



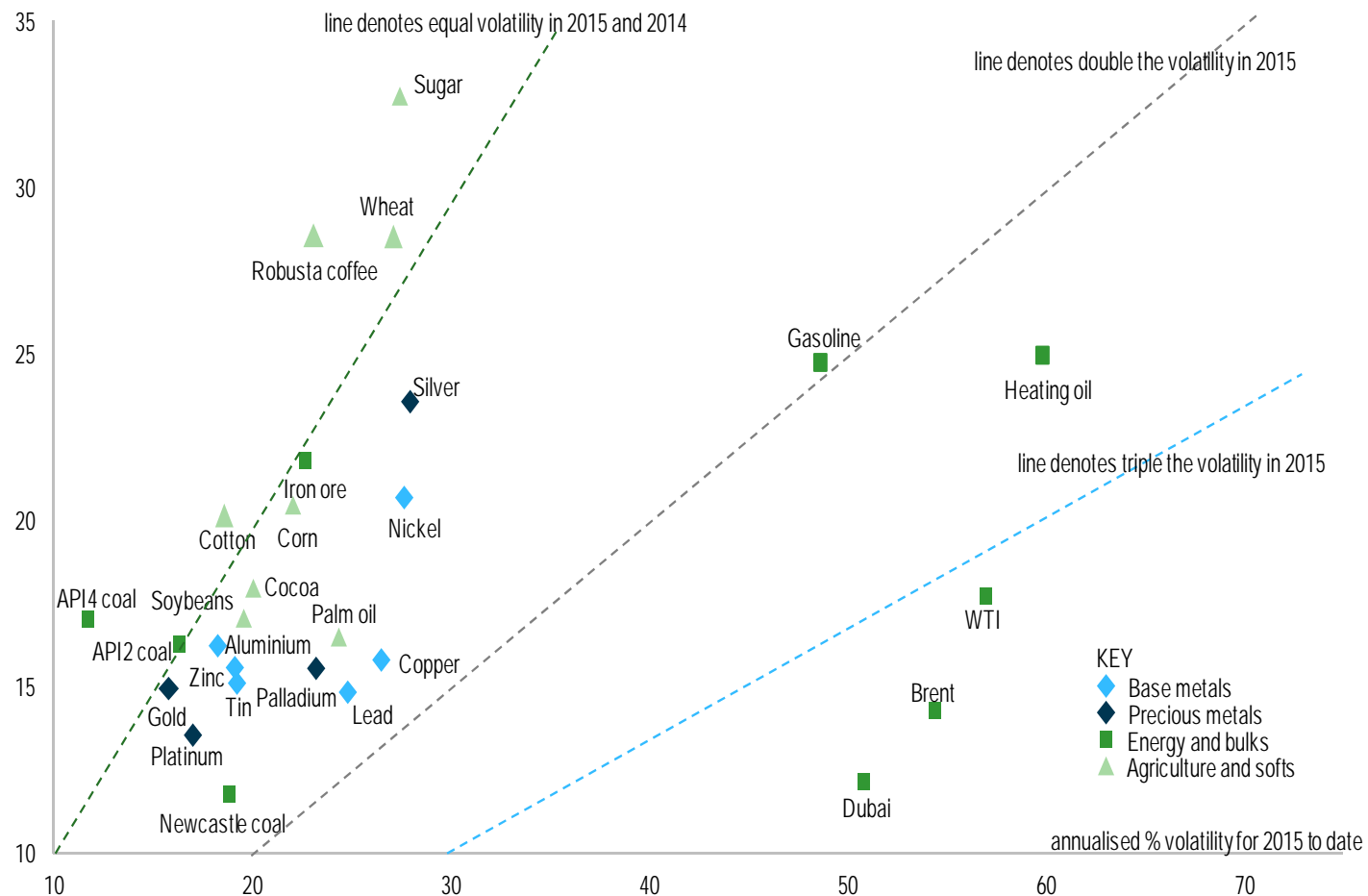
Volatility patterns in commodity assets including oil

