



> aluminum intelligence unit
the global leader in aluminum industry analysis and outlook

ATTACHMENT B

Aluminum Premiums Outlook



> Upward Trend in Premiums Far From Over: Winners vs Losers

Regional Aluminum Premiums Report (Q1 2013)

January 2013



EXECUTIVE SUMMARY

NORTH AMERICA

Midwest P1020 aluminum premiums (MW) up early this year to a fresh high of 11.10-12.0 cent/lb. Full billet premiums (MW + billet upcharge) also on the rise to levels as high as 25.0 cent/lb. Today, 74% of total LME aluminum inventories in the region are concentrated in Detroit, trapped in a queue of 18 months. On-warrant North America LME inventories (metal theoretically available for consumer) have fallen by 285,675 mtons only in the last month. Expect tighter physical conditions this year and continuing iteration of the vicious cycle that locks away metal from consumers (+concentration, +queues, -availability). MW could reach levels above 13.0 cent/lb as soon as Q2, with billet premiums near 27.0 cent/lb. Billet could suffer the most as the US building & construction sector continues to gather momentum. Primary aluminum demand expected to grow 5.0% this year, with only a modest recovery in output rates of traditional suppliers (Canada and Latin America). Lately, *Alba*, *Qatalum* & *Rusal* gaining market share.

MEXICO

Spot premiums for P1020 are up to levels as high as 13.8 cent/lb on the high end of the range of negotiations. These levels apply for consumers that aim to directly import metal. Consumers buying metal from Mexican traders/distributors get much lower premiums on fiscal strategies. Premiums for billet in a range of 21.3-24.0 cent/lb. Industry sources are quoting less hot demand in the beginning of this year for castings and FRP. Construction sector on a much noticeable slowdown that mainly has to do with the change of federal government in the country. This is only temporarily and demand is expected to remain notably strong during the year. Expect spot P1020 premiums as high as 15.0 cent/lb sometime during H1, with billet premiums +27.0 cent/lb. *Rusal* gaining market share. *Vedanta* via traders entering the market.

BRAZIL

Spot ingot and billet premiums on the rise again after declining somewhat in Q4. Levels for P1020 premiums quoted in a \$260-310 per mton range and billet premiums in a range of \$510-610. Overall demand in the country is back in expansion mode and should accelerate ahead. Manufacturing activity left contraction zone in October and then gain some traction in November-December. Primary demand to grow 5.1% this year, with primary output in the country staying near ten-year lows. Expect P1020 premiums +\$350 per mton in Q2 and billet premiums +\$600 as soon as Q1.

WEST EUROPE

Duty paid ingot premiums up to a record high of \$290-305 per mton in the beginning of the year, billet premiums more modest increase to \$470-490 per mton. Much less pressure for billet in West Europe vs North America as building & construction hit the most mainly in Southern European countries. Today, 59% of total LME aluminum inventories in the region are concentrated in Vlissingen, trapped in a 16-month long queue. On warrant Europe LME inventories down by 167,300 mtons in the last month. End user demand deep inside contraction, but no worsening at the margin. In spite of lackluster demand, physical conditions to get tighter this year as primary output could experience further declines. Expect P1020 premiums as high as \$350 per mton in H1 with billet at \$520. *Dubal/EMAL* and *Alba* gaining market share.



EXECUTIVE SUMMARY

JAPAN

Spot P1020 premiums up to \$240-245 per mton after falling in November-December, still shy of the record highs reached in October. Overall demand in the country is in contraction mode and weakening, although it is expected to improve on government stimulus. Automotive and consumer electronics sector quoted particularly weak. The vicious cycle that locks away metal from the consumer is not playing in Asia. However, Japan will have to compete for new metal with North America, Europe and Southeast Asia. Premiums should go up in consequence. Expect spot P1020 premiums to go up to \$280 per mton in H1. *UC Rusal* market share up in the P1020 Japanese market on output declines in New Zealand and South Africa, while *Dubal/EMAL* and *Rusal's* VAP exports to Japan grew the most. This year, *Ma'aden-Alcoa* smelter (in Saudi Arabia) to gain share in the Japanese market.

SOUTHEAST ASIA

Spot premiums for P1020 quoted in a range of \$215-245 per mton taking into account India, Malaysia, Singapore and South Korea. Quotes for billet premiums cited at \$365-390 per mton in India, Thailand, Vietnam and Malaysia. Overall demand remains strong with some seasonal easing. Indonesia, Malaysia, Thailand remain as hot spots, while South Korea and Taiwan cited less strong. The vicious cycle that locks away metal from the consumer is not playing in Asia and we expect slightly better physical conditions this year given primary output expansions taking place in India and Malaysia. In fact, the region is positioned the best also to compete for new metal coming out from *Ma'aden-Alcoa* smelter. Nevertheless, the region will still have to partially compete for material with Japan, West Europe and in a lesser extent North America. Expect P1020 premiums heading toward \$300 per mton and billet towards \$450 per mton as the year advances.

MIDDLE EAST

Our best estimate is that spot P1020 domestic premiums stand between \$175-200 per mton. Demand in the region is described as hot, with Saudi Arabia leading at the margin. Strong building & construction and electrical markets in the country. The *Ma'aden-Alcoa* smelter in Saudi Arabia has already started commercial deliveries and its output should be of 230,000 tons this year, reaching full capacity (750,000 mtpy) in late 2014. At that point, they should supply most of the domestic market. Today, other regional players are even increasing exports to the country. This trend will continue.

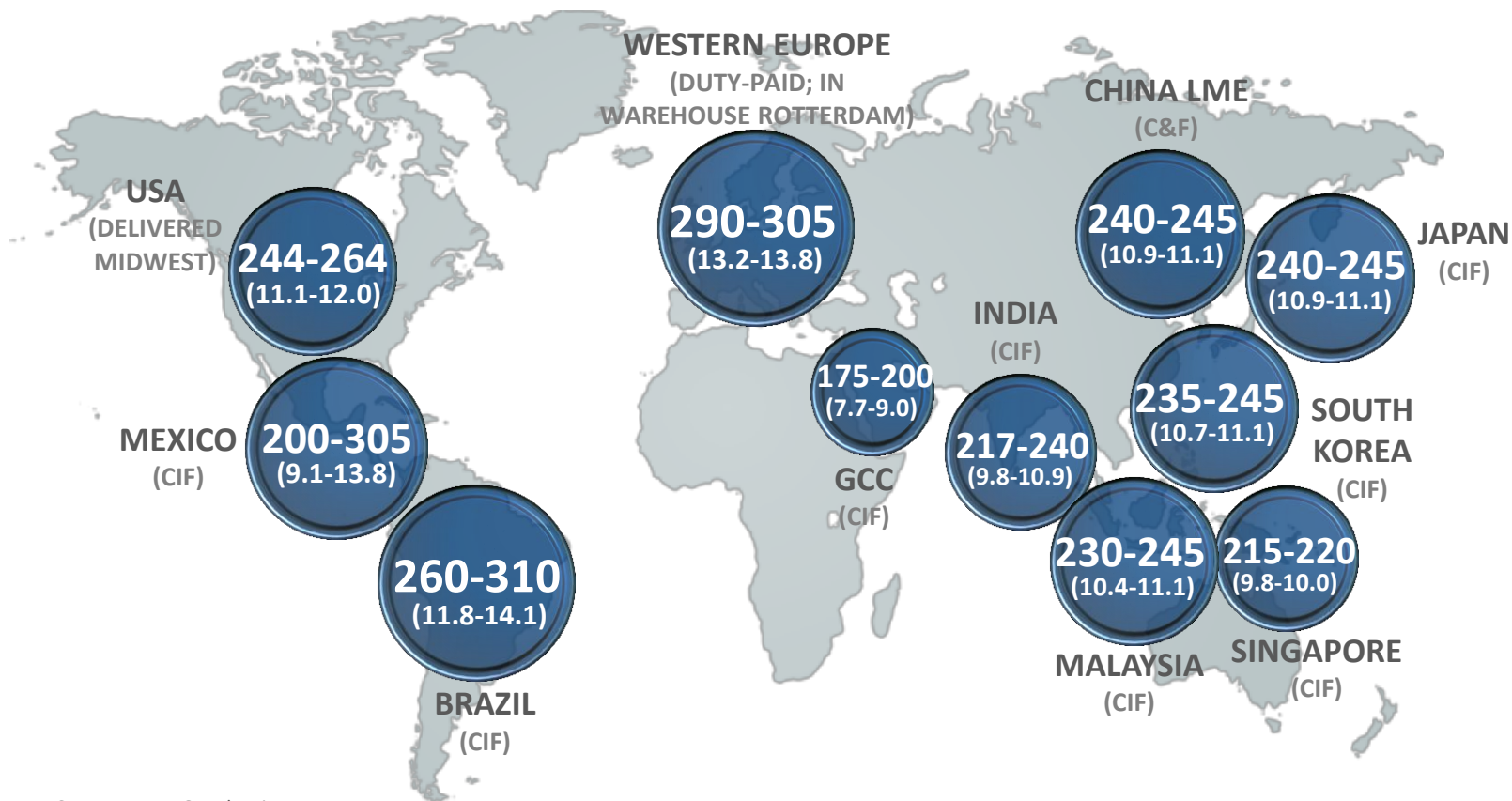
CHINA

China LME ingot premiums up to \$240-245 per mton early this year in line with higher premiums in Japan & Southeast Asia. Overall demand picking up since October 2012. Flash manufacturing activity estimates show strong pick up in January. However, China is also producing primary aluminum at record high rates. We expect a balanced primary aluminum market for this year. In 2012, China imported 0.5 millions tons of P1020 with *Rusal/RTA* as main suppliers. China also increased VAP imports with *Dubal/EMAL* penetrating the market. Quantities and suppliers would be similar in this year. Ingot premiums should have to follow Japan & Southeast Asia to attract that metal. *Rusal/RTA* to benefit the most if current trend of gradual increase in Chinese imports continues (possible scenario).

Ingot premiums (what you pay on top of LME price) started the year rising ...

ALUMINUM INGOT SPOT PREMIUMS TODAY

(\$/mton and cent/lb in parenthesis; January 24th, 2013)

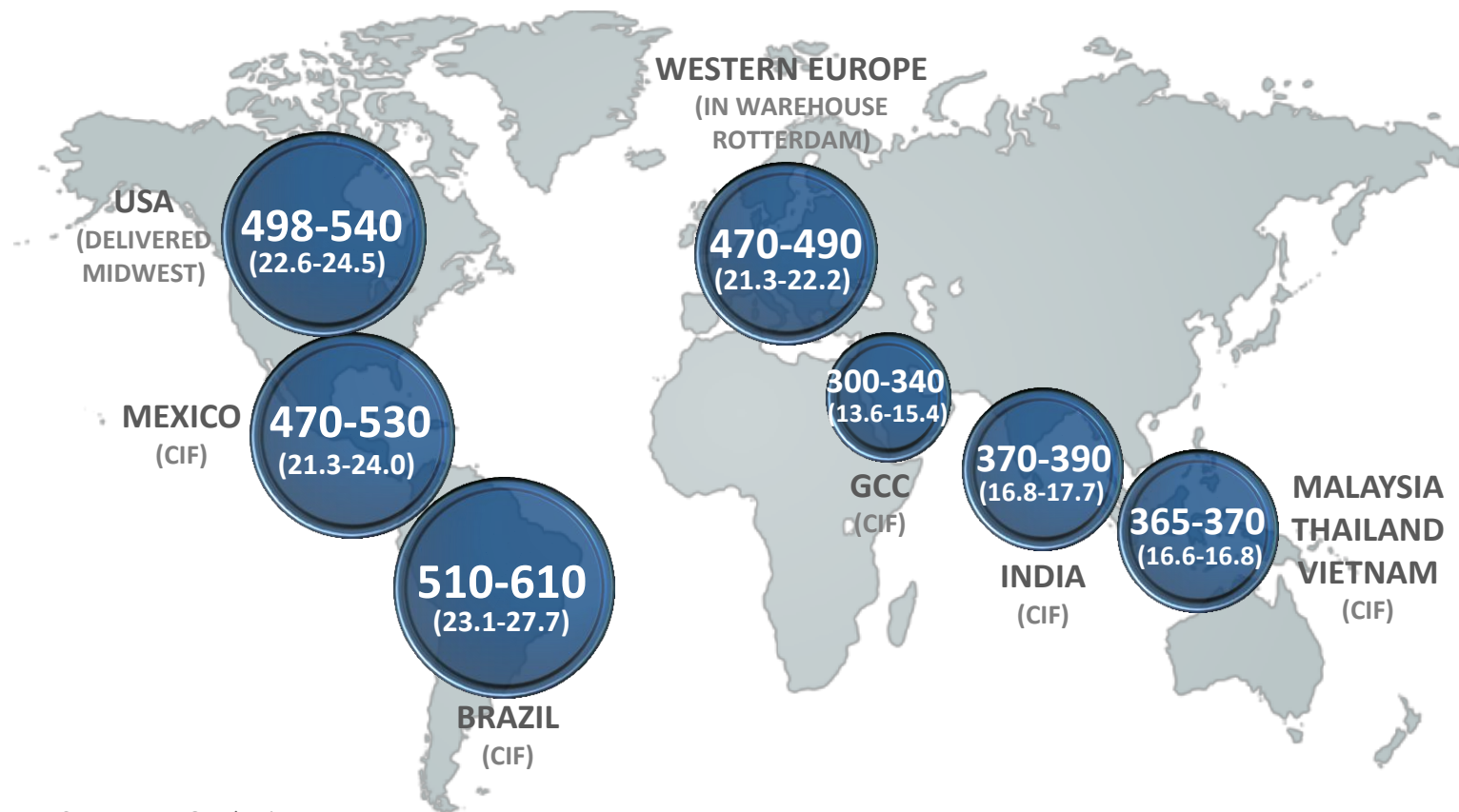


Source: HARBOR Aluminum

...with full billet premiums increasing in the Americas, Europe & Southeast Asia

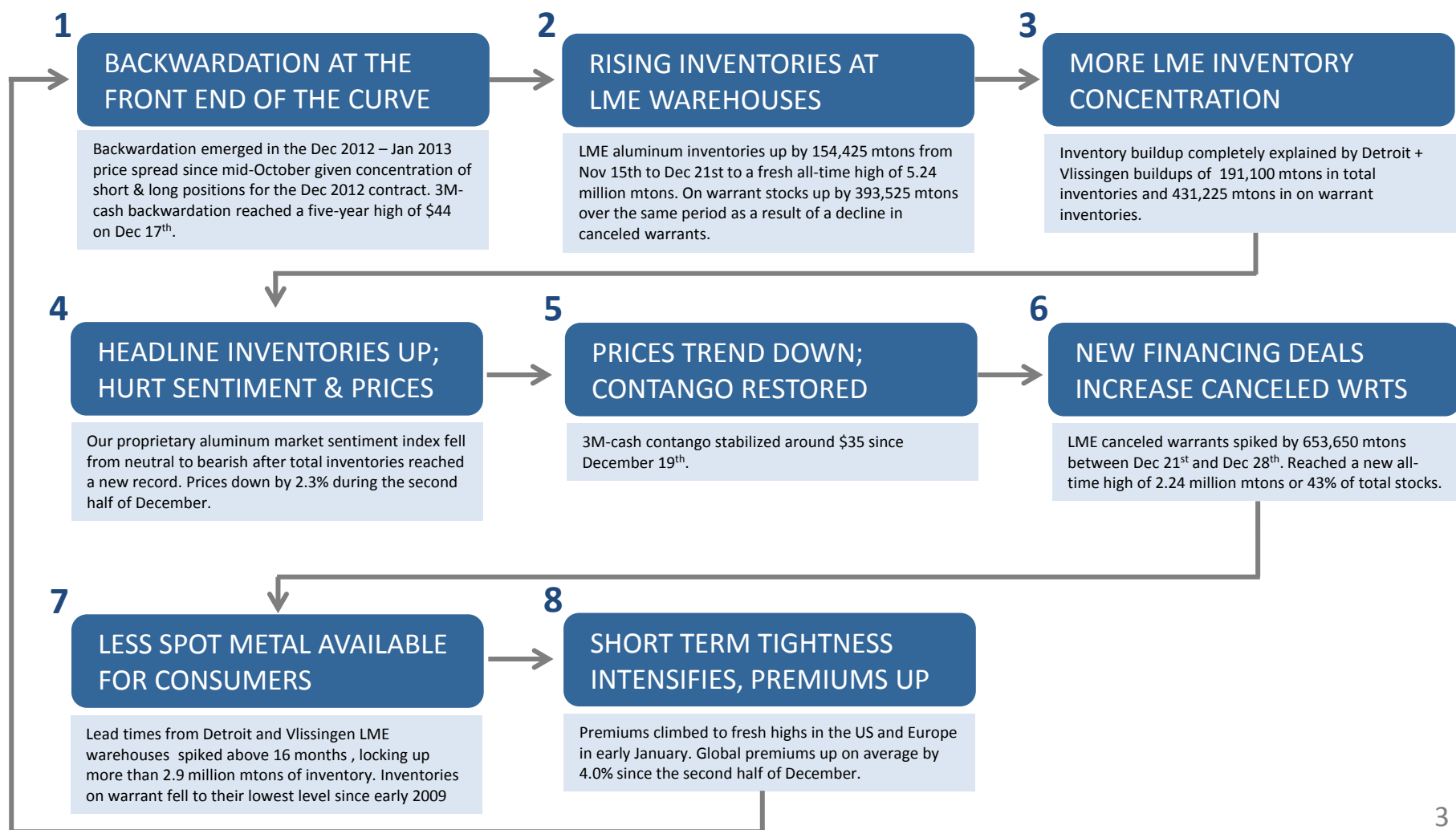
ALUMINUM BILLET FULL SPOT PREMIUMS TODAY

(\$/mton and cent/lb in parenthesis; January 24th, 2013)



Source: HARBOR Aluminum

Vicious cycle that locks out metal from consumers iterated itself again in December...

