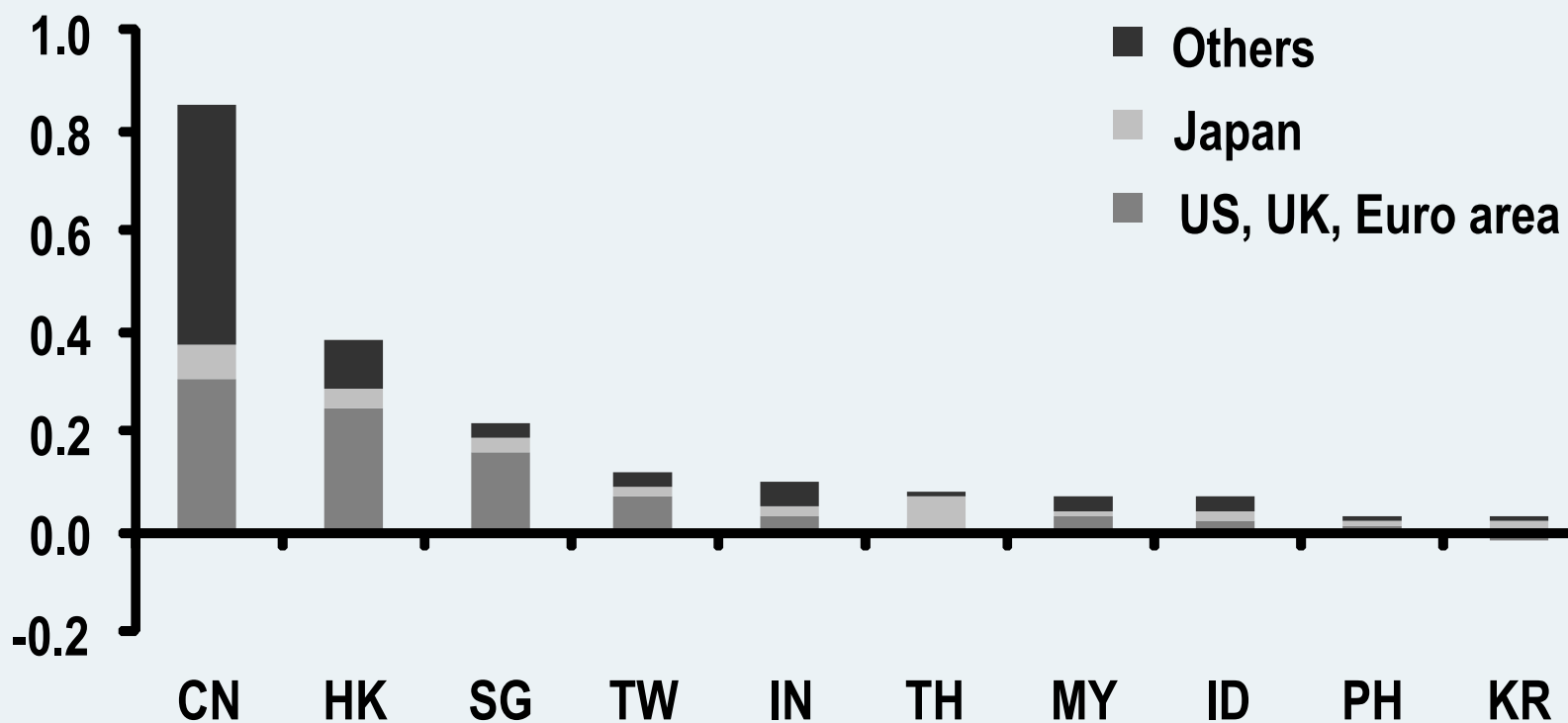
Source: CEIC and J.P. Morgan

2. Rising cross border loans to China

Largest increase in cross border loans to China

Foreign bank lending to Emerging Asia

Change in US\$ tn, since end-2008



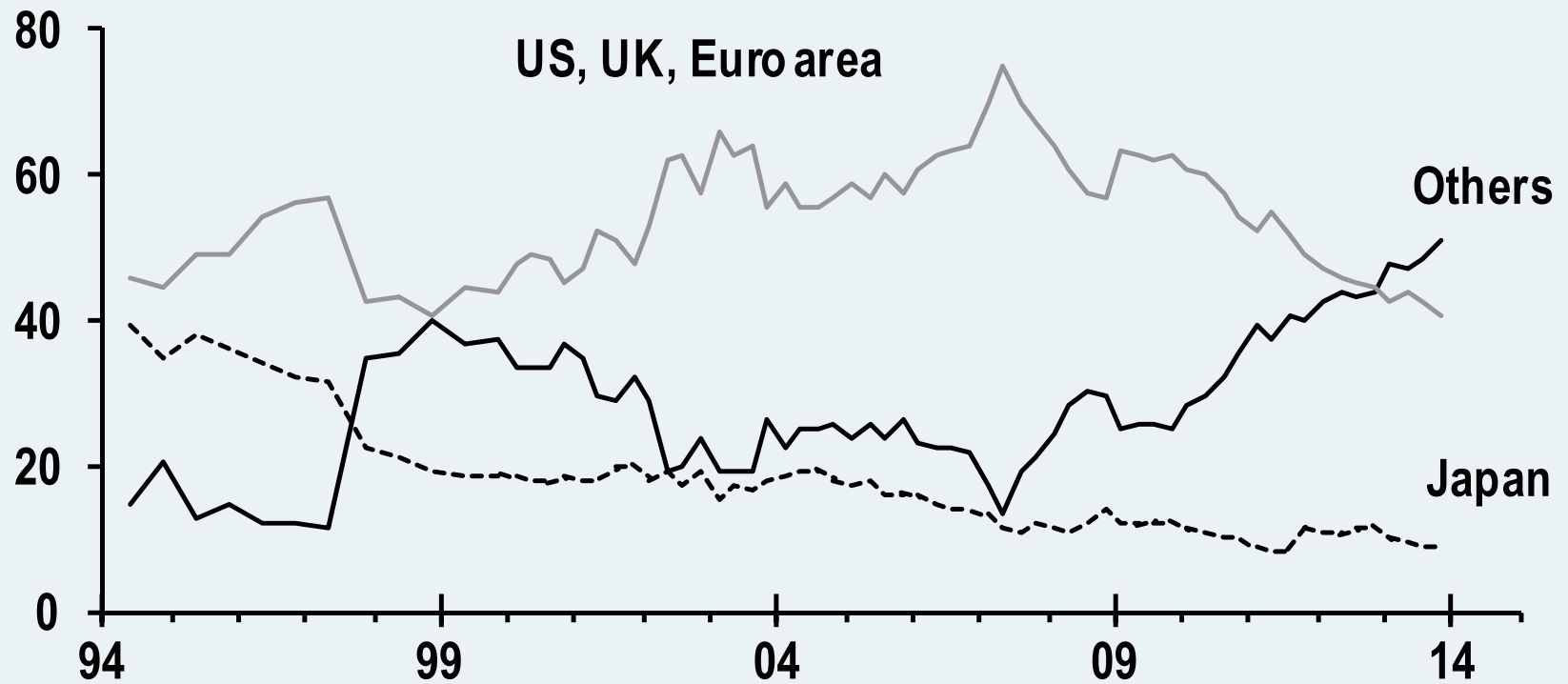
Source: BIS, CEIC, J.P. Morgan