Paul Horsnell – Standard Chartered

Joint IEA- IEF-OPEC Technical Meeting
Vienna, 30 March 2015

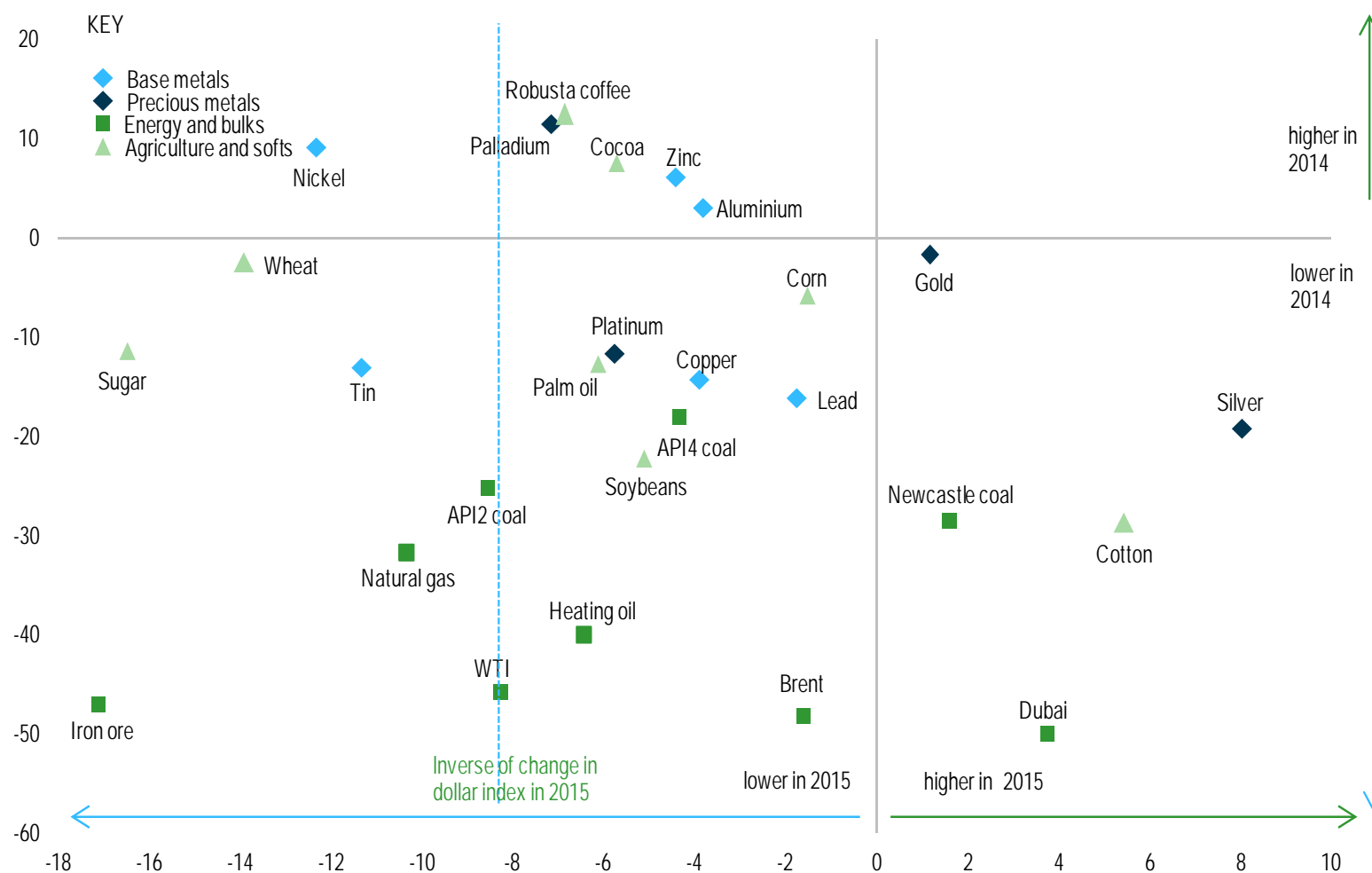