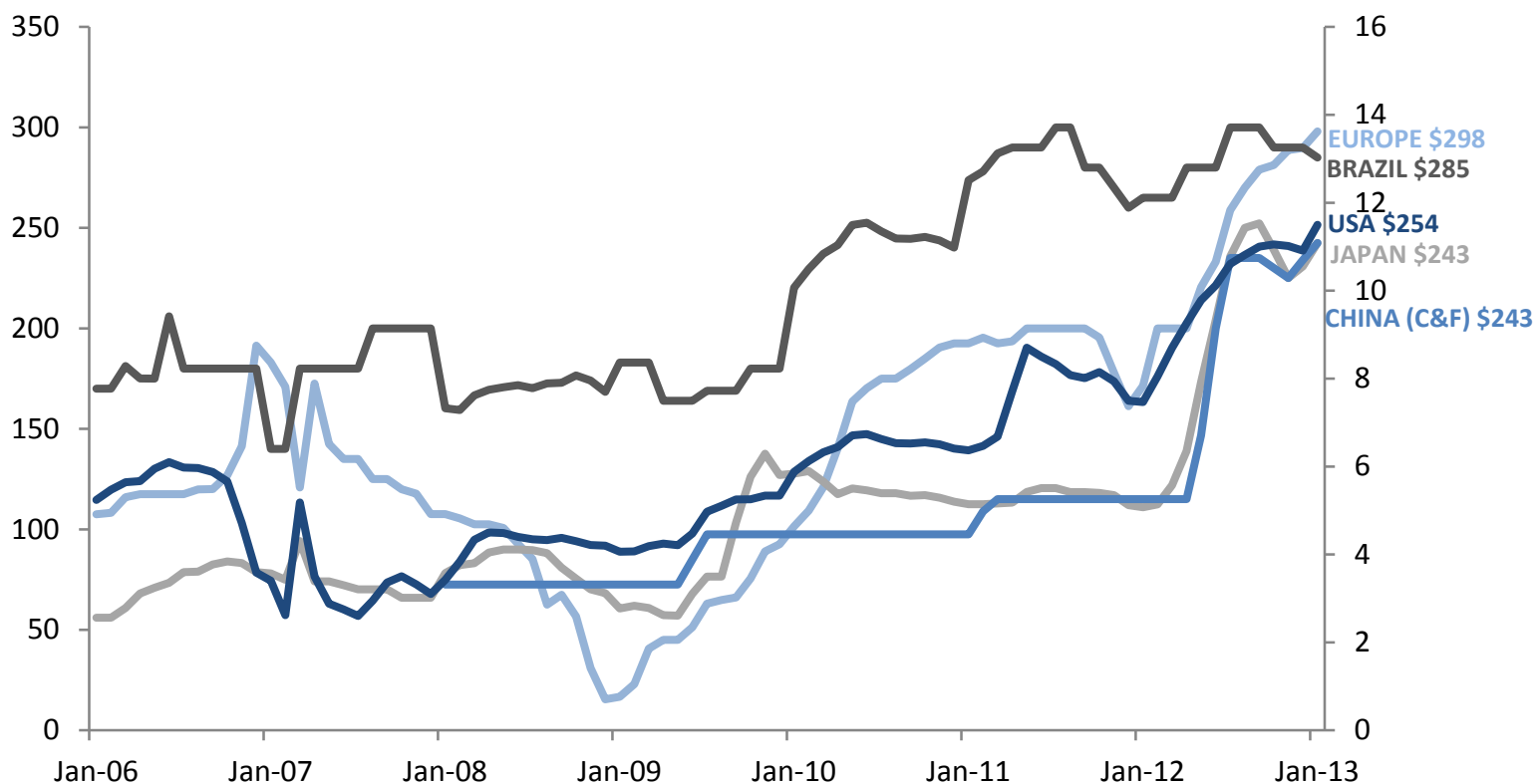




...pushing up premiums across the board and to fresh record highs in Europe & USA...

REGIONAL ALUMINUM INGOT PREMIUMS CIF

(monthly average data; \$/mton in left scale and cent/lb in right scale)



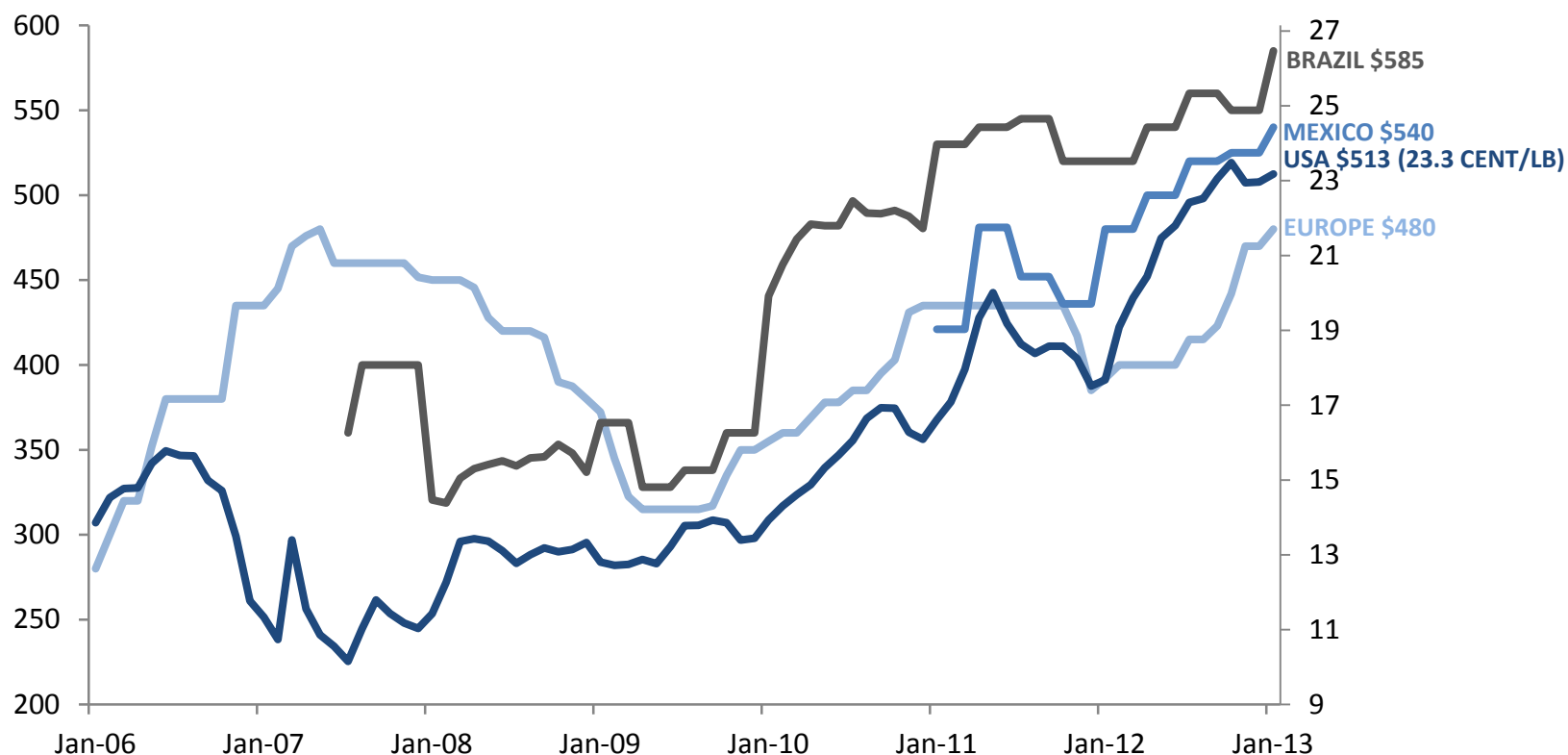
Source: HARBOR Aluminum



...including billet...

REGIONAL ALUMINUM BILLET FULL PREMIUMS CIF

(monthly average data; \$/mton in left scale and cent/lb in right scale)

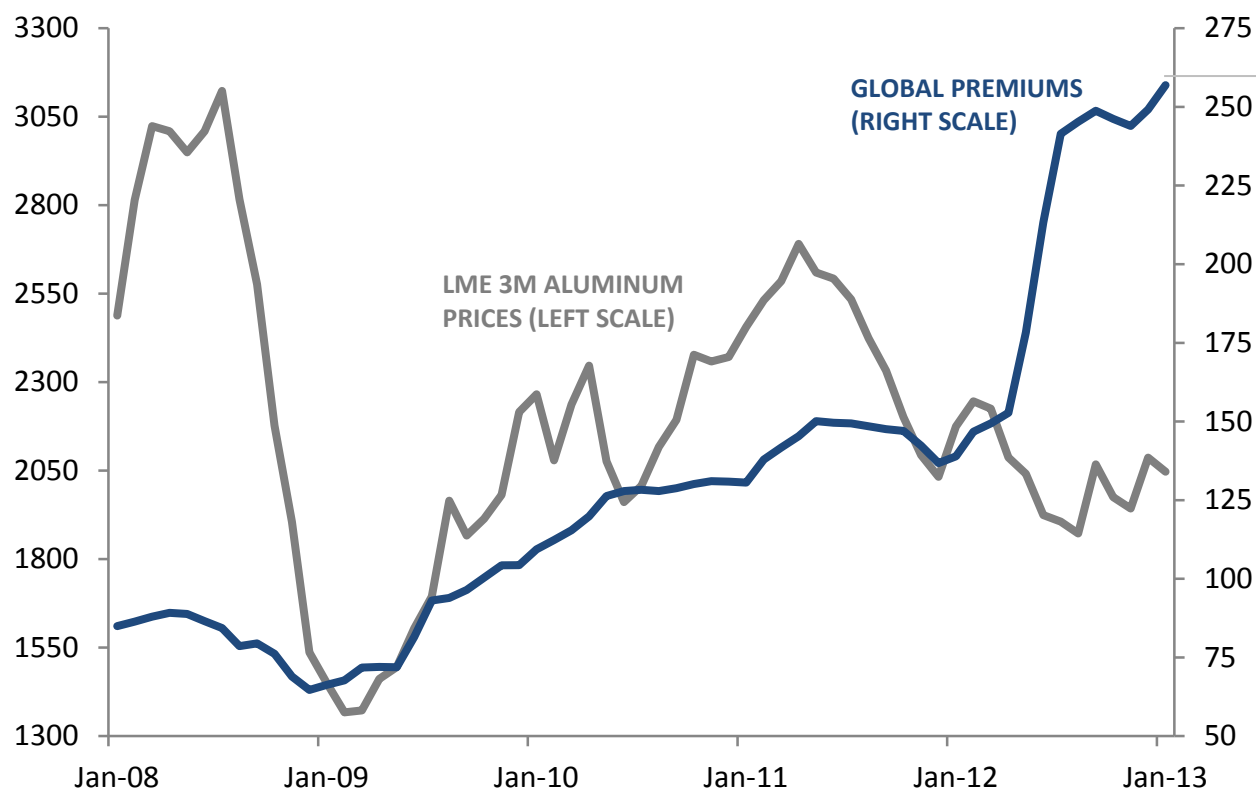


Source: HARBOR Aluminum

...and widening again the unprecedented divergence between premiums and LME prices

LME 3M ALUMINUM PRICES VS GLOBAL ALUMINUM PREMIUMS*

(monthly data; \$/mton)



The divergence between spot premiums and LME prices has reached an unprecedented level. While premiums are a full reflection of physical supply and demand dynamics (including what some consider "manipulation"), LME prices have become a reflection mainly of financial (paper) supply and demand as 70% of the volume traded in the LME is fund related.

Source: HARBOR intelligence with LME data

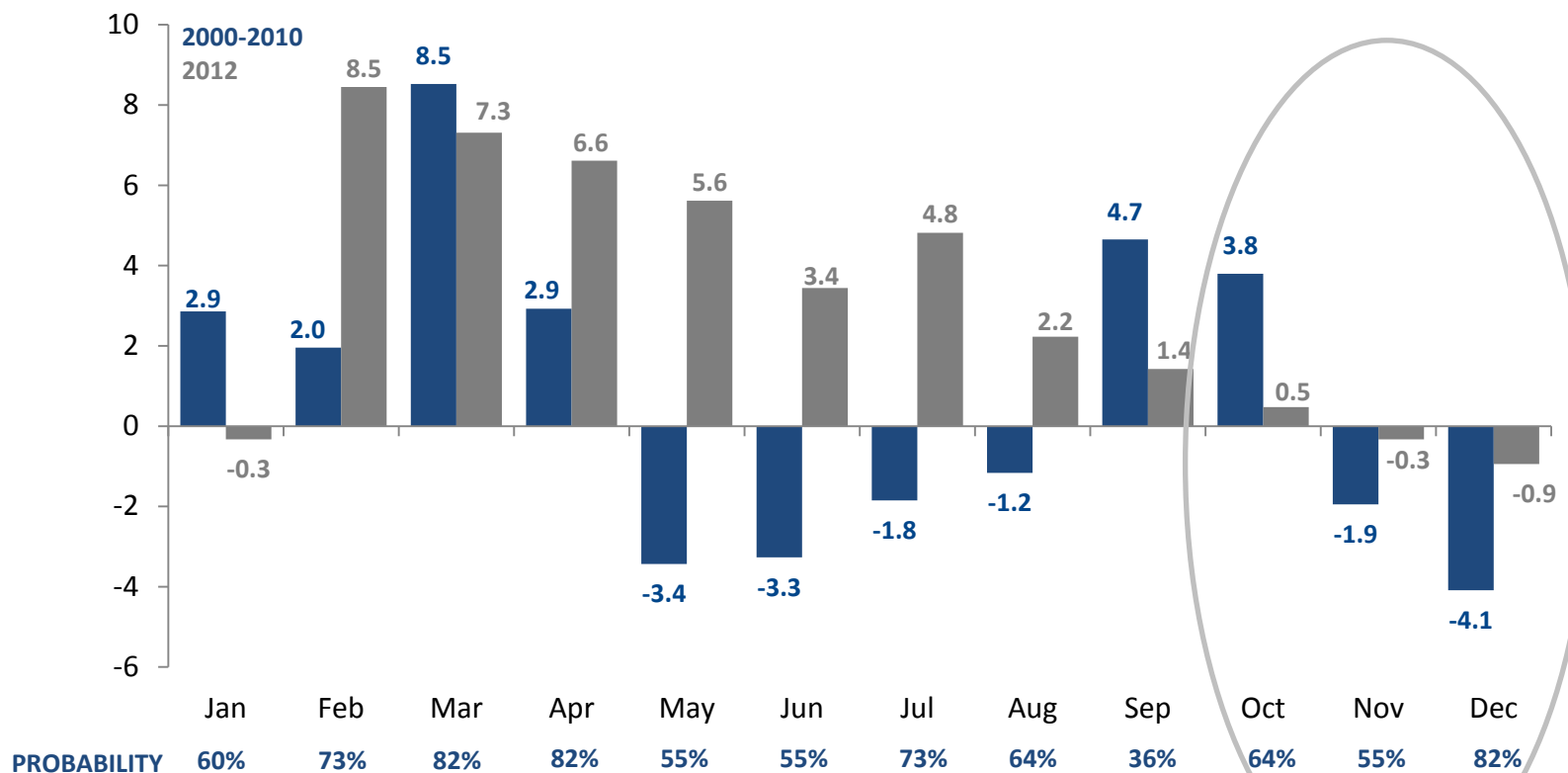
*US Midwest, Europe duty-paid, Japan Spot, Brazil and China LME weighted by country shares in total primary aluminum consumption



In fact, ingot premiums in North America fell less than expected in Q4...