Driven by Non G-3 banks

Exposure to China mainly by non G-3 banks

Foreign bank lending to China

% share of total claims



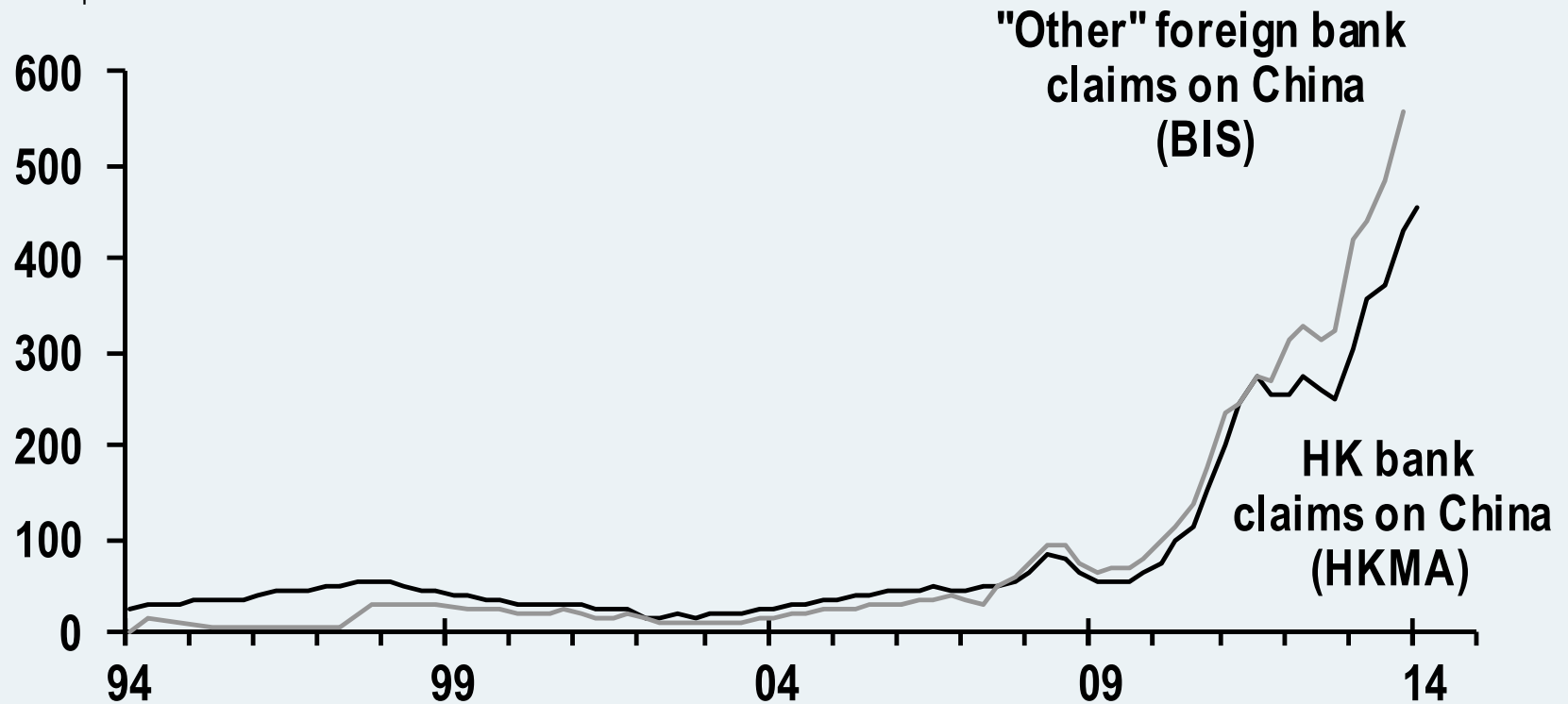
Source: CEIC, J.P. Morgan
1. All Asia

Hong Kong a key source of credit into China

Hong Kong is a key creditor to China

Hong Kong bank claims and BIS "other" bank claims on China