Oil the most volatile commodity in 2015

Realised annualised volatility in 2015 to date and equivalent period in 2014



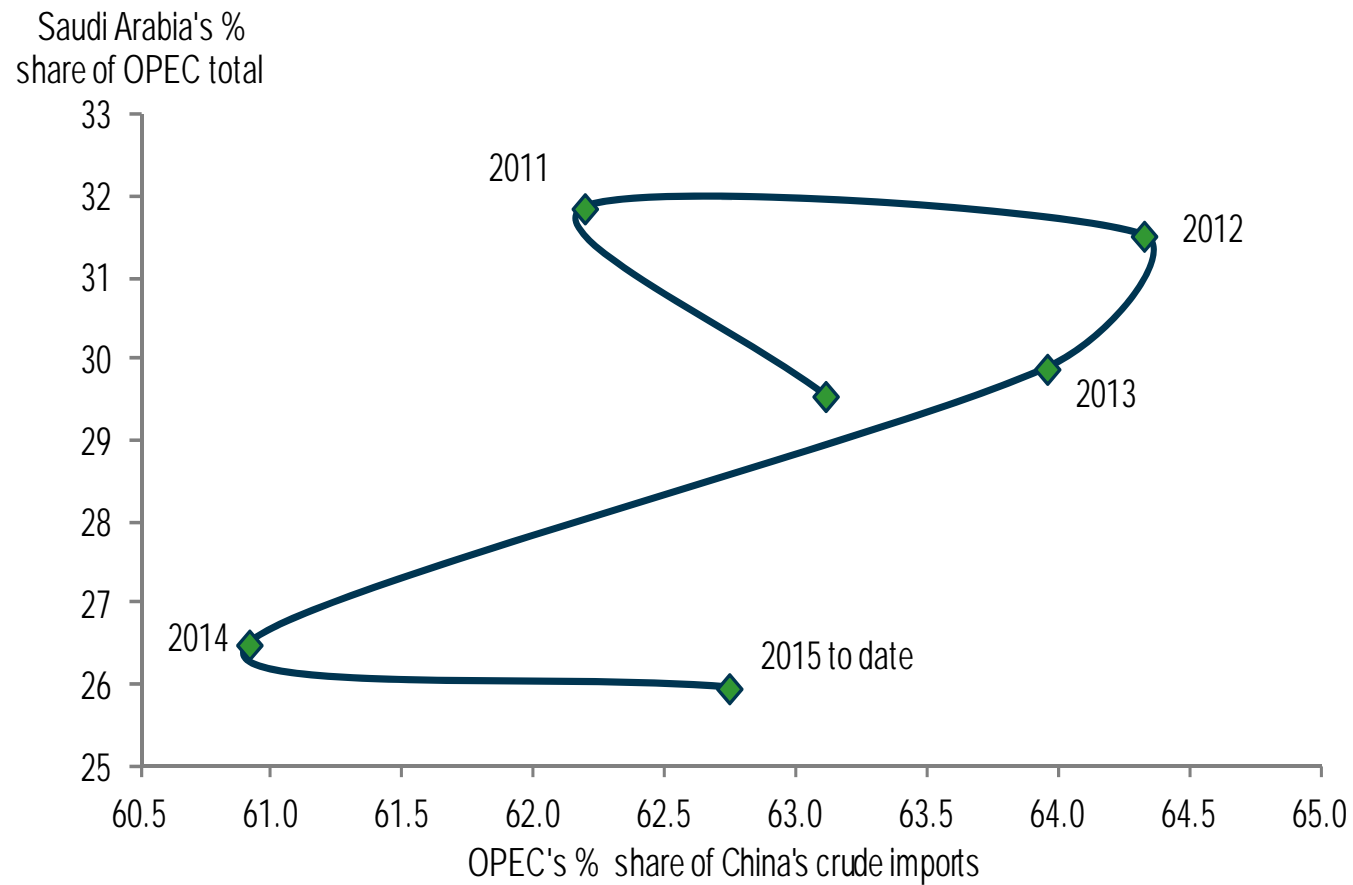