US MIDWEST PREMIUM SEASONALITY

(monthly average % change; 2000-2010)



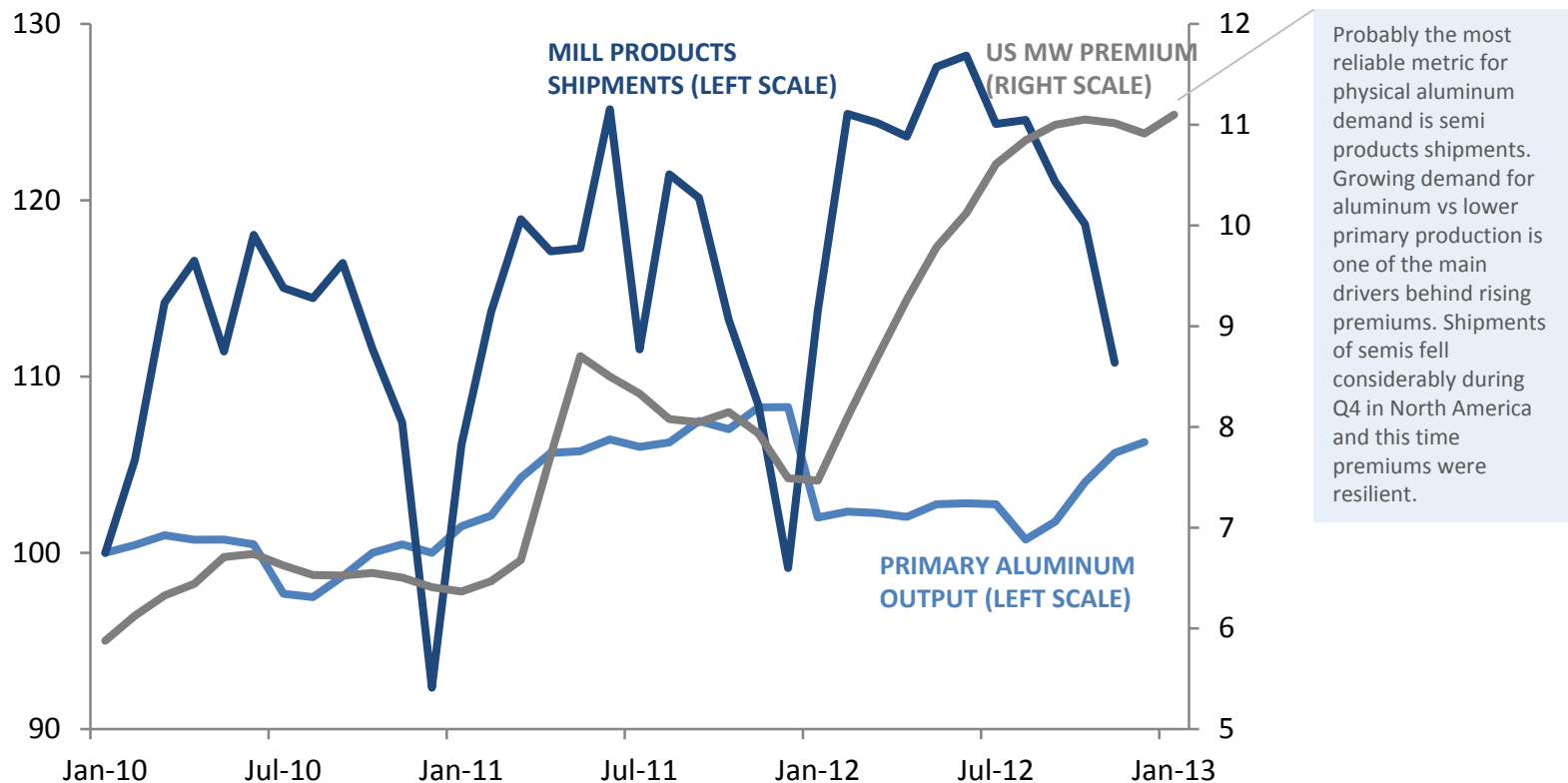
Source: HARBOR Aluminum



...and were roughly immune to the typical end-of-year demand slowdown...

NORTH AMERICA PRIMARY ALUMINUM OUTPUT & PRODUCTS SHIPMENTS

(index vs cent/lb; January 2010 = 100)

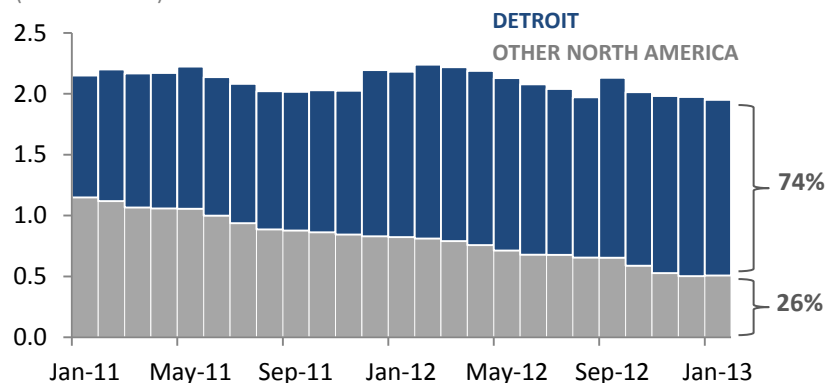


Source: HARBOR Aluminum with Aluminum Association data

...as more metal was locked away from the consumer

LME INVENTORY CONCENTRATION IN DETROIT

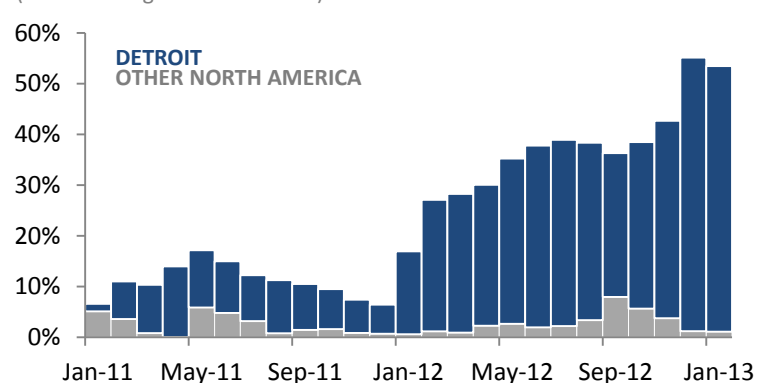
(million mtons)



Source: HARBOR Aluminum with LME data

NORTH AMERICA CANCELED WARRANTS AS % OF INVENTORIES

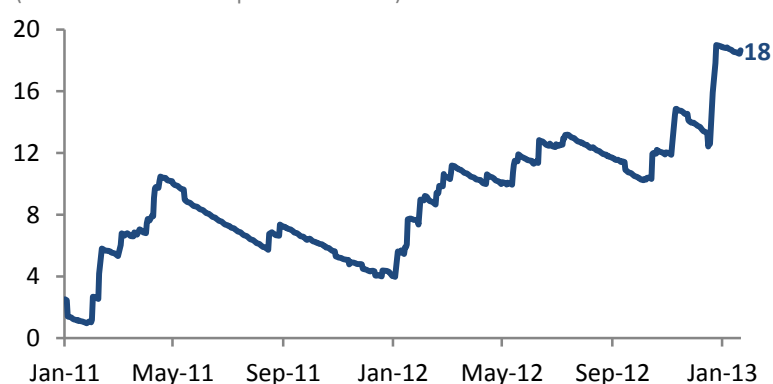
(% of total regional inventories)



Source: HARBOR Aluminum with LME data

LOAD OUT QUEUE IN DETROIT LME WAREHOUSES

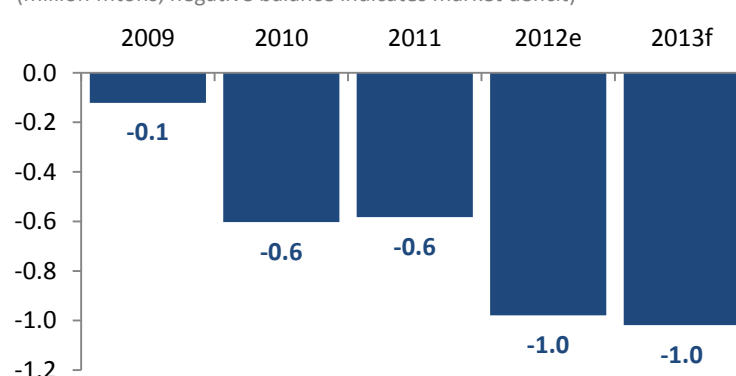
(estimated maximum queue in months)



Source: HARBOR Aluminum with LME data

NORTH AMERICA PRIMARY ALUMINUM MARKET BALANCE

(million mtons; negative balance indicates market deficit)

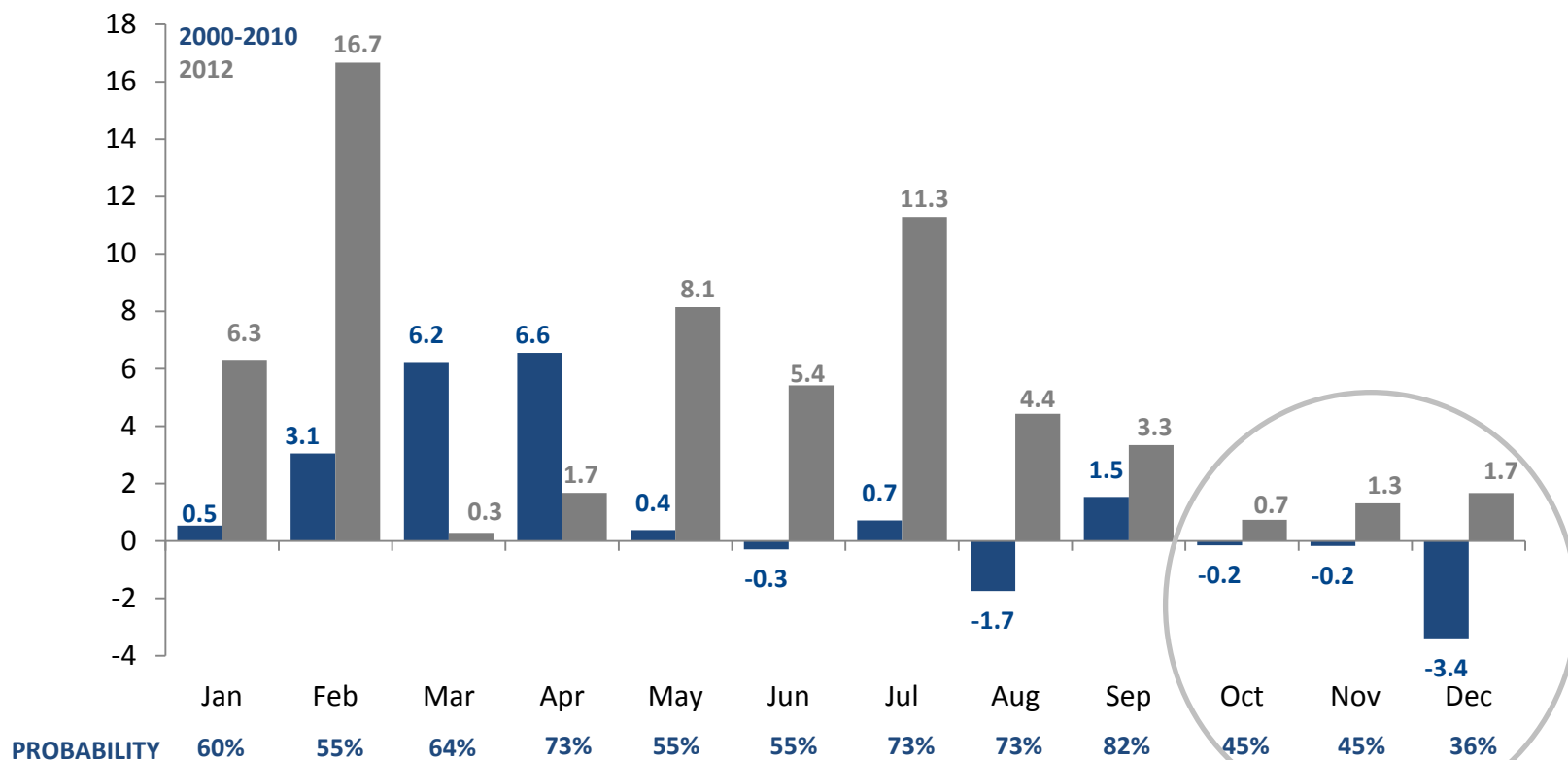


Source: HARBOR Aluminum

In Europe, premiums actually increased, defying seasonality ...

EUROPEAN DUTY-PAID PREMIUM SEASONALITY

(monthly average % change; 2000-2010)

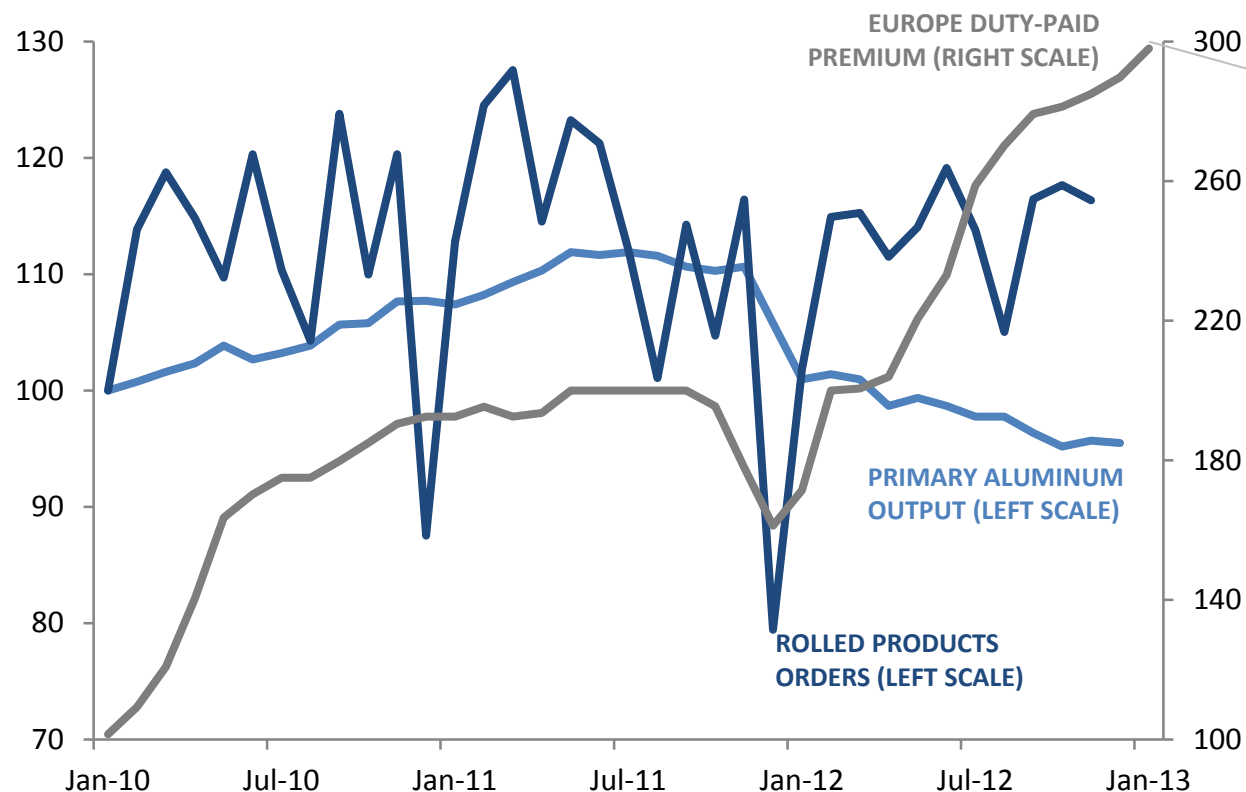


Source: HARBOR Aluminum

...partly because physical conditions continued to be hurt by falling primary output...

EUROPE PRIMARY ALUMINUM OUTPUT & PRODUCTS ORDERS

(index vs \$/mton; January 2010 = 100)

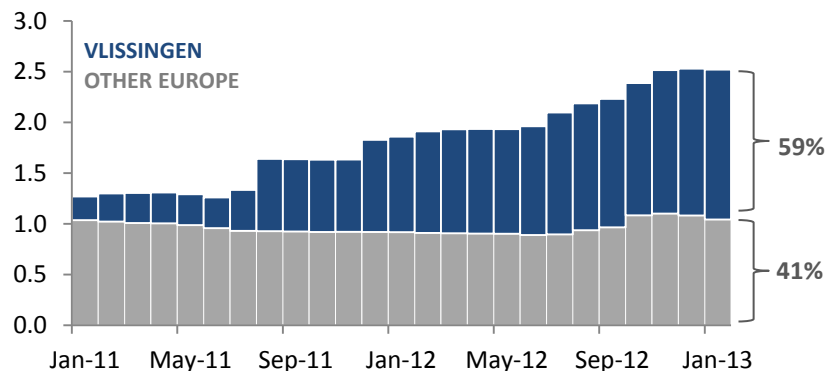


Probably the most reliable metric for physical aluminum demand is semi products shipments. Growing demand for aluminum vs lower primary production is one of the main drivers behind rising premiums.