US\$ bn



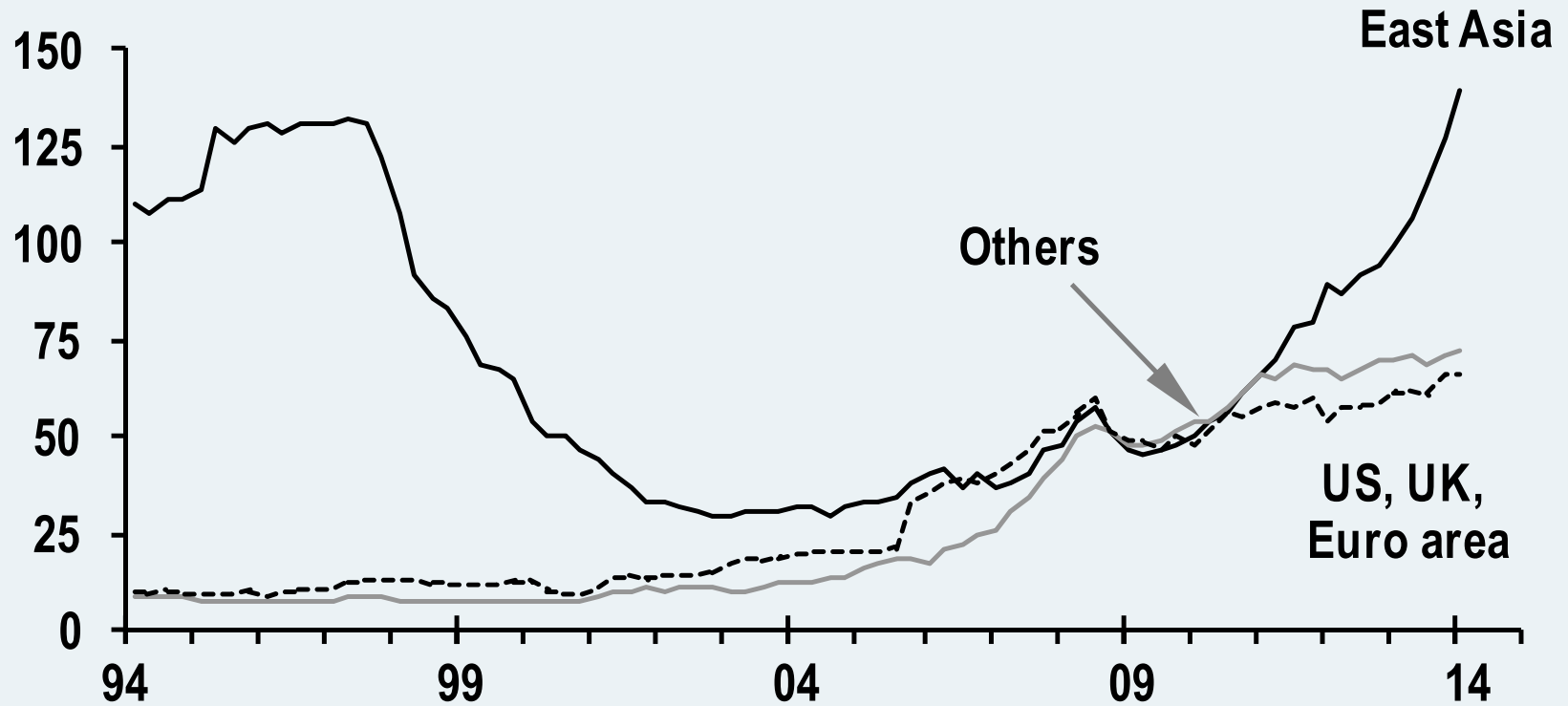
Source: CEIC, J.P. Morgan
1. All Asia

As is Singapore

Singapore also a large creditor to China

Singapore banks' cross-border lending by destination

US\$ bn



Source: CEIC, J.P. Morgan
1. All Asia

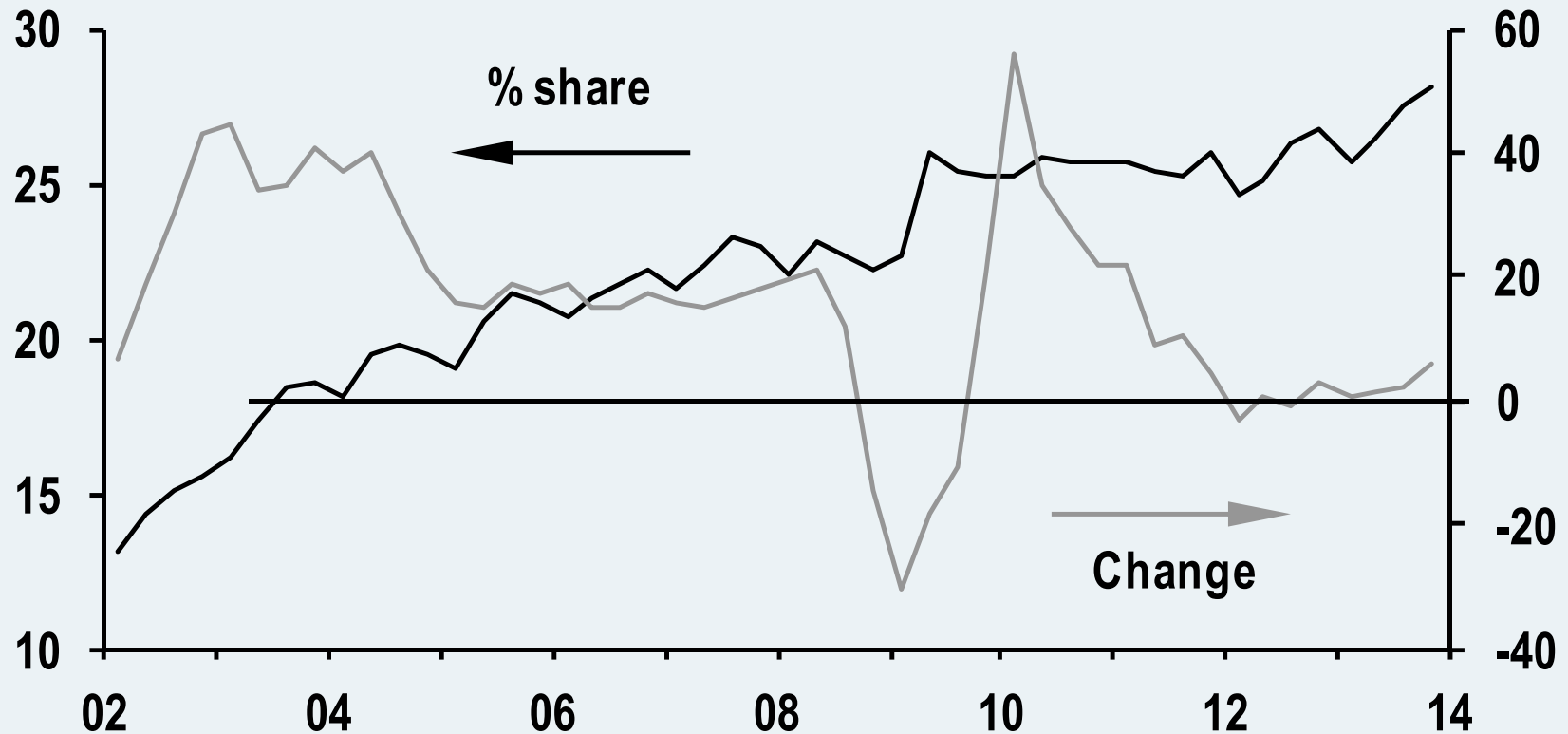