Strong dollar effect in 2015

Commodity price performance in 2014 and in 2015 to date



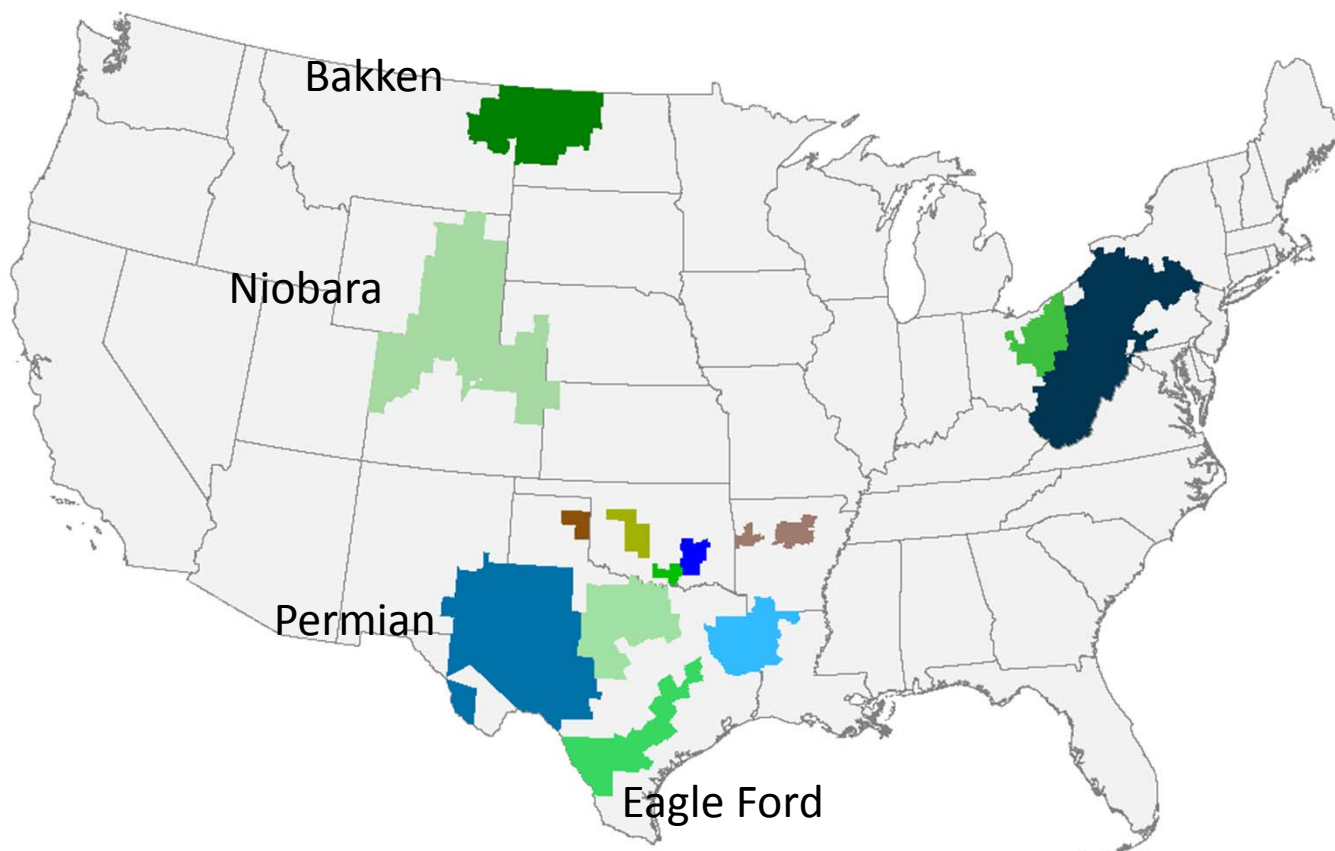
Market share in China