...which compounded the impact of the December cycle iteration

LME INVENTORY CONCENTRATION IN VLISSINGEN

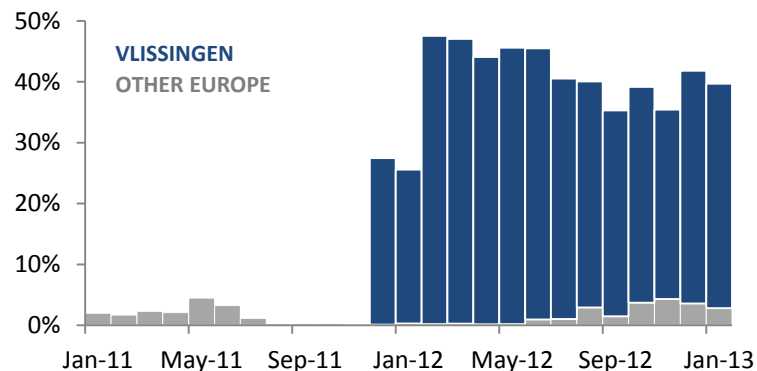
(million mtons)



Source: HARBOR Aluminum with LME data

EUROPE CANCELED WARRANTS AS % OF INVENTORIES

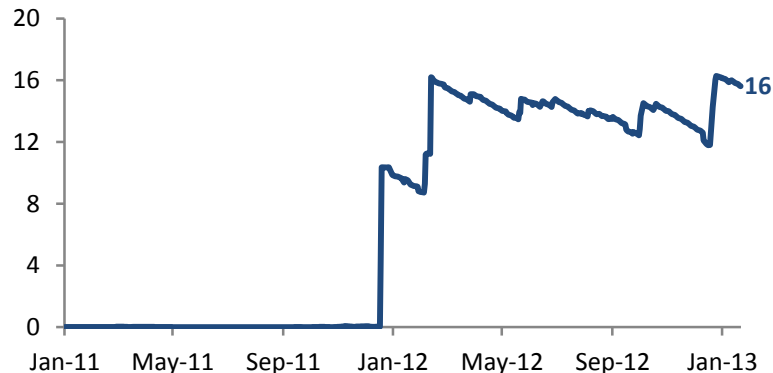
(% of total regional inventories)



Source: HARBOR Aluminum with LME data

LOAD OUT QUEUE IN VLISSINGEN LME WAREHOUSES

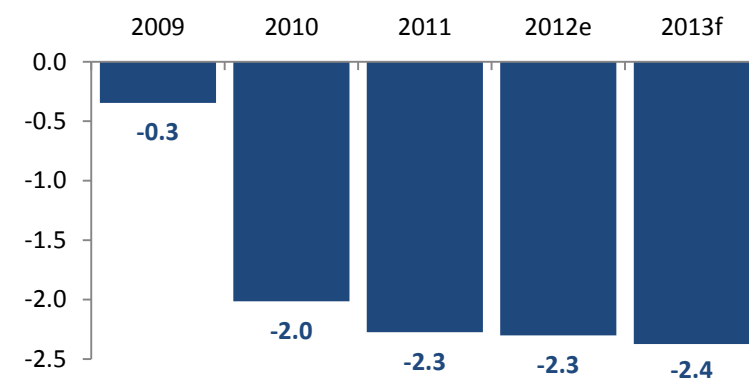
(estimated maximum queue in months)



Source: HARBOR Aluminum with LME data

WESTERN EUROPE PRIMARY ALUMINUM MARKET BALANCE

(million mtons; negative balance indicates market deficit)

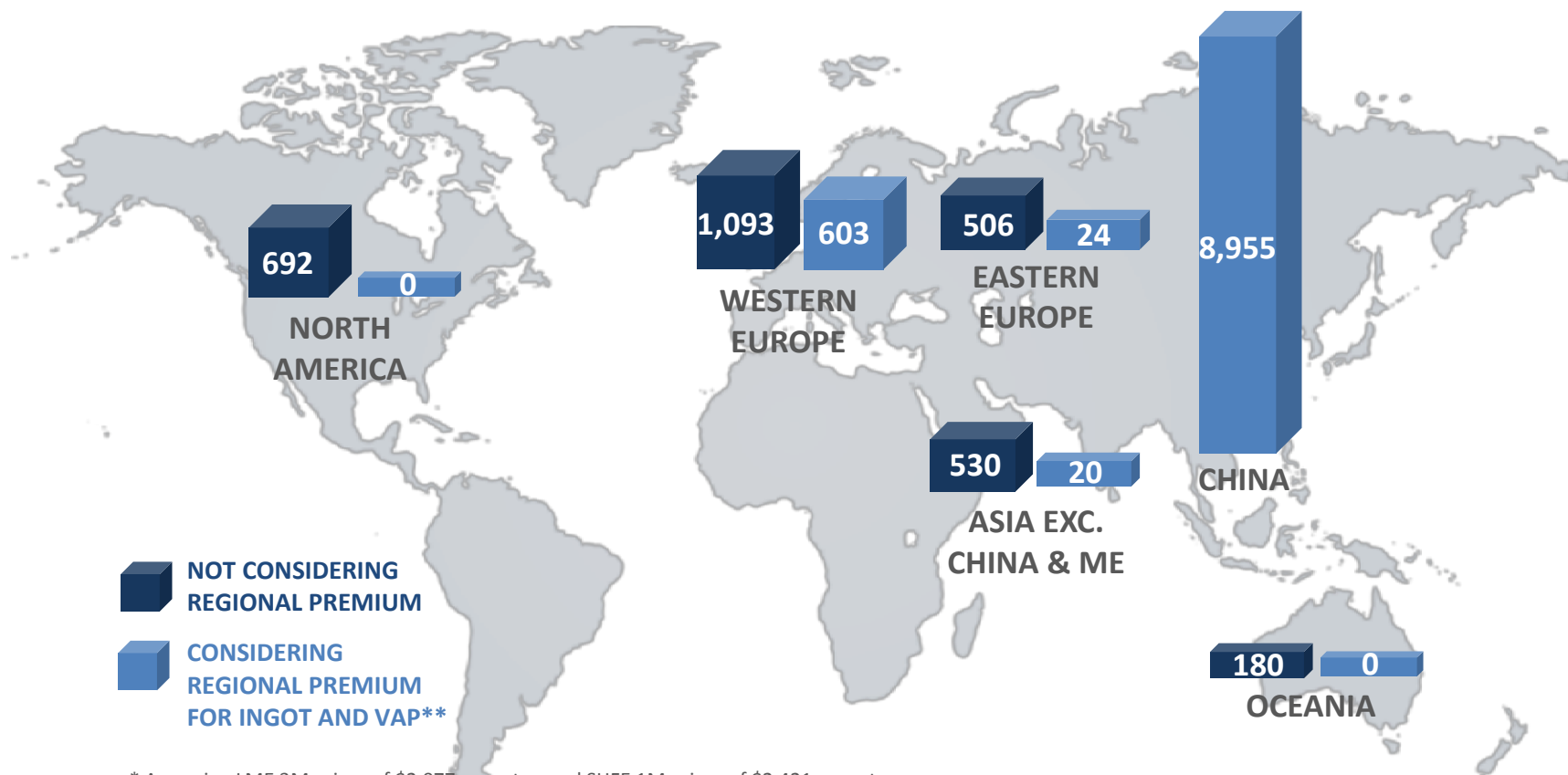


Source: HARBOR Aluminum

Worth to note that capacity at risk in ROW is concentrated today only in Europe...

PRIMARY ALUMINUM OPERATING CAPACITY UNDERWATER BY REGION*

(Q4 2012; thousand mtons per year)



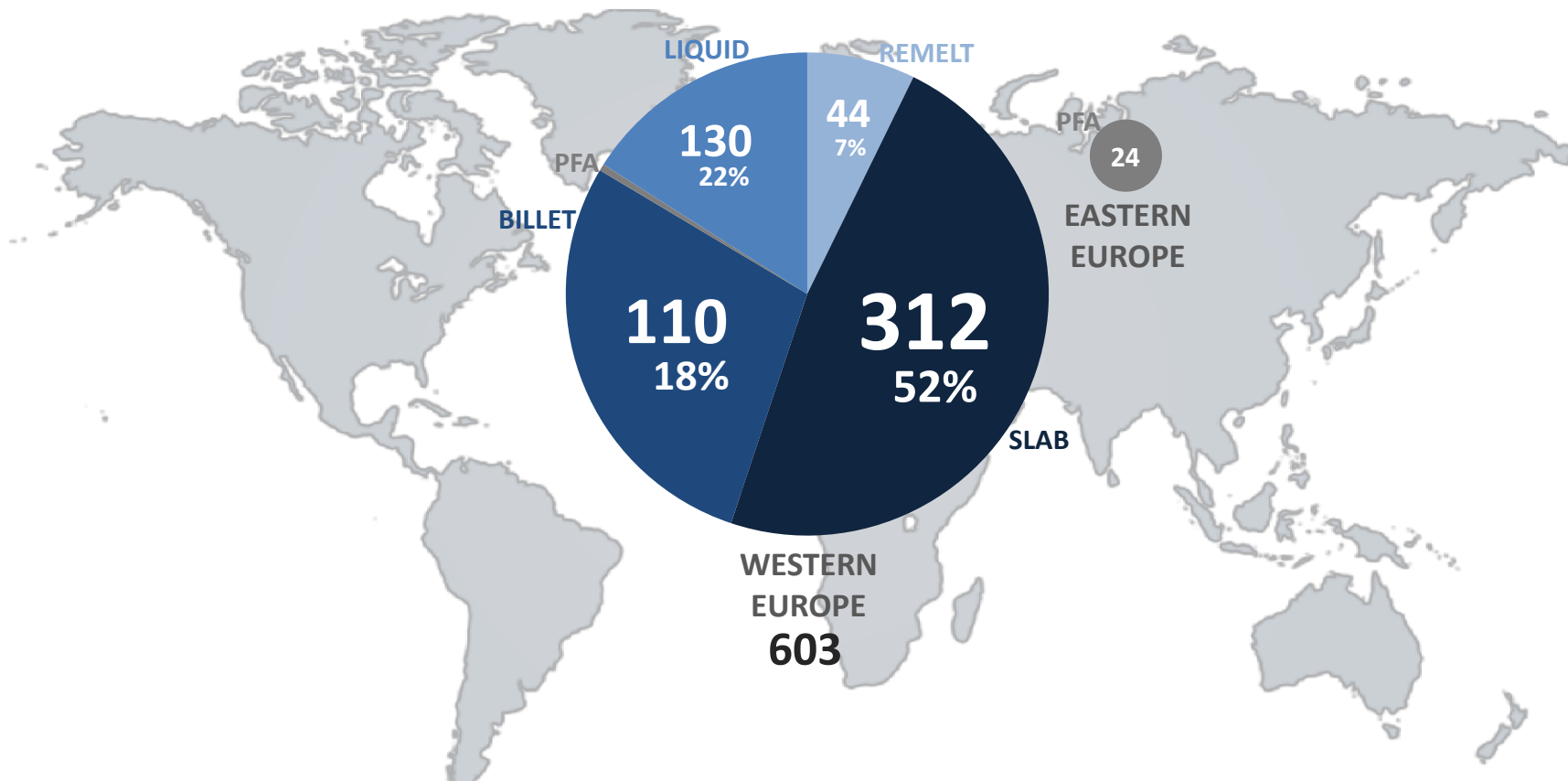
* Assuming LME 3M prices of \$2,077 per mton and SHFE 1M prices of \$2,421 per mton.

** Casthouse products mix for each smelter of ingot, billet, slab, PFA, high purity aluminum and hot metal for various uses.

Source: HARBOR Aluminum

...with more than 50% of it being slab

ROW PRIMARY ALUMINUM OPERATING CAPACITY UNDERWATER BY REGION & CASTHOUSE PRODUCT* (Q4 2012; thousand mtons per year)

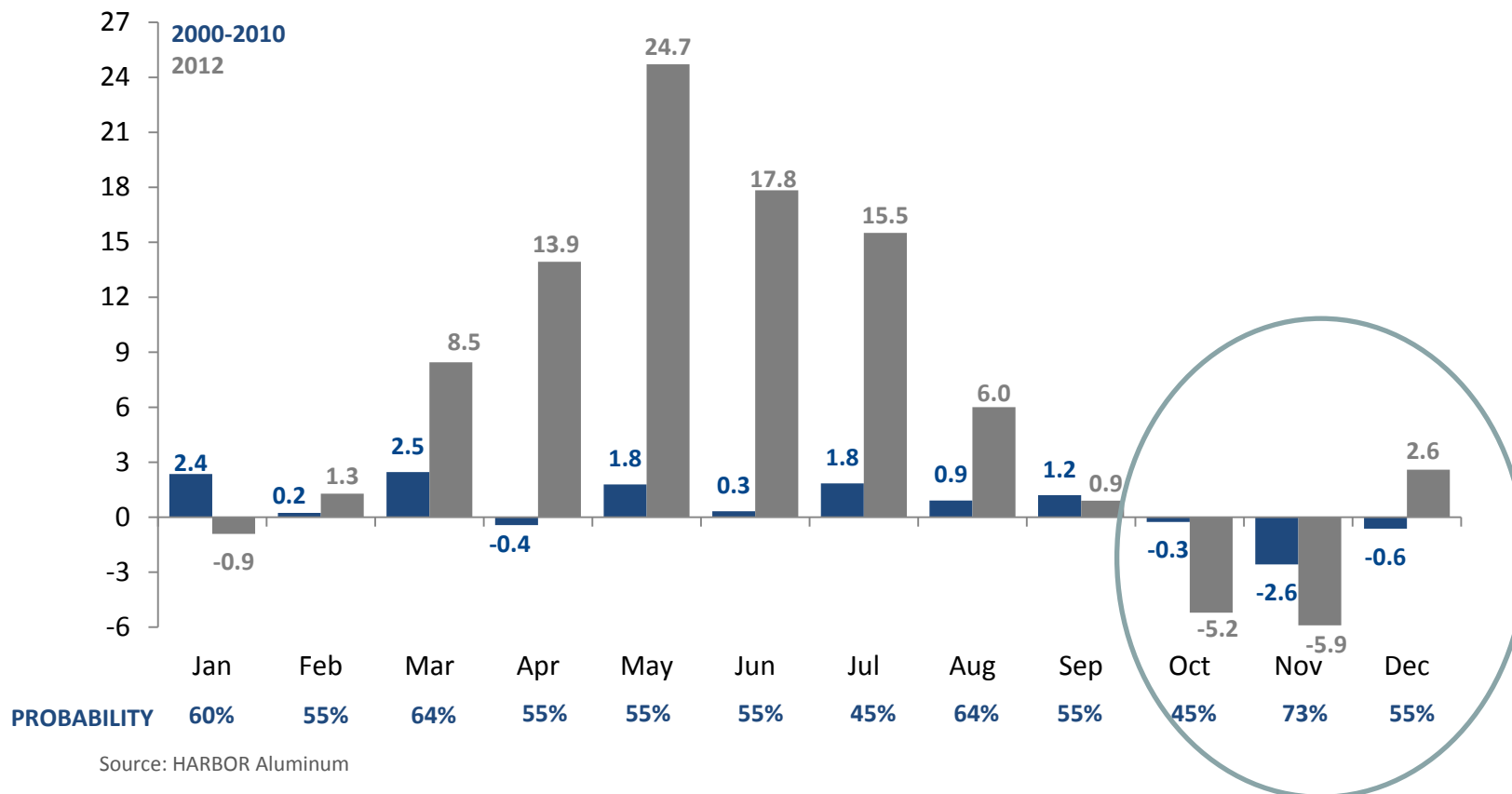


* Assuming LME 3M prices of \$2,077 per mton and SHFE 1M prices of \$2,421 per mton.
Source: HARBOR Aluminum

In Asia, premiums fell according to seasonality patterns...

JAPAN SPOT INGOT PREMIUM SEASONALITY

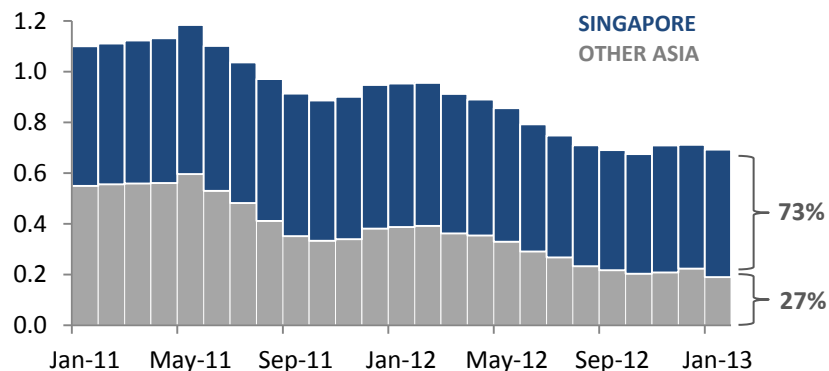
(monthly average % change; 2000-2010)



...as concentration/long queues are not playing much in the region...