3. China accounts for more than 25% of Asia's exports

China is a large part of Asia's trade destination

Asia¹: exports to China

% of total exports

%oya, US\$ terms



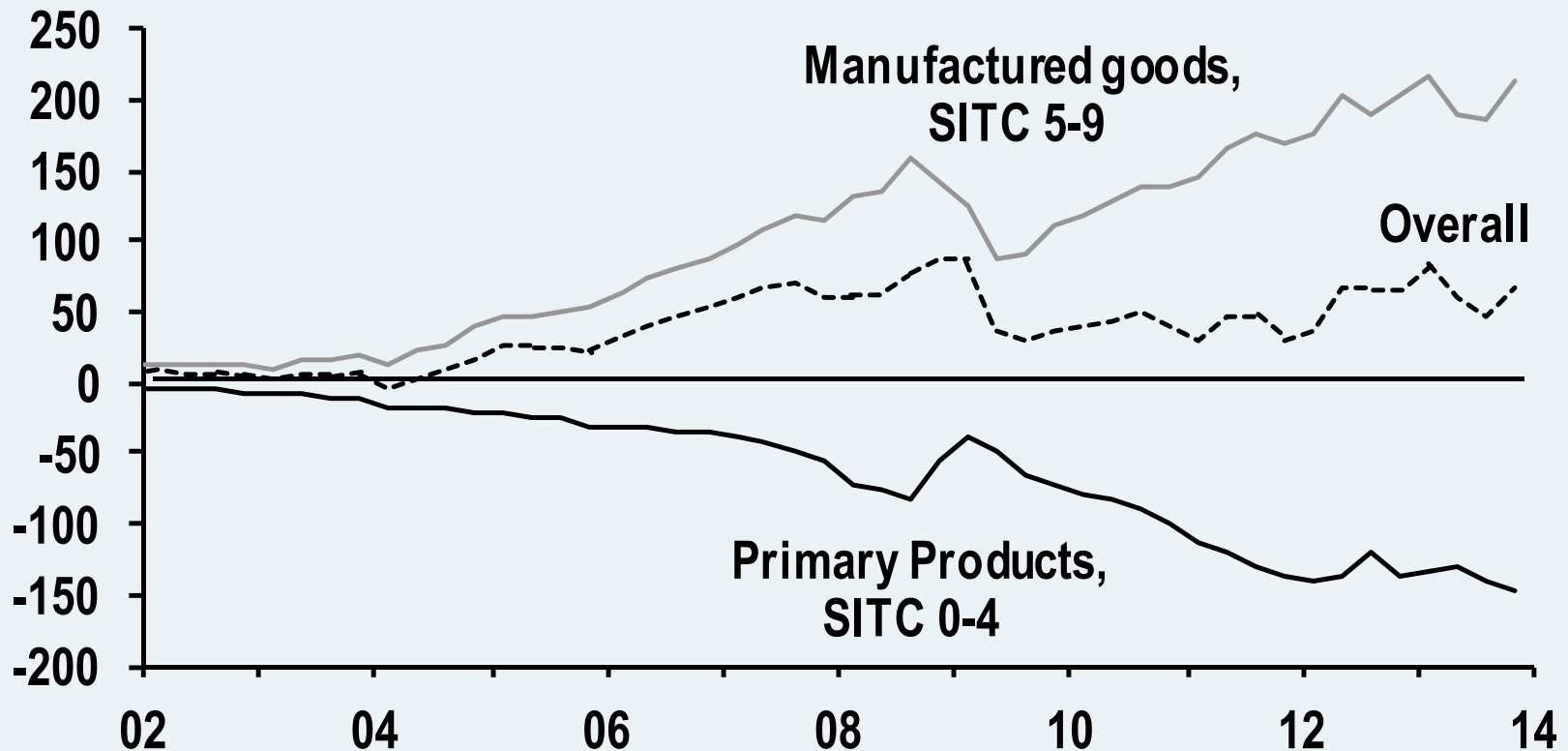
Source: CEIC, J.P. Morgan
1. All Asia

But with striking split between deficit and surplus items...