OPEC's share of China imports, and Saudi share of the OPEC share



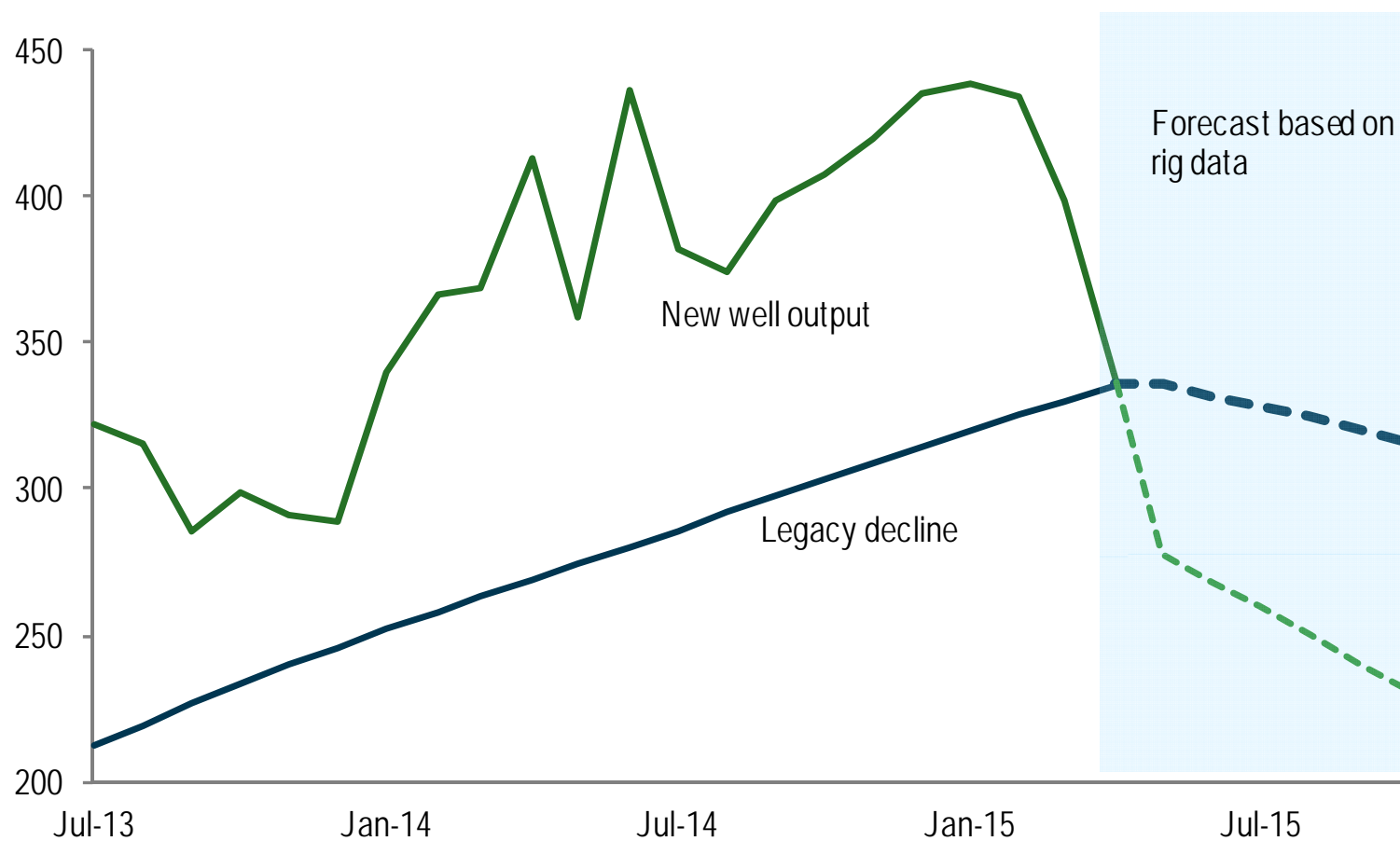
US tight oil – still key in the geography of oil flows