LME INVENTORY CONCENTRATION IN SINGAPORE

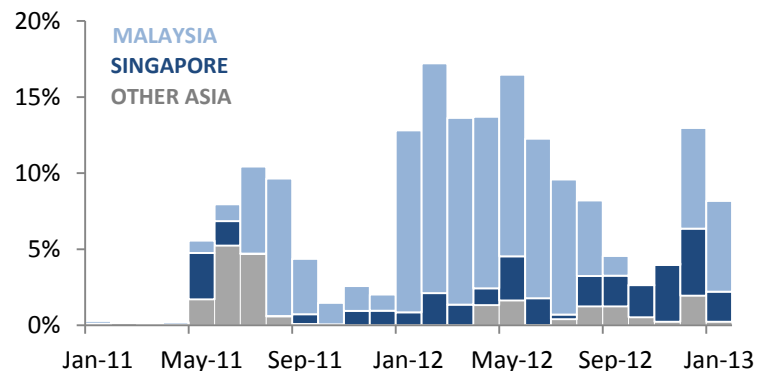
(million mtons)



Source: HARBOR Aluminum with LME data

ASIA CANCELED WARRANTS AS % OF INVENTORIES

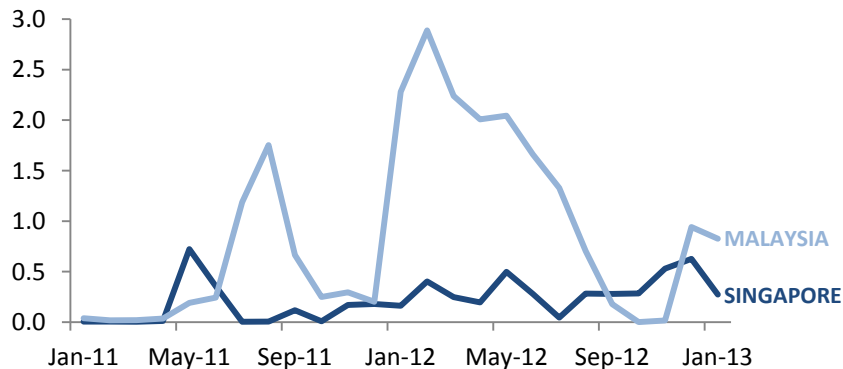
(% of total regional inventories)



Source: HARBOR Aluminum with LME data

LOAD OUT QUEUES IN LME LOCATIONS IN ASIA

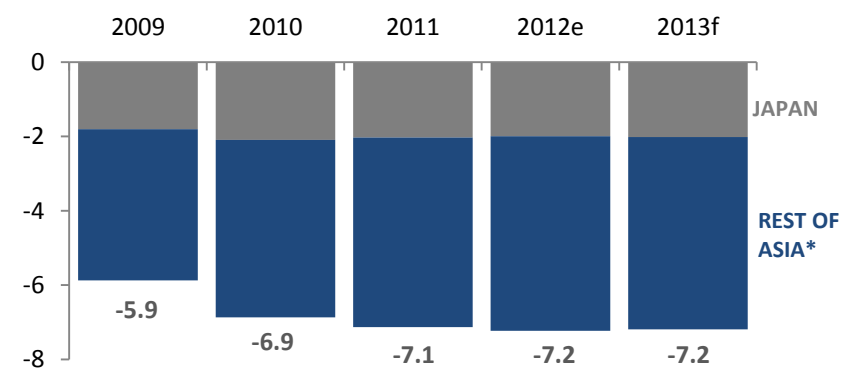
(estimated maximum queue in months)



Source: HARBOR Aluminum with LME data

ASIA* PRIMARY ALUMINUM MARKET BALANCE

(million mtons; negative balance indicates market deficit)



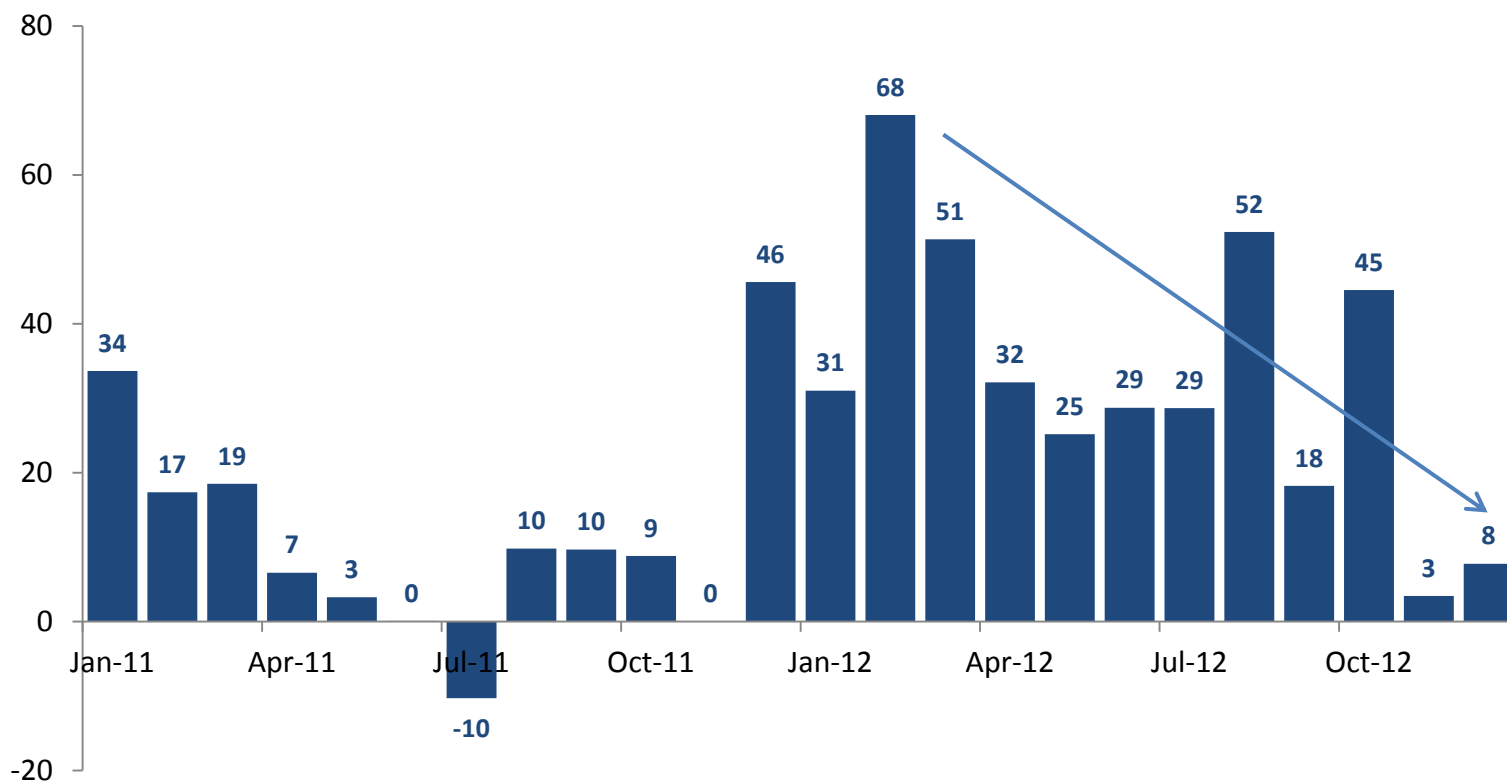
Source: HARBOR Aluminum

*Excluding China and Middle East

...and as China imported less quantities of metal

CHINA UNWROUGHT UNALLOYED ALUMINUM NET IMPORTS

(monthly data; thousand mtons)



Source: HARBOR Aluminum

The Americas healthy and expected to accelerate; Europe's contraction easing

↑ NORTH AMERICA

Overall Demand – Healthy and accelerating gradually

- ↑ **Transportation** – Automotive & aerospace demand stays 'hot'
- ↑ **Electrical** – Conductor shipments up 40% y/y in November
- ↑ **Building & Construction** – Continues to gain momentum
- ↓↑ **Packaging** – Remains as the laggard; contracting in late 2012
- End user demand growing at the fastest pace in two years in January
- Motor vehicle and parts output at all time highs in December
- Housing starts up 40% y/y in Q4 2012
- Domestic can stock orders at multi-year lows in December

↑ BRAZIL

Overall Demand – Back in expansion mode; should accelerate

- ↓ **B&C** – Latest hard data was still not showing any improvement
- ↓ **Transportation** – Auto production was still contracting in November
- ↓ **Electrical** – Sector activity contracting in late 2012
- ↑ **Packaging** – Was expanding in November 2012, after contraction in July-October
- Brazil manufacturing activity left contraction zone in October and then gain some traction in November-December... better prospects for 2013

↑ MEXICO

Overall Demand – Strong growth with some seasonal easing

- ↑ **B&C** – Output temporarily stalled as usual as the new government takes the office... expected to resume strong growth soon
- ↑ **Transportation** – Significant slow down in December 2012
- ↑ **Packaging** – Beverage sector demand growing steadily
- ↑ **Electrical** – Electrical equipment output growing at modest rates
- Automotive sector cited less strong than expected in early 2013
- Demand for FRP also less robust than expected for the beginning of this year

↓ WESTERN EUROPE

Overall Demand – Still contracting, but rate diminishing

- ↓ **Transportation** – Hard data for October showing heavy contraction
- ↓ **B&C** – Deep contraction mainly in Southern countries
- ↓ **Packaging** – Can beverage segment weakened more in Q4 2012
- Region well inside manufacturing recession, but worst point reached in July and roughly stable rate of decline since then
- Preliminary manufacturing activity estimates for January show contraction easing and even marginal growth in Germany
- However, anemic growth at best expected ahead.



Middle East strong, Asia's growth expected to accelerate

↑ MIDDLE EAST

Overall Demand – Strong growth and accelerating

- ↑ **Transportation** – Prospects of attractive growth ahead
- ↑ **B&C** – Cited hot mainly in Saudi Arabia
- ↑ **Electrical** – Cited hot mainly in Saudi Arabia
- ↑ **Packaging** – Attractive structural growth

- Non-Oil manufacturing output at 2-year highs in UAE in December
- New orders in UAE at four-year highs in December
- Aluminum demand described as hot in Saudi Arabia

↑ CHINA

Overall Demand – Modest pick up since October 2012

- ↑ **B&C** – Investment continues steady at rates of +20% y/y
- ↑ **Transportation** – Auto production slowed down notably in H2 2012
- ↑ **Electrical** – Should receive boost from infrastructure projects
- ↓ **Packaging** – Seasonal monthly contraction in Q4 2012

- Flash manufacturing activity estimates show strong pick up in January
- Manufacturing activity had exited contraction zone since October
- Motor vehicles production up 20% in November-December

↑ SOUTHEAST ASIA

Overall Demand – Strong growth with some seasonal easing

- ↑ **Transportation** – Attractive growth in automotive demand
- ↑ **B&C** – Urbanization trends encouraging for sector
- ↑ **Electrical** – Urbanization trends encouraging for sector
- ↑ **Packaging** – Steady attractive growth

- Indonesia, Malaysia, Thailand remain as hot spots
- South Korea and Taiwan cited less strong in late 2012/early this year
- Premiums stable in consequence... this is only temporarily

↓ JAPAN

Overall Demand – In contraction mode; expected bounce on stimulus

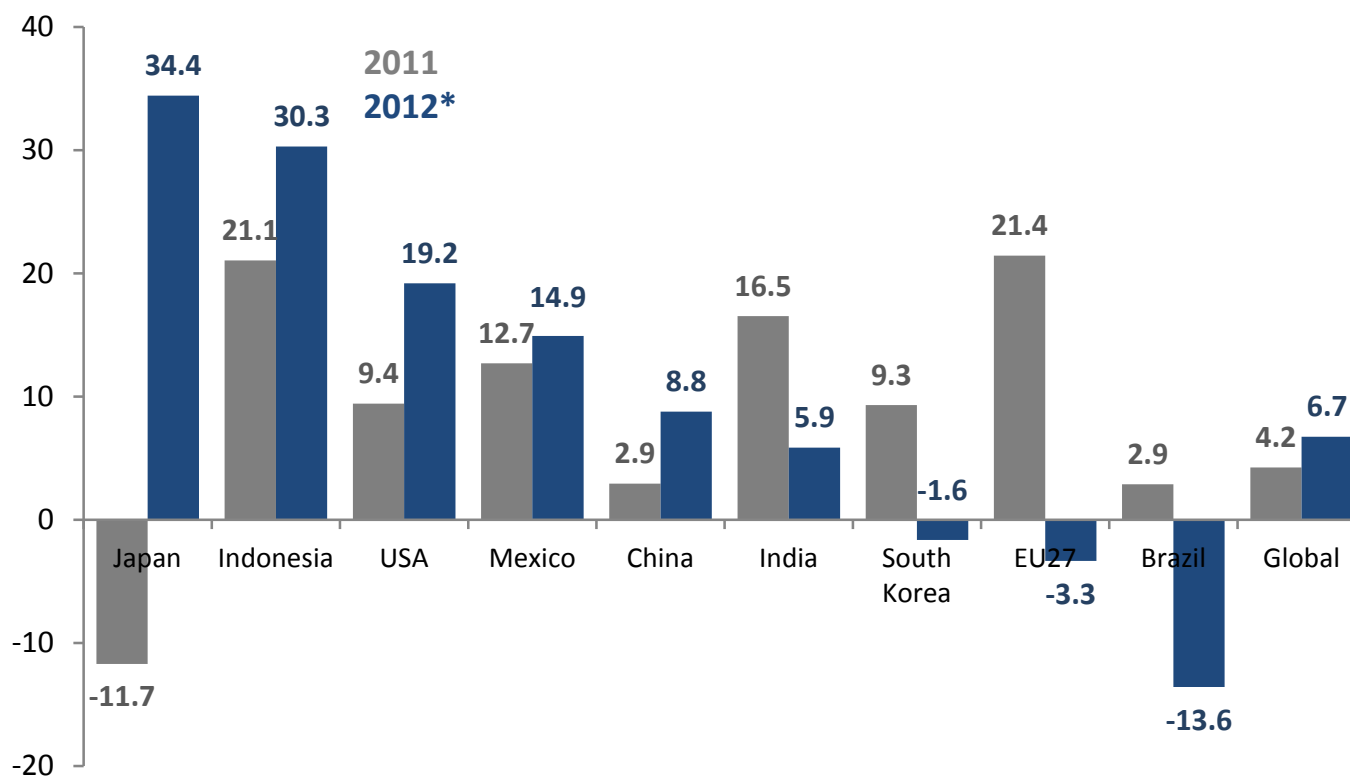
- ↓ ↑ **B&C** – Still expanding y/y, but already contraction m/m
- ↓ **Transportation** – Auto production contracting at two-digit rates in Q4
- ↓ **Packaging** – Can demand contracted m/m and y/y in November
- ↓ **Electrical** – Demand from sector continued to decline in H2

- Auto production down 14% y/y in Sep-Nov more weakness in Dec-Jan
- Construction activity still growing 4% y/y, but falling m/m since July. Extrusions contracting y/y since August 2012
- Consumer electronics sector weakening in the beginning of this year

Southeast Asia and North America led in automotive growth...

AUTOMOTIVE SECTOR DEMAND GROWTH BY COUNTRY

(average annual % growth rates)



Source: HARBOR Aluminum with METI, GAIKINDO, FRB, AMIA, CNBS, SIAM, KAMA, Eurostat, IBGE and Bloomberg data.