But not all are the same – split between commodities and non-commodities

China: trade balance

US\$bn, sa



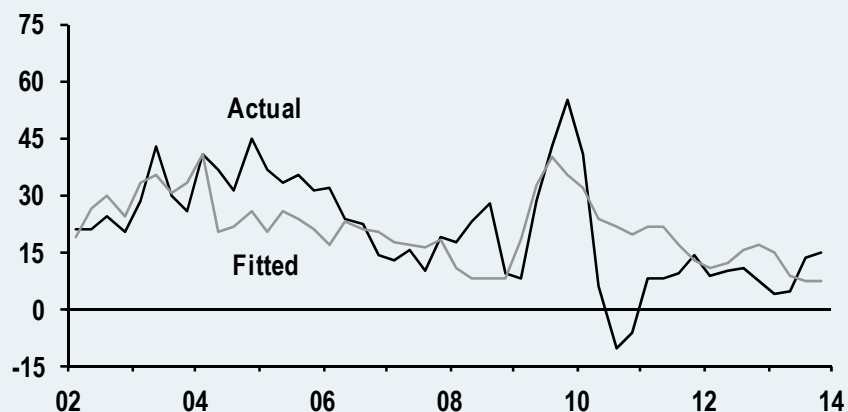
Source: CEIC, J.P. Morgan

With most of higher-end imports driven by external demand

Commodities driven by domestic demand

China: imports of crude materials and fuels

%oya, real terms



Regression of China's imports of crude materials and fuels

%oya, real terms, 2002 to 2013, quarterly

Independent variable	Coefficient	T-statistic
Constant	2.50	0.20
China fixed asset inv.	0.81	2.24
China exports	0.08	0.34
China REER ¹	-1.17	-2.10
R-squared		0.37
Standard Error of Regression		11.22

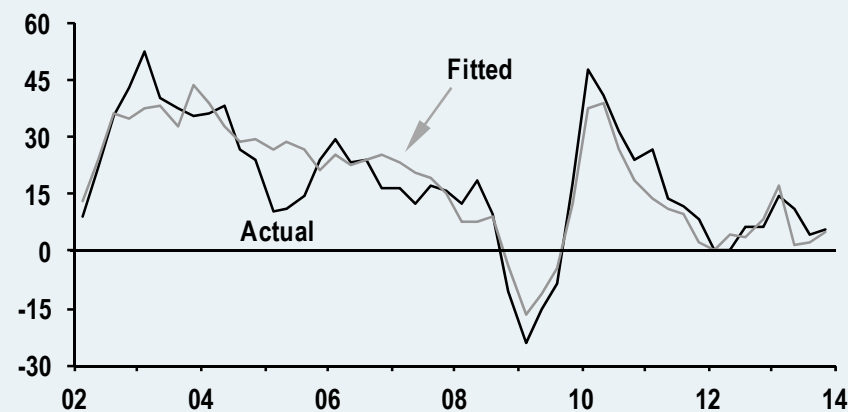
1. Deflated by CPI; Source: CEIC and J.P. Morgan

Source: CEIC and J.P. Morgan

Non-commodities driven by external demand

China: imports of SITC 7-8 components

%oya, real terms



Regression of China's imports of machinery and transport equipment

%oya, real terms, 2002 to 2013, quarterly

Independent variable	Coefficient	T-statistic
Constant	-6.40	-0.82
China fixed asset inv.	0.31	1.40
China exports	1.01	7.03
China REER ¹	-0.29	-0.85
R-squared		0.83
Standard Error of Regression		6.97