Main US tight oil regions



New well output falling below legacy declines

New well output and declines in US shale oil

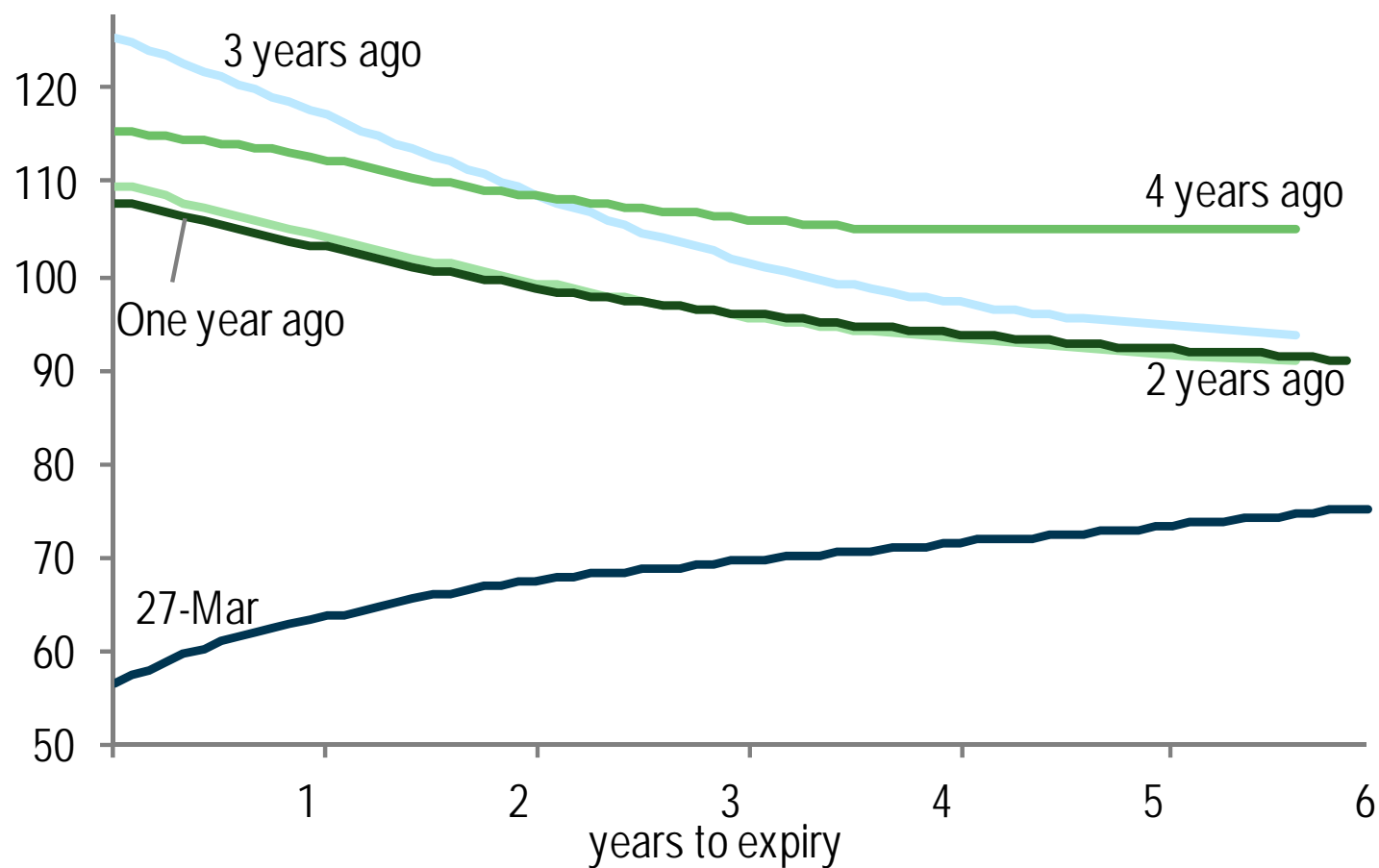


Oil price crises – Not all the same

	1985/6	1997/9	2008/9	2014/5
Spare oil production capacity	Very high	Moderate	Low at start, rose sharply after OPEC cuts	Very low
Saudi Arabian output	Rising	Initial rise, then fall, flat from mid-99 until sharp fall in April 1999	Falling	Flat
Scope for conventional non-OPEC cost reduction	Very high	Moderate	Low	Very low
Scope for non-OPEC oil taxation cuts	High	Moderate	Low	Low
Global oil demand	Falling	Fell with Asian financial crisis, recovered strongly in 1999	Falling	Rising
Totemic onset event	Saudi oil minister Yamani announces the end of fixed official selling prices	OPEC meeting in Bali increases quotas during Asian financial crisis	Onset of Global Financial Crisis	OPEC meeting results in Saudi Arabian shift away from short-term price defence