*January-November 2012 data

Japan: Passenger cars, buses and trucks production

USA: Motor vehicles and parts IP

India: Vehicle sales domestic & total

EU27: Motor vehicles production

Indonesia: Automotive production

China: Automobile production

South Korea: Vehicle production

Brazil: Automotive vehicles production

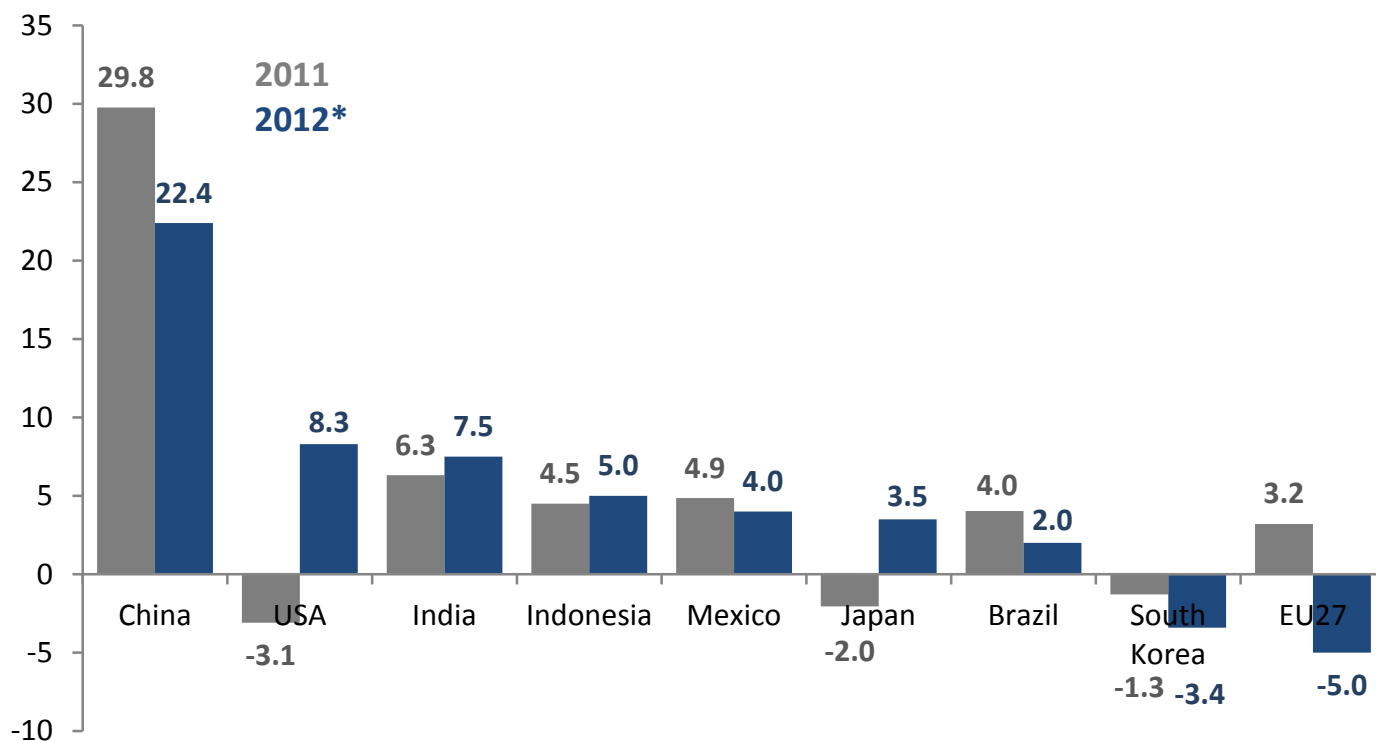
Global: Vehicle sales

Mexico: Motor vehicle production

...as well as bulding and construction, only behind China...

CONSTRUCTION SECTOR GROWTH BY COUNTRY

(average annual % growth rates)



Source: HARBOR Aluminum with CNBS, US Census Bureau, ICSO, BPSI, INEGI, OECD, METI, KNSO and Eurostat data.

*January-November 2012 data

Japan: Construction activity

USA: Construction spending

India: Construction GDP (real)

EU27: Construction production (buildings)

Mexico: Construction production

Indonesia: Construction GDP (real)

China: Fixed assets investment in construction and installations

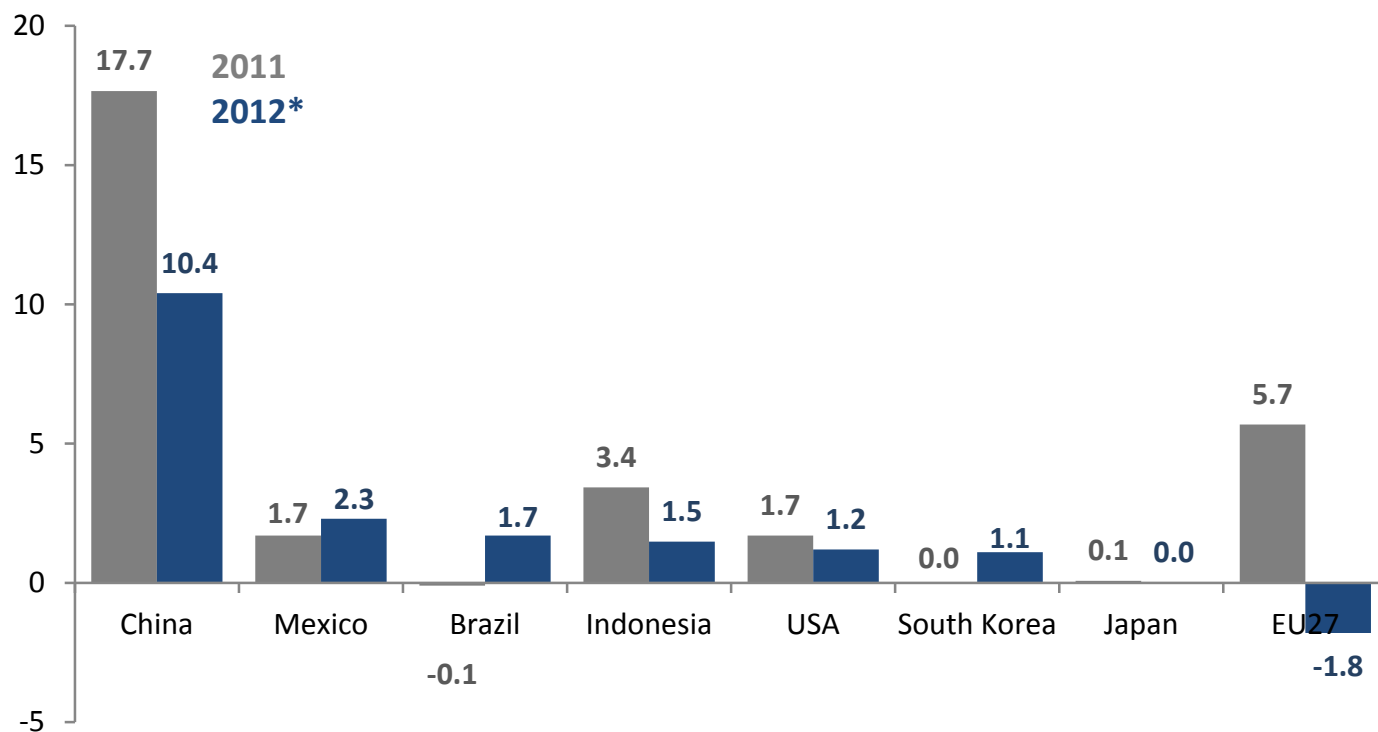
South Korea: Value of construction completed

Brazil: Construction production

...while beverage sector growth was almost fully delivered by the Emerging World

BEVERAGE SECTOR GROWTH BY COUNTRY

(average annual % growth rates)



Source: HARBOR Aluminum with Aluminum Association, Eurostat, METI, CNBS, INEGI, KNSO, BPSI and IBGE data.

*January-November 2012 data

Japan: Aluminum cans for beverage output

USA: Can stock shipments

South Korea: Domestic beverage shipments

Brazil: Beverage production

Indonesia: Manufacturing food, beverages and tobacco GDP

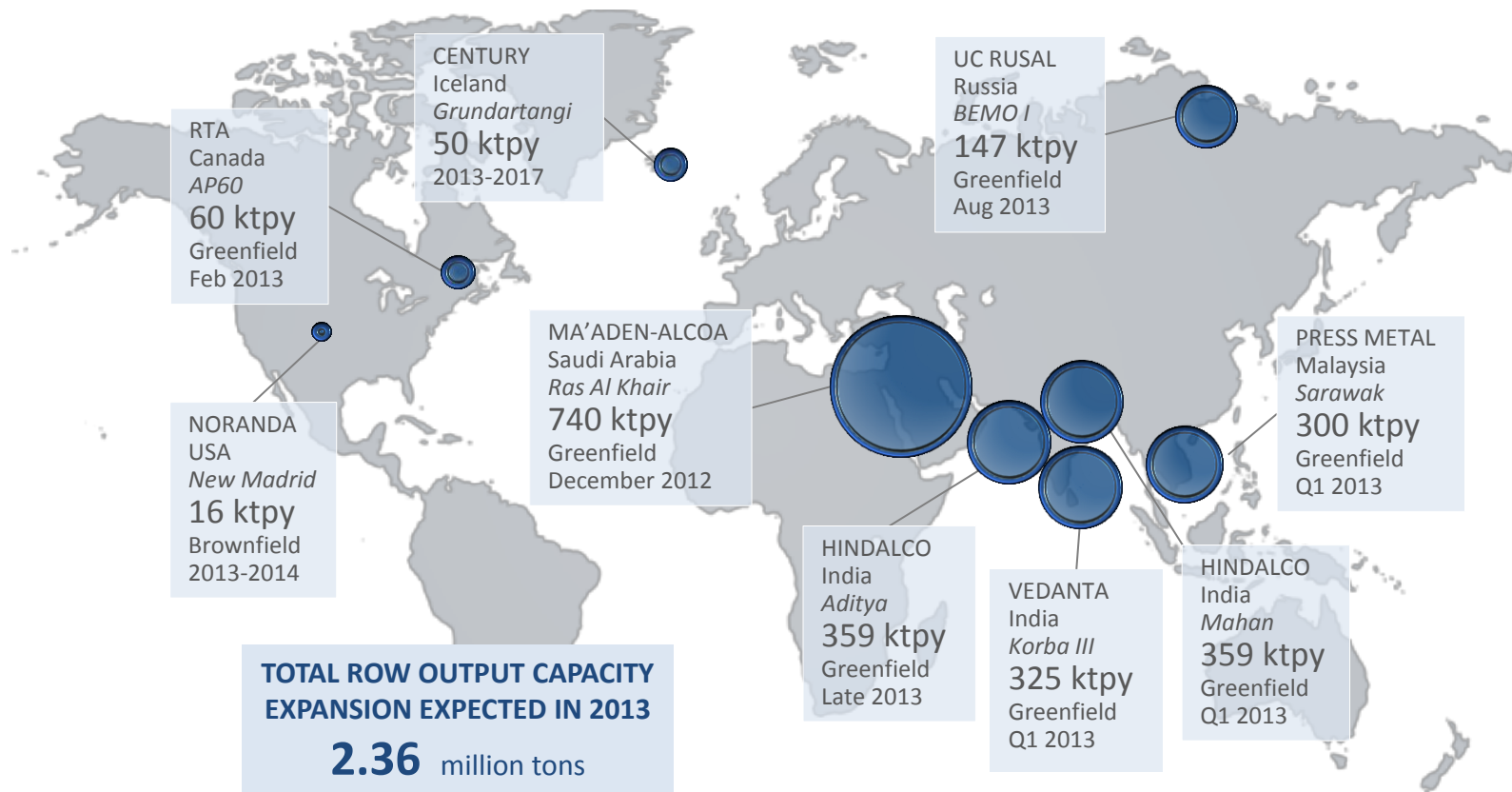
China: Soft drinks production

EU27: Beverage production

Mexico: Food and beverages production

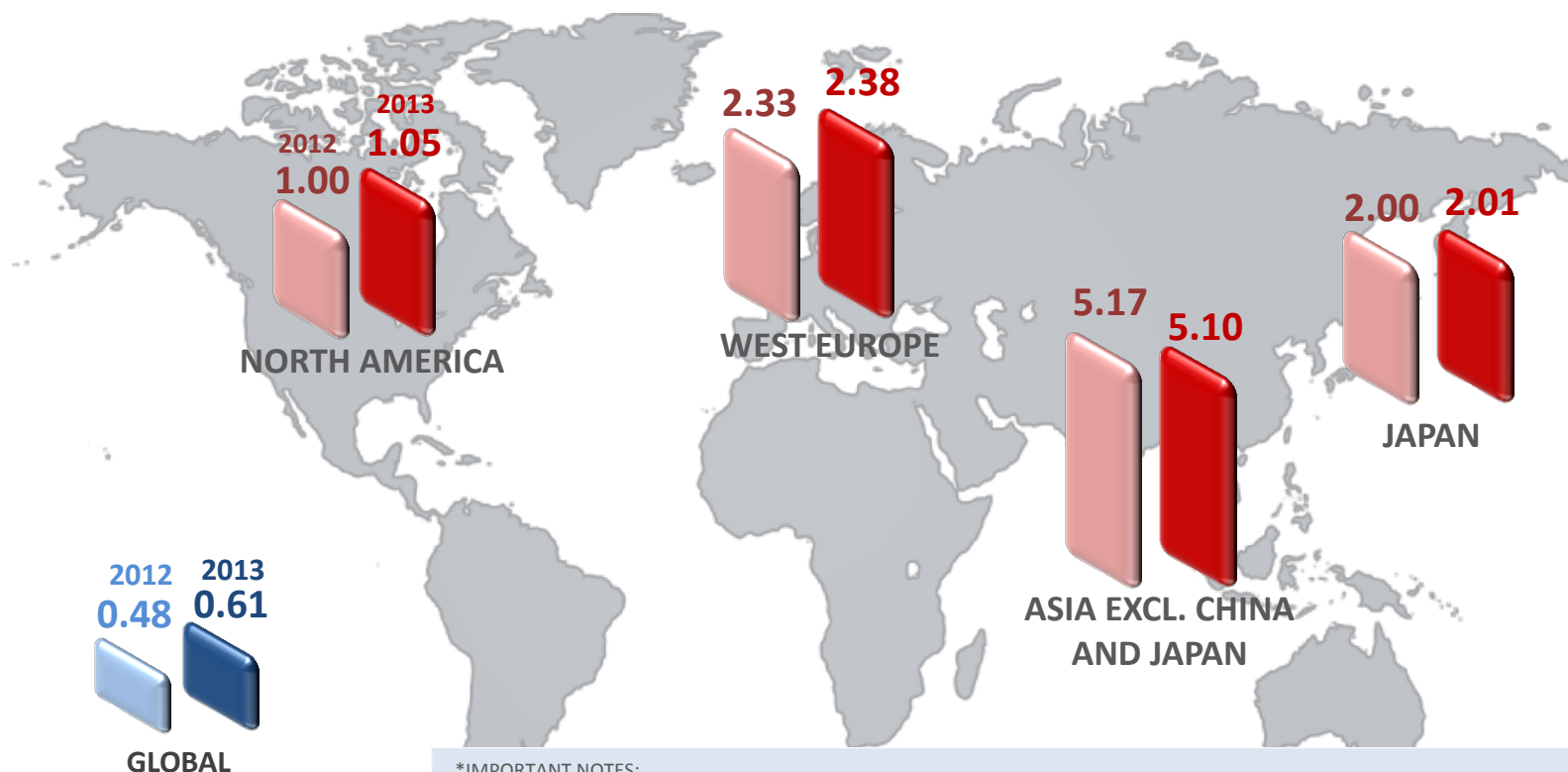
Asia is best positioned to benefit from primary output expansions in 2013

ROW PRIMARY ALUMINUM OUTPUT EXPANSION PROJECTS IN 2013



Regional deficits to widen in North America & West Europe, but not in Asia...