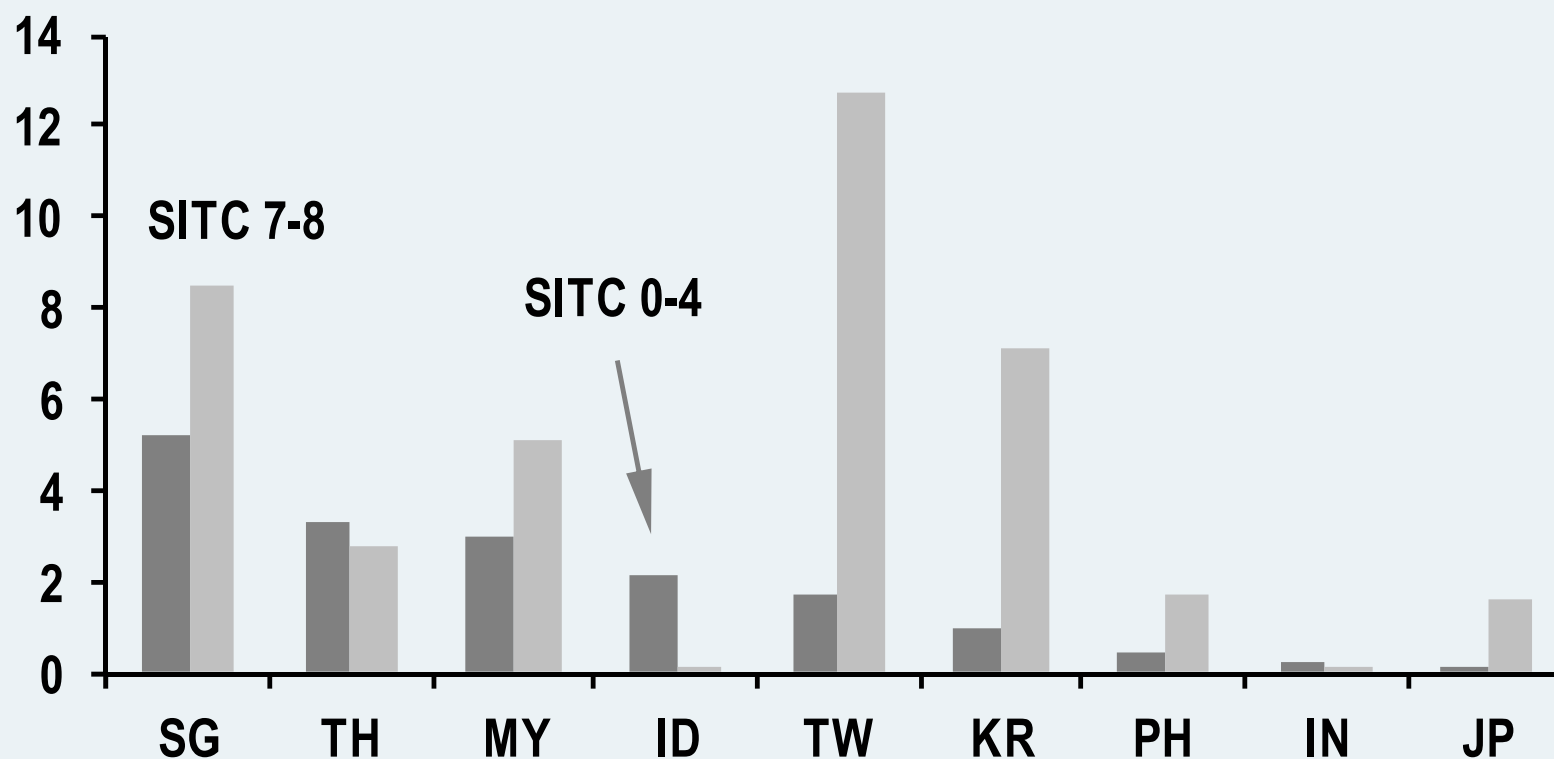
1. Deflated by CPI; Source: CEIC and J.P. Morgan

ASEAN more exposed to China than North Asia

ASEAN more exposed to China's domestic demand

Asia: exports to China by SITC components

% GDP, 2013



Source: CEIC, J.P. Morgan

Disclosures

Disclosures

Analyst Certification: The research analyst(s) denoted by an “AC” on the cover of this report certifies (or, where multiple research analysts are primarily responsible for this report, the research analyst denoted by an “AC” on the cover or within the document individually certifies, with respect to each security or issuer that the research analyst covers in this research) that: (1) all of the views expressed in this report accurately reflect his or her personal views about any and all of the subject securities or issuers; and (2) no part of any of the research analyst's compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the research analyst(s) in this report. For all Korea-based research analysts listed on the front cover, they also certify, as per KOFIA requirements, that their analysis was made in good faith and that the views reflect their own opinion, without undue influence or intervention.

Company-Specific Disclosures: Important disclosures, including price charts and credit opinion history tables, are available for compendium reports and all J.P. Morgan–covered companies by visiting <https://jpm.com/research/disclosures>, calling 1-800-477-0406, or e-mailing research.disclosure.inquiries@jpmorgan.com with your request. J.P. Morgan’s Strategy, Technical, and Quantitative Research teams may screen companies not covered by J.P. Morgan. For important disclosures for these companies, please call 1-800-477-0406 or e-mail research.disclosure.inquiries@jpmorgan.com.

Analysts' Compensation: The research analysts responsible for the preparation of this report receive compensation based upon various factors, including the quality and accuracy of research, client feedback, competitive factors, and overall firm revenues.

Other Disclosures

J.P. Morgan ("JPM") is the global brand name for J.P. Morgan Securities LLC ("JPMS") and its affiliates worldwide. J.P. Morgan Cazenove is a marketing name for the U.K. investment banking businesses and EMEA cash equities and equity research businesses of JPMorgan Chase & Co. and its subsidiaries.

Options related research: If the information contained herein regards options related research, such information is available only to persons who have received the proper option risk disclosure documents. For a copy of the Option Clearing Corporation's Characteristics and Risks of Standardized Options, please contact your J.P. Morgan Representative or visit the OCC's website at <http://www.optionsclearing.com/publications/risks/riskstoc.pdf>