Country that acted as catalyst for price recovery	USA (visit of then VP Bush to Riyadh)	Mexico (organiser of rapprochement between Saudi Arabia and	Saudi Arabia (a key driver of effective OPEC price defence)	?
Prices after crisis relative to onset	Move to lower steady state	Higher	Similar	?
US domestic output	Fell heavily in 1986 (flat in 1985), loss 349 kb/d	Sharp falls in 1998 and 1999 including stripper well shut-ins, combined loss 538 kb/d	Rose strongly in 2009, gain 584 kb/d	m/m falls expected to commence in April
Maximum 3M decline	USD16.24/bbl (61%)	USD4.63/bbl (42%)	USD72.08/bbl (60%)	USD41.46/bbl (47%)
Time from start of sustained fall to start of sustained 3M gains	8 months	15 months	7 months	8 months and counting

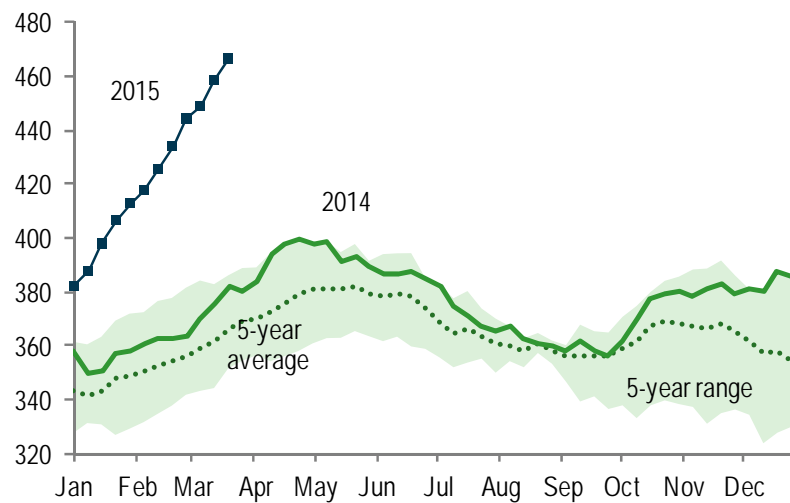
Significant pressure at front of time curve

Brent forward curve, 27 March and equivalent day in past years

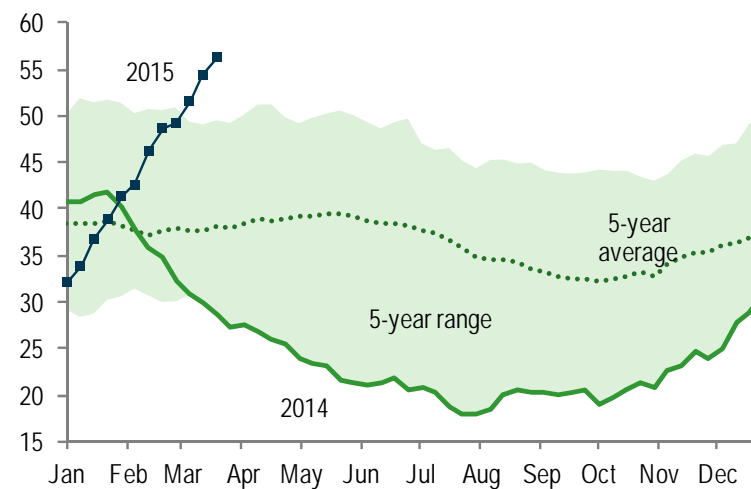


US inventory dynamics still central

US crude inventories, mb



Cushing crude inventories, mb



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