EXPECTED PRIMARY ALUMINUM MARKET DEFICITS BY REGION 2012-2013*
(million mtons)



***IMPORTANT NOTES:**

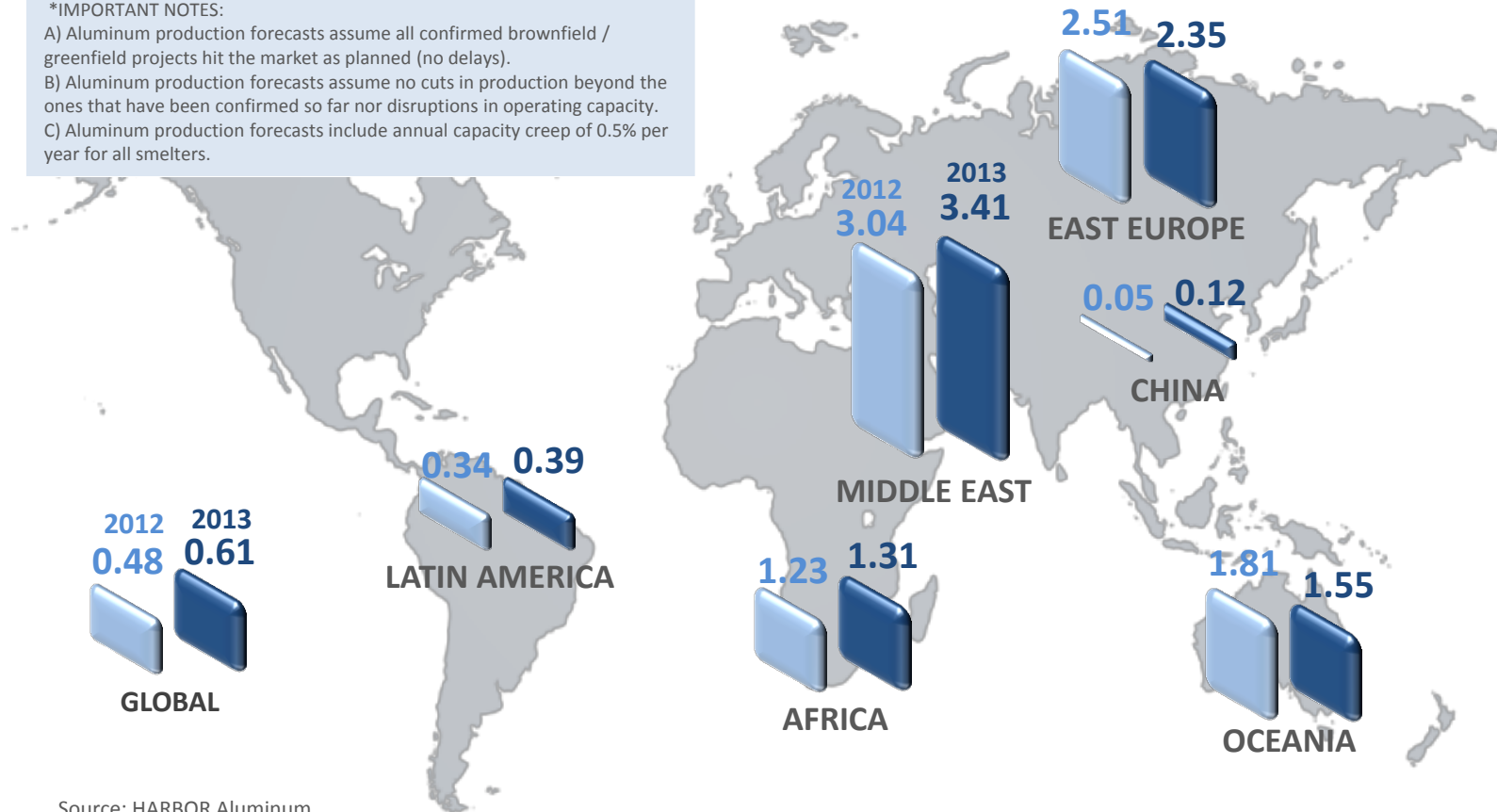
- A) Aluminum production forecasts assume all confirmed brownfield / greenfield projects hit the market as planned (no delays).
- B) Aluminum production forecasts assume no cuts in production beyond the ones that have been confirmed so far nor disruptions in operating capacity.
- C) Aluminum production forecasts include annual capacity creep of 0.5% per year for all smelters.

...while regional surpluses will only increase significantly in the Middle East

EXPECTED PRIMARY ALUMINUM MARKET SURPLUSES BY REGION 2012-2013* (million mtons)

***IMPORTANT NOTES:**

- A) Aluminum production forecasts assume all confirmed brownfield / greenfield projects hit the market as planned (no delays).
- B) Aluminum production forecasts assume no cuts in production beyond the ones that have been confirmed so far nor disruptions in operating capacity.
- C) Aluminum production forecasts include annual capacity creep of 0.5% per year for all smelters.



Conditions behind record high regional premiums are not likely to go away soon

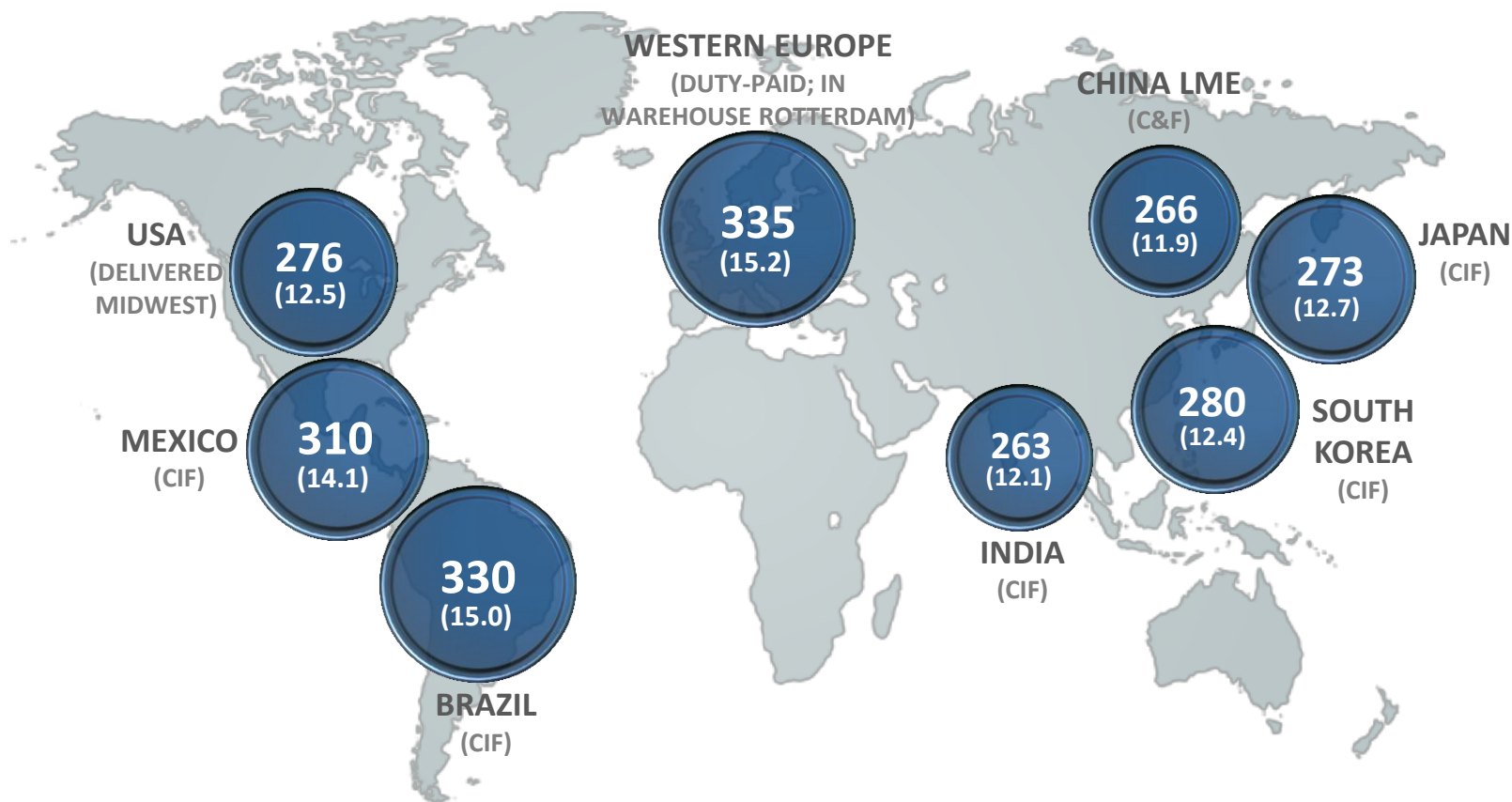
	EXPECTED PHYSICAL MARKET CONDITIONS	VICIOUS CYCLE PLAYING IN THE REGION	OUTLOOK FOR REGIONAL PREMIUMS
THE AMERICAS	Market deficit to widen to 1,019 ktons in 2013 from 979 ktons in 2012	Yes	Worst geographical position to compete for new metal. Expect fresh record highs, billet to suffer the most
WEST EUROPE	Market deficit to widen to 2,374 ktons in 2013 from 2,301 ktons in 2012	Yes	Worst primary aluminum output outlook prospects, will compete for metal against the Americas and Southeast Asia. Expect fresh record highs, P1020 to suffer the most
SOUTHEAST ASIA	Market deficit to narrow to 5,174 ktons in 2013 from 5,236 ktons in 2012	No	Will have to pay higher premiums to compete for its regional new metal against the Americas , West Europe and Japan
JAPAN	Stable. Market deficit to widen marginally to 2,015 mtons in 2013	No	Will have to pay higher premiums to compete for its regional new metal against the Americas, West Europe and Southeast Asia

Source: HARBOR Aluminum

Expect fresh highs for ingot premiums... Europe potentially affected the most

ALUMINUM INGOT SPOT PREMIUMS FORECAST 2013

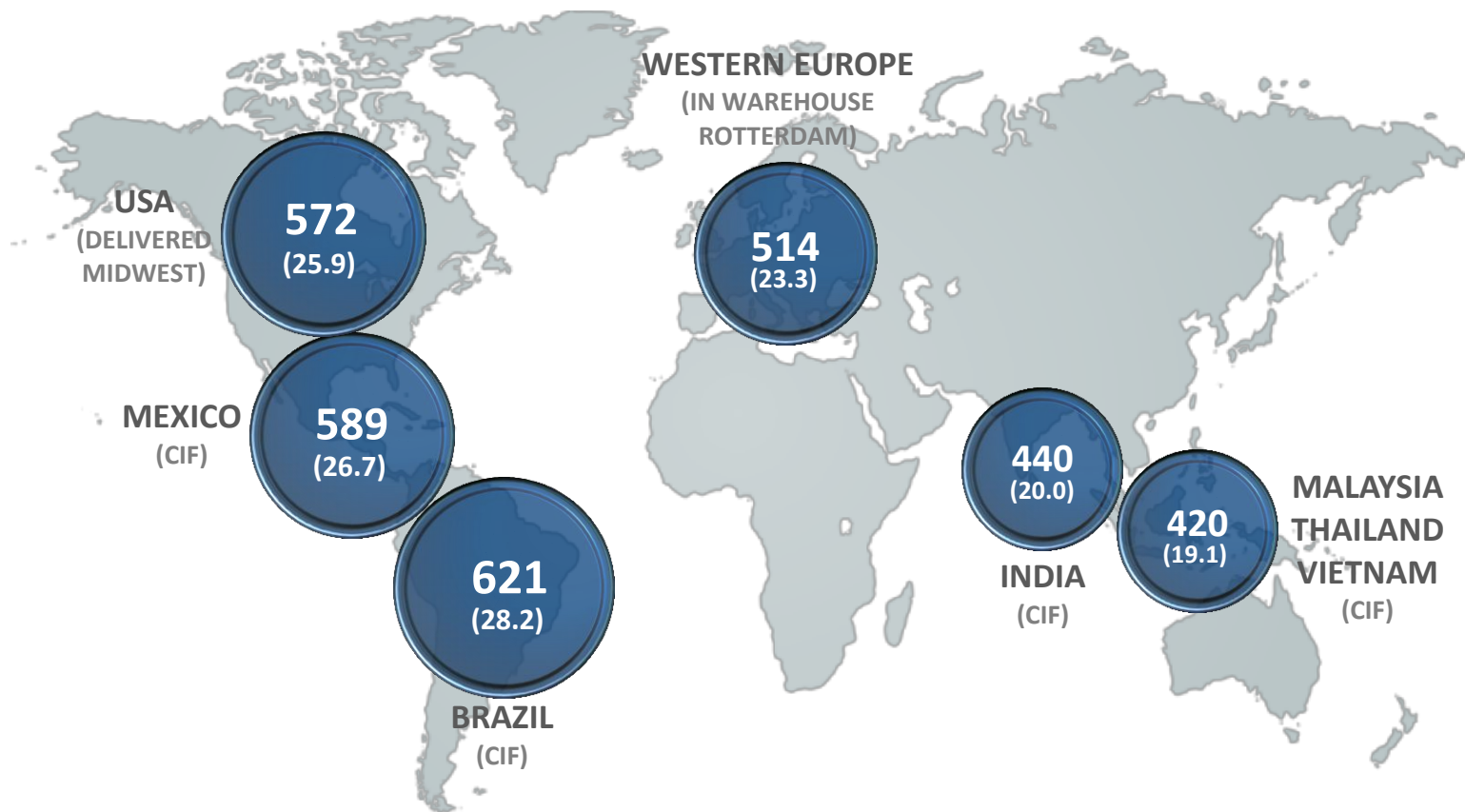
(\$/mton and cent/lb in parenthesis; annual average)



Record levels also expected for billet premiums... The Americas affected the most here

ALUMINUM BILLET FULL SPOT PREMIUMS FORECAST 2013

(\$/mton and cent/lb in parenthesis; annual average)



Largest increases in ingot and VAP premiums potentially during H1

GLOBAL ALUMINUM PREMIUMS DATA AND FORECASTS

(quarterly average)

	2012				2013			
	Q1	Q2	Q3	Q4	Q1f	Q2f	Q3f	Q4f
US Midwest Premium (prompt delivery; cent/lb)	8.1	9.7	11.0	11.0	11.5	12.5	13.0	13.0
US Full 6063 Billet Premium (prompt delivery; cent/lb)	18.9	21.3	22.7	23.2	24.2	25.9	26.7	27.0
Brazil Spot Ingot Premium (CIF; \$/mton)	265	280	300	290	310	325	345	340
Brazil Spot Billet Premium (CIF; \$/mton)	520	540	560	550	585	615	650	635
Mexico Spot Ingot Premium (CIF; \$/mton)	200	237	264	268	280	300	325	330
Mexico Spot Billet Premium (CIF; \$/mton)	480	500	520	525	540	580	615	620
Europe Spot Duty-Paid Premium (In-Warehouse Rotterdam; \$/mton)	190	219	269	285	300	328	351	359
Europe Spot Duty-Unpaid Premium (In-Warehouse Rotterdam; \$/mton)	123	158	214	216	230	255	280	290
Europe Full 6063 Billet Duty-Paid Premium (In-Warehouse Rotterdam; \$/mton)	397	400	423	459	485	505	525	540
Japan Ingot Contract Premium (CIF; \$/mton)	112	121	205	255	243	260	275	290
Japan Ingot Spot Premium (CIF; \$/mton)	115	172	247	232	252	270	285	285
South Korea Spot Ingot Premium (CIF; \$/mton)	135	190	235	239	260	275	290	295
India NalcoTenders Ingot Premium (CIF; \$/mton)	165	174	223	223	230	260	280	280
China LME Premium (C&F; \$/mton)	115	154	235	230	248	260	275	280

Source: HARBOR Aluminum

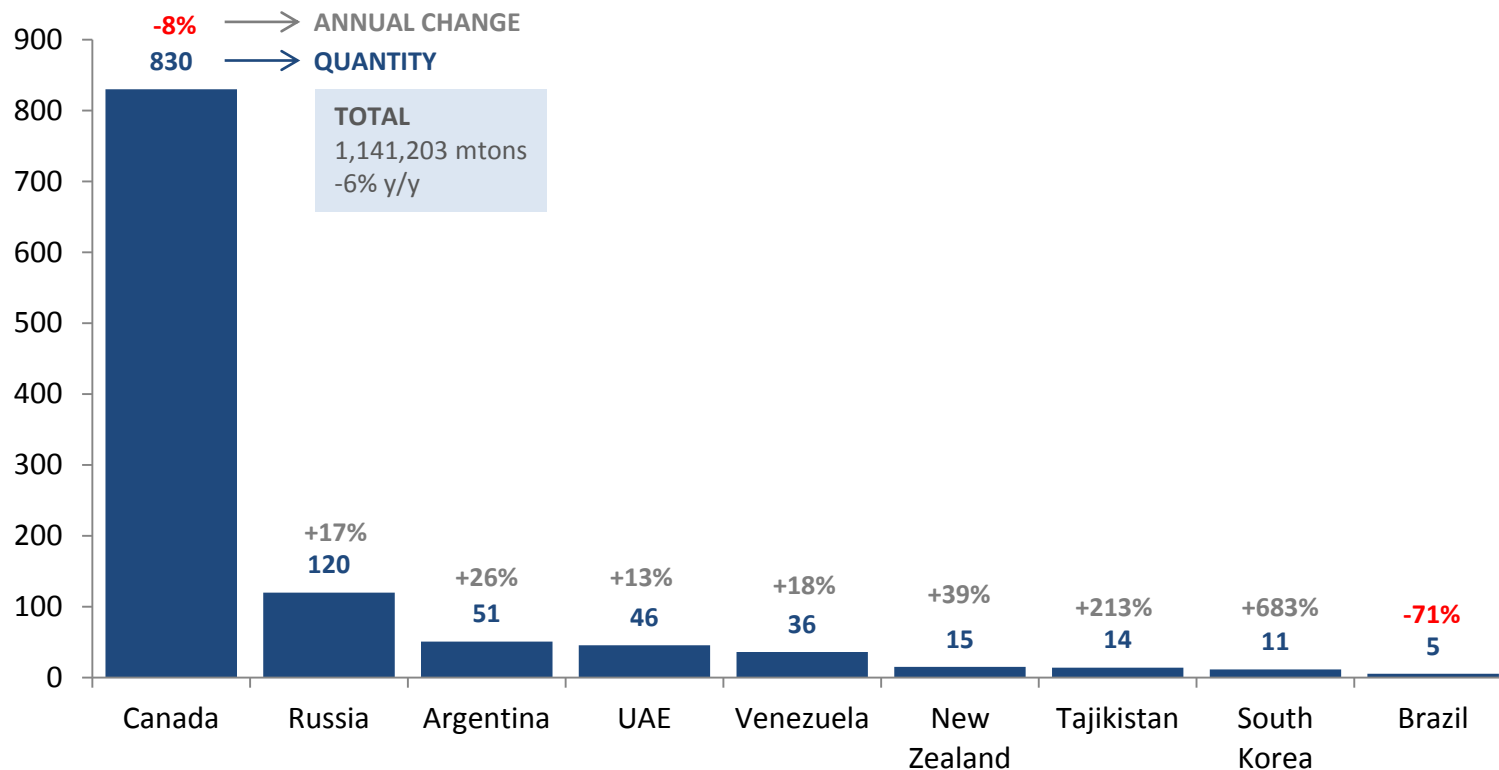


*** INGOT AND VAP TRADE FLOW TRENDS**

Rusal and Aluar gained P1020 share in the US... Canada & Brazil lost

USA UNWROUGHT UNALLOYED ALUMINUM IMPORTS BY TOP ORIGIN

(January-November 2012 data; thousand mtons)