Legal Entities Disclosures

U.S.: JPMS is a member of NYSE, FINRA, SIPC and the NFA. JPMorgan Chase Bank, N.A. is a member of FDIC. **U.K.:** JPMorgan Chase N.A., London Branch, is authorised by the Prudential Regulation Authority and is subject to regulation by the Financial Conduct Authority and to limited regulation by the Prudential Regulation Authority. Details about the extent of our regulation by the Prudential Regulation Authority are available from J.P. Morgan on request. J.P. Morgan Securities plc (JPMS plc) is a member of the London Stock Exchange and is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. Registered in England & Wales No. 2711006. Registered Office 25 Bank Street, London, E14 5JP. **South Africa:** J.P. Morgan Equities South Africa Proprietary Limited is a member of the Johannesburg Securities Exchange and is regulated by the Financial Services Board. **Hong Kong:** J.P. Morgan Securities (Asia Pacific) Limited (CE number AAJ321) is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission in Hong Kong and/or J.P. Morgan Broking (Hong Kong) Limited (CE number AAB027) is regulated by the Securities and Futures Commission in Hong Kong. **Korea:** J.P. Morgan Securities (Far East) Ltd, Seoul Branch, is regulated by the Korea Financial Supervisory Service. **Australia:** J.P. Morgan Australia Limited (JPMAL) (ABN 52 002 888 011/AFS Licence No: 238188) is regulated by ASIC and J.P. Morgan Securities Australia Limited (JPMSAL) (ABN 61 003 245 234/AFS Licence No: 238066) is regulated by ASIC and is a Market, Clearing and Settlement Participant of ASX Limited and CHI-X. **Taiwan:** J.P.Morgan Securities (Taiwan) Limited is a participant of the Taiwan Stock Exchange (company-type) and regulated by the Taiwan Securities and Futures Bureau. **India:** J.P. Morgan India Private Limited (Corporate Identity Number - U67120MH1992FTC068724), having its registered office at J.P. Morgan Tower, Off. C.S.T. Road, Kalina, Santacruz - East, Mumbai – 400098, is a member of the National Stock Exchange of India Limited (SEBI Registration Number - INB 230675231/INF 230675231/INE 230675231) and Bombay Stock Exchange Limited (SEBI Registration Number - INB 010675237/INF 010675237) and is regulated by Securities and Exchange Board of India. Telephone: 91-22-6157 3000, Facsimile: 91-22-6157 3990 and Website: www.jpmpil.com. For non local research reports, this material is not distributed in India by J.P. Morgan India Private Limited. **Thailand:** This material is issued and distributed in Thailand by JPMorgan Securities (Thailand) Ltd., which is a member of the Stock Exchange of Thailand and is regulated by the Ministry of Finance and the Securities and Exchange Commission and its registered address is 3rd Floor, 20 North Sathorn Road, Silom, Bangkok, Bangkok 10500. **Indonesia:** PT J.P. Morgan Securities Indonesia is a member of the Indonesia Stock Exchange and is regulated by the OJK a.k.a. BAPEPAM LK. **Philippines:** J.P. Morgan Securities Philippines Inc. is a Trading Participant of the Philippine Stock Exchange and a member of the Securities Clearing Corporation of the Philippines and the Securities

Disclosures

Investor Protection Fund. It is regulated by the Securities and Exchange Commission. **Brazil:** Banco J.P. Morgan S.A. is regulated by the Comissao de Valores Mobiliarios (CVM) and by the Central Bank of Brazil. **Mexico:** J.P. Morgan Casa de Bolsa, S.A. de C.V., J.P. Morgan Grupo Financiero is a member of the Mexican Stock Exchange and authorized to act as a broker dealer by the National Banking and Securities Exchange Commission. **Singapore:** This material is issued and distributed in Singapore by or through J.P. Morgan Securities Singapore Private Limited (JPMSS) [MCI (P) 100/03/2015 and Co. Reg. No.: 199405335R] which is a member of the Singapore Exchange Securities Trading Limited and is regulated by the Monetary Authority of Singapore (MAS) and/or JPMorgan Chase Bank, N.A., Singapore branch (JPMCB Singapore) which is regulated by the MAS. This material is provided in Singapore only to accredited investors, expert investors and institutional investors, as defined in Section 4A of the Securities and Futures Act, Cap. 289. Recipients of this document are to contact JPMSS or JPMCB Singapore in respect of any matters arising from, or in connection with, the document. **Japan:** JPMorgan Securities Japan Co., Ltd. is regulated by the Financial Services Agency in Japan. **Malaysia:** This material is issued and distributed in Malaysia by JPMorgan Securities (Malaysia) Sdn Bhd (18146-X) which is a Participating Organization of Bursa Malaysia Berhad and a holder of Capital Markets Services License issued by the Securities Commission in Malaysia. **Pakistan:** J. P. Morgan Pakistan Broking (Pvt.) Ltd is a member of the Karachi Stock Exchange and regulated by the Securities and Exchange Commission of Pakistan. **Saudi Arabia:** J.P. Morgan Saudi Arabia Ltd. is authorized by the Capital Market Authority of the Kingdom of Saudi Arabia (CMA) to carry out dealing as an agent, arranging, advising and custody, with respect to securities business under licence number 35-07079 and its registered address is at 8th Floor, Al-Faisaliyah Tower, King Fahad Road, P.O. Box 51907, Riyadh 11553, Kingdom of Saudi Arabia. **Dubai:** JPMorgan Chase Bank, N.A., Dubai Branch is regulated by the Dubai Financial Services Authority (DFSA) and its registered address is Dubai International Financial Centre - Building 3, Level 7, PO Box 506551, Dubai, UAE.

Country and Region Specific Disclosures

U.K. and European Economic Area (EEA): Unless specified to the contrary, issued and approved for distribution in the U.K. and the EEA by JPMS plc. Investment research issued by JPMS plc has been prepared in accordance with JPMS plc's policies for managing conflicts of interest arising as a result of publication and distribution of investment research. Many European regulators require a firm to establish, implement and maintain such a policy. This report has been issued in the U.K. only to persons of a kind described in Article 19 (5), 38, 47 and 49 of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (all such persons being referred to as "relevant persons"). This document must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this document relates is only available to relevant persons and will be engaged in only with relevant persons. In other EEA countries, the report has been issued to persons regarded as professional investors (or equivalent) in their home jurisdiction. **Australia:** This material is issued and distributed by JPMSAL in Australia to "wholesale clients" only. This material does not take into account the specific investment objectives, financial situation or particular needs of the recipient. The recipient of this material must not distribute it to any third party or outside Australia without the prior written consent of JPMSAL. For the purposes of this paragraph the term "wholesale client" has the meaning given in section 761G of the Corporations Act 2001. **Germany:** This material is distributed in Germany by J.P. Morgan Securities plc, Frankfurt Branch and J.P. Morgan Chase Bank, N.A., Frankfurt Branch which are regulated by the Bundesanstalt für Finanzdienstleistungsaufsicht. **Hong Kong:** The 1% ownership disclosure as of the previous month end satisfies the requirements under Paragraph 16.5(a) of the Hong Kong Code of Conduct for Persons Licensed by or Registered with the Securities and Futures Commission. (For research published within the first ten days of the month, the disclosure may be based on the month end data from two months prior.) J.P. Morgan Broking (Hong Kong) Limited is the liquidity provider/market maker for derivative warrants, callable bull bear contracts and stock options listed on the Stock Exchange of Hong Kong Limited. An updated list can be found on HKEx website: <http://www.hkex.com.hk>. **Japan:** There is a risk that a loss may occur due to a change in the price of the shares in the case of share trading, and that a loss may occur due to the exchange rate in the case of foreign share trading. In the case of share trading, JPMorgan Securities Japan Co., Ltd., will be receiving a brokerage fee and consumption tax (shouhizei) calculated by multiplying the executed price by the commission rate which was individually agreed between JPMorgan Securities Japan Co., Ltd., and the customer in advance. Financial Instruments Firms: JPMorgan Securities Japan Co., Ltd., Kanto Local Finance Bureau (kinsho) No. 82 Participating Association / Japan Securities Dealers Association, The Financial Futures Association of Japan, Type II Financial Instruments Firms Association and Japan Investment Advisers Association. **Korea:** This report may have been edited or contributed to from time to time by affiliates of J.P. Morgan Securities (Far East) Ltd, Seoul Branch. **Singapore:** JPMSS and/or its affiliates may have a holding in any of the securities discussed in this report; for securities where the holding is 1% or greater, the specific holding is disclosed in the Important Disclosures section above. **Taiwan:** This material is issued and distributed in Taiwan by J.P. Morgan Securities (Taiwan) Limited. **India:** For private circulation only, not for sale. **Pakistan:** For private circulation only, not for sale. **New Zealand:** This material is issued and distributed by JPMSAL in New Zealand only to persons whose principal business is the investment of money or who, in the course of and for the purposes of their business, habitually invest money. JPMSAL does not issue or distribute this material to members of "the public" as determined in accordance with section 3 of the Securities Act 1978. The recipient of this material must not distribute it to any third party or outside New Zealand without the prior written consent of JPMSAL. **Canada:** The information contained herein is not, and under no circumstances is to be construed as, a prospectus, an advertisement, a public offering, an offer to sell securities described herein, or solicitation of an offer to buy securities described herein, in Canada or any province or territory thereof. Any offer or sale of the securities described herein in Canada will be made only under an exemption from the requirements to file a prospectus with the relevant Canadian securities regulators and only by a dealer properly registered under applicable securities laws or, alternatively, pursuant to an exemption from the dealer registration requirement in the relevant province or territory of Canada in which such offer or sale is made. The information contained herein is under no circumstances to be construed as investment advice in any province or territory of Canada and is not tailored to the needs of the recipient. To the extent that the information contained herein references securities of an issuer incorporated, formed or created under the laws of Canada or a province or territory of Canada, any trades in such securities must be conducted through a dealer registered in Canada. No securities commission or similar regulatory authority in Canada has reviewed or in any way passed judgment upon these materials, the information contained herein or the merits of the securities described herein, and any representation to the contrary is an offence. **Dubai:** This report has been issued to persons regarded as professional clients as defined under the DFSA rules. **Brazil:** Ombudsman J.P. Morgan: 0800-7700847 / ouvidoria.jp.morgan@jpmorgan.com.

Disclosures

General: Additional information is available upon request. Information has been obtained from sources believed to be reliable but JPMorgan Chase & Co. or its affiliates and/or subsidiaries (collectively J.P. Morgan) do not warrant its completeness or accuracy except with respect to any disclosures relative to JPMS and/or its affiliates and the analyst's involvement with the issuer that is the subject of the research. All pricing is as of the close of market for the securities discussed, unless otherwise stated. Opinions and estimates constitute our judgment as of the date of this material and are subject to change without notice. Past performance is not indicative of future results. This material is not intended as an offer or solicitation for the purchase or sale of any financial instrument. The opinions and recommendations herein do not take into account individual client circumstances, objectives, or needs and are not intended as recommendations of particular securities, financial instruments or strategies to particular clients. The recipient of this report must make its own independent decisions regarding any securities or financial instruments mentioned herein. JPMS distributes in the U.S. research published by non-U.S. affiliates and accepts responsibility for its contents. Periodic updates may be provided on companies/industries based on company specific developments or announcements, market conditions or any other publicly available information. Clients should contact analysts and execute transactions through a J.P. Morgan subsidiary or affiliate in their home jurisdiction unless governing law permits otherwise.

"Other Disclosures" last revised March 28, 2015.

Copyright 2015 JPMorgan Chase & Co. All rights reserved. This report or any portion hereof may not be reprinted, sold or redistributed without the written consent of J.P. Morgan.