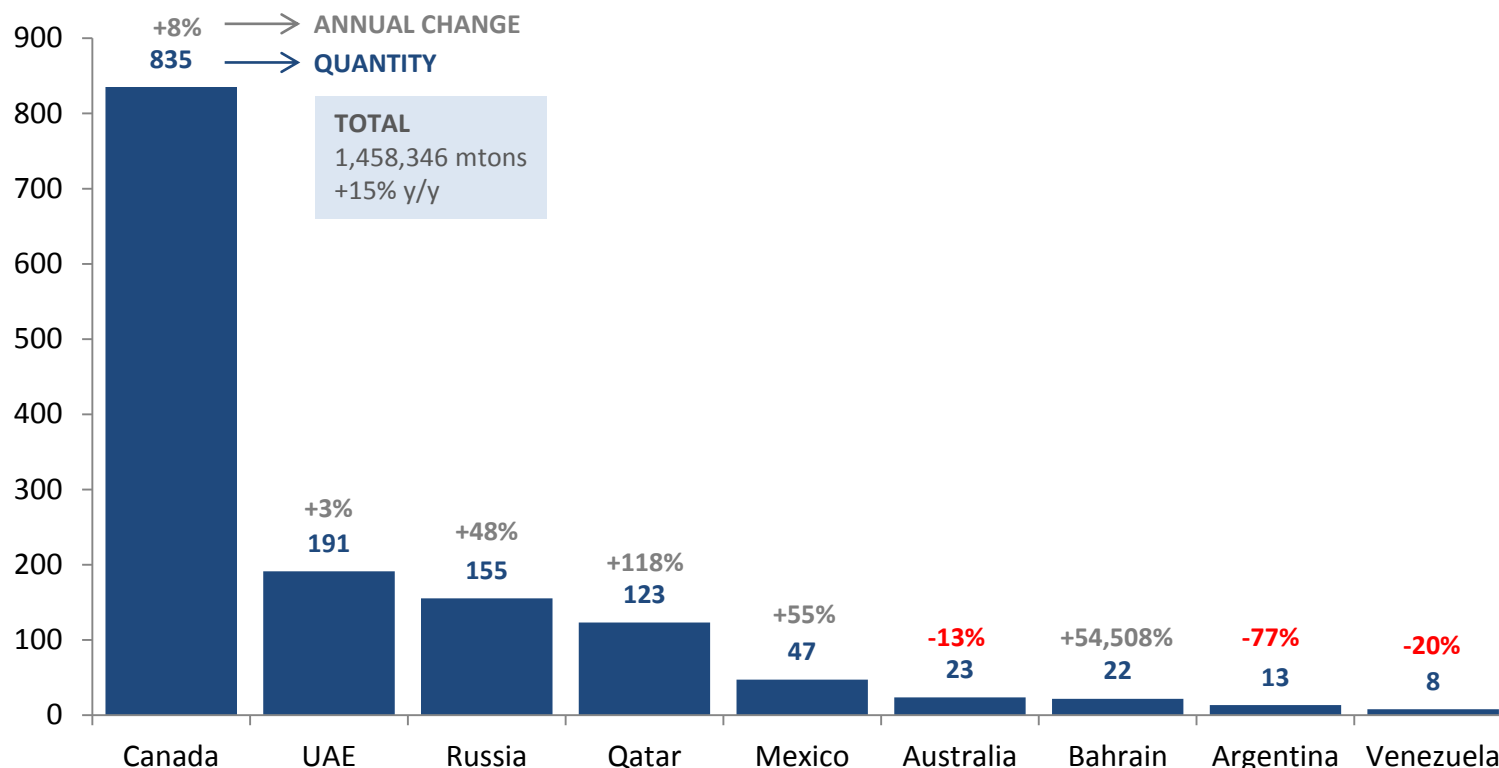


Source: HARBOR Aluminum

Qatalum, Rusal and Alba the clear winners of Billet mkt share...Latam the loser

USA UNWROUGHT ALLOYED ALUMINUM IMPORTS BY TOP ORIGIN

(January-November 2012 data; thousand mtons)

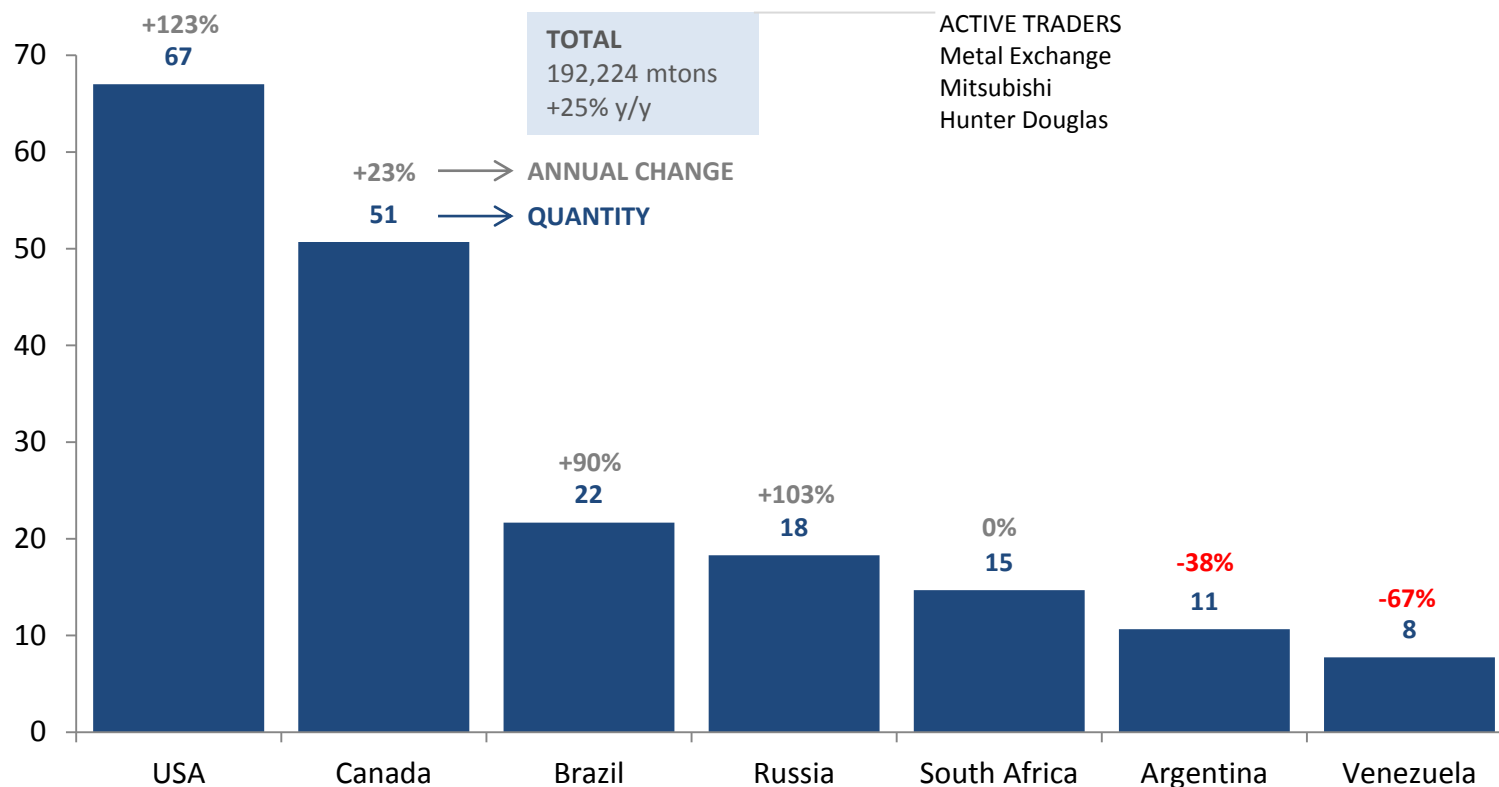


Source: HARBOR Aluminum

Mexico growing importer of ingot... traders grabbing share as Latam falls

MEXICO UNWROUGHT UNALLOYED ALUMINUM IMPORTS BY TOP ORIGIN

(January-October 2012 data; thousand mtons)

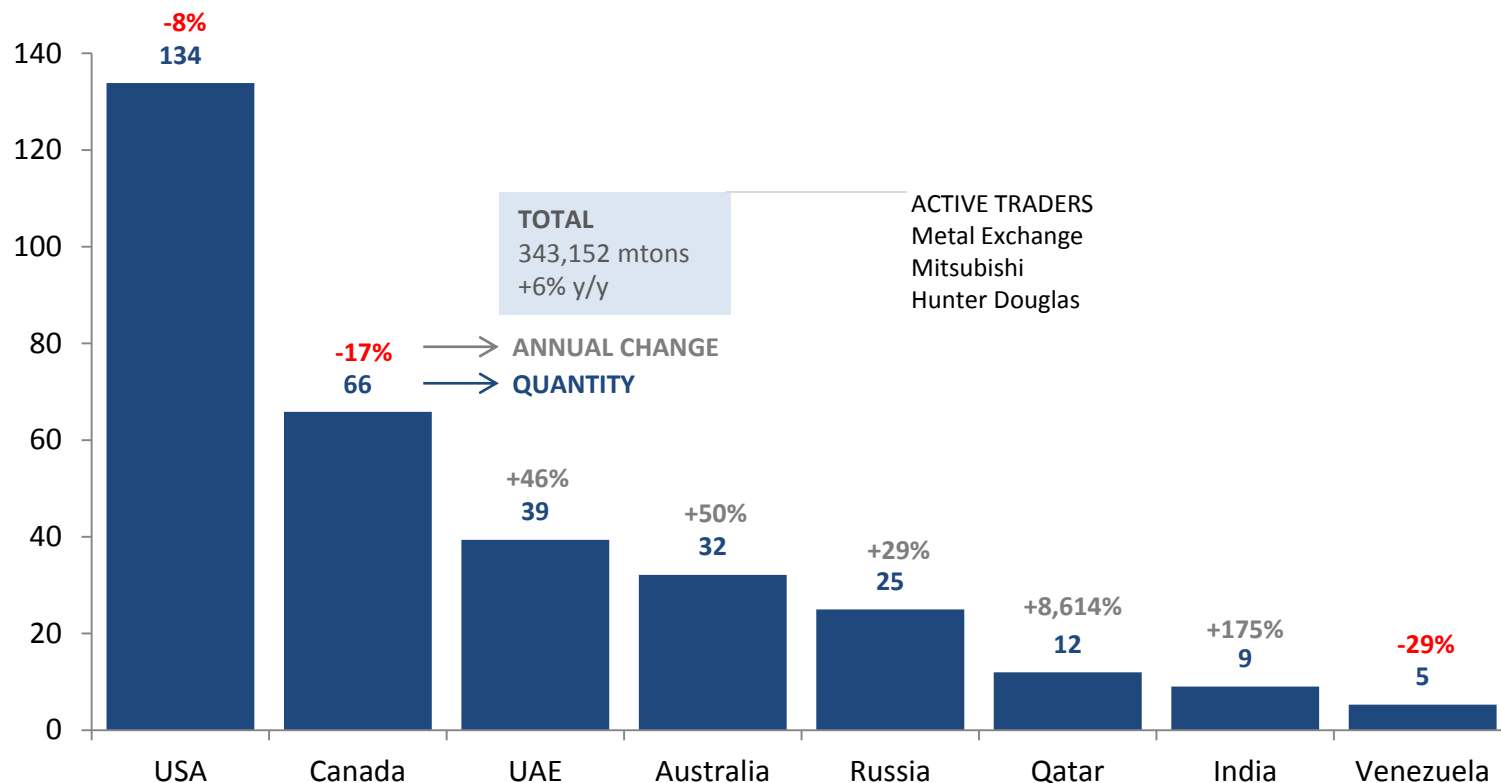


Source: HARBOR Aluminum

...but in VAP, Mexico's needs grew and the Middle East stepped in

MEXICO UNWROUGHT ALLOYED ALUMINUM IMPORTS BY TOP ORIGIN

(January-October 2012 data; thousand mtons)

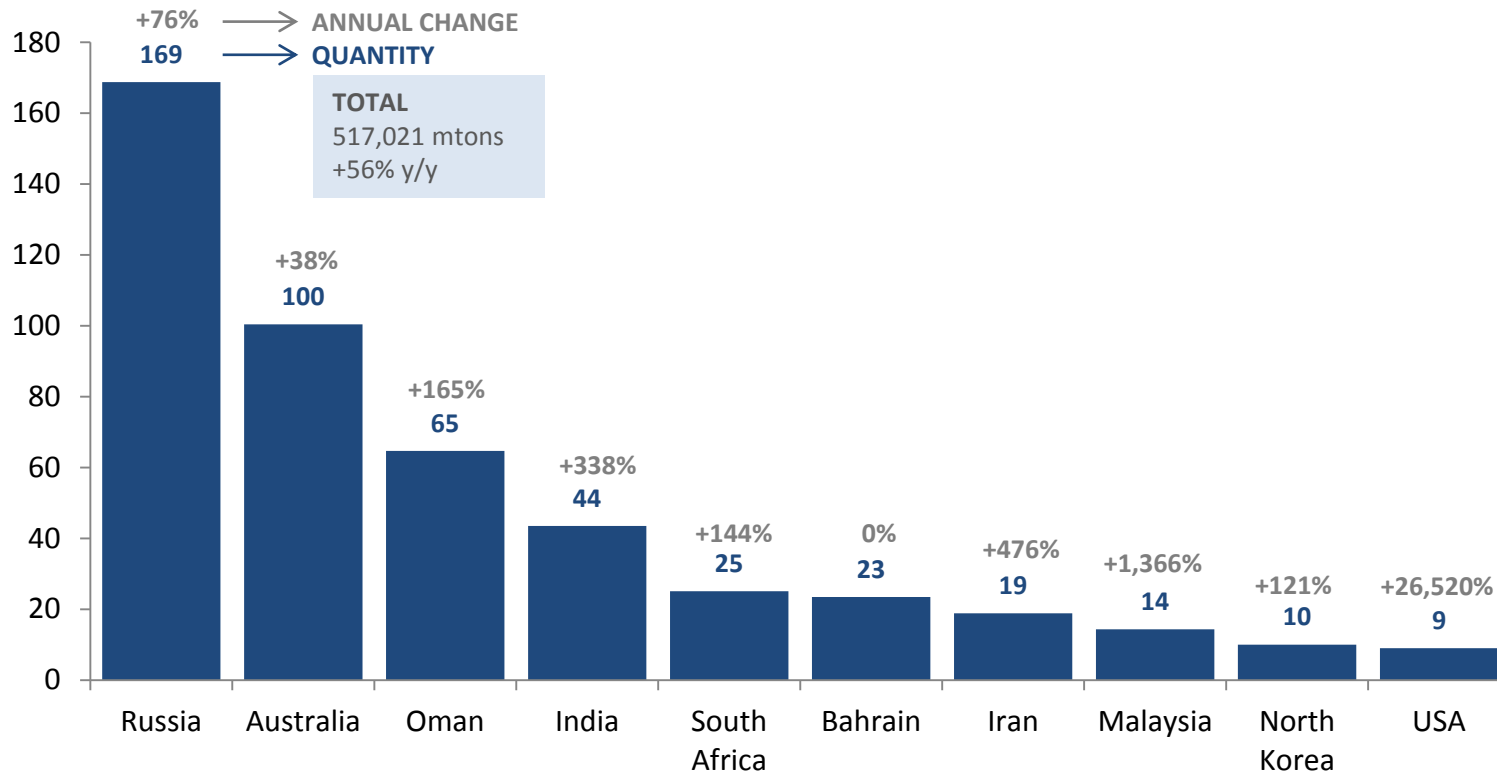


Source: HARBOR Aluminum

China imported 0.5 millions tons of P1020 in 2012... *Rusal/RTA* main suppliers

CHINA UNWROUGHT UNALLOYED ALUMINUM IMPORTS BY TOP ORIGIN

(January-December 2012 data; thousand mtons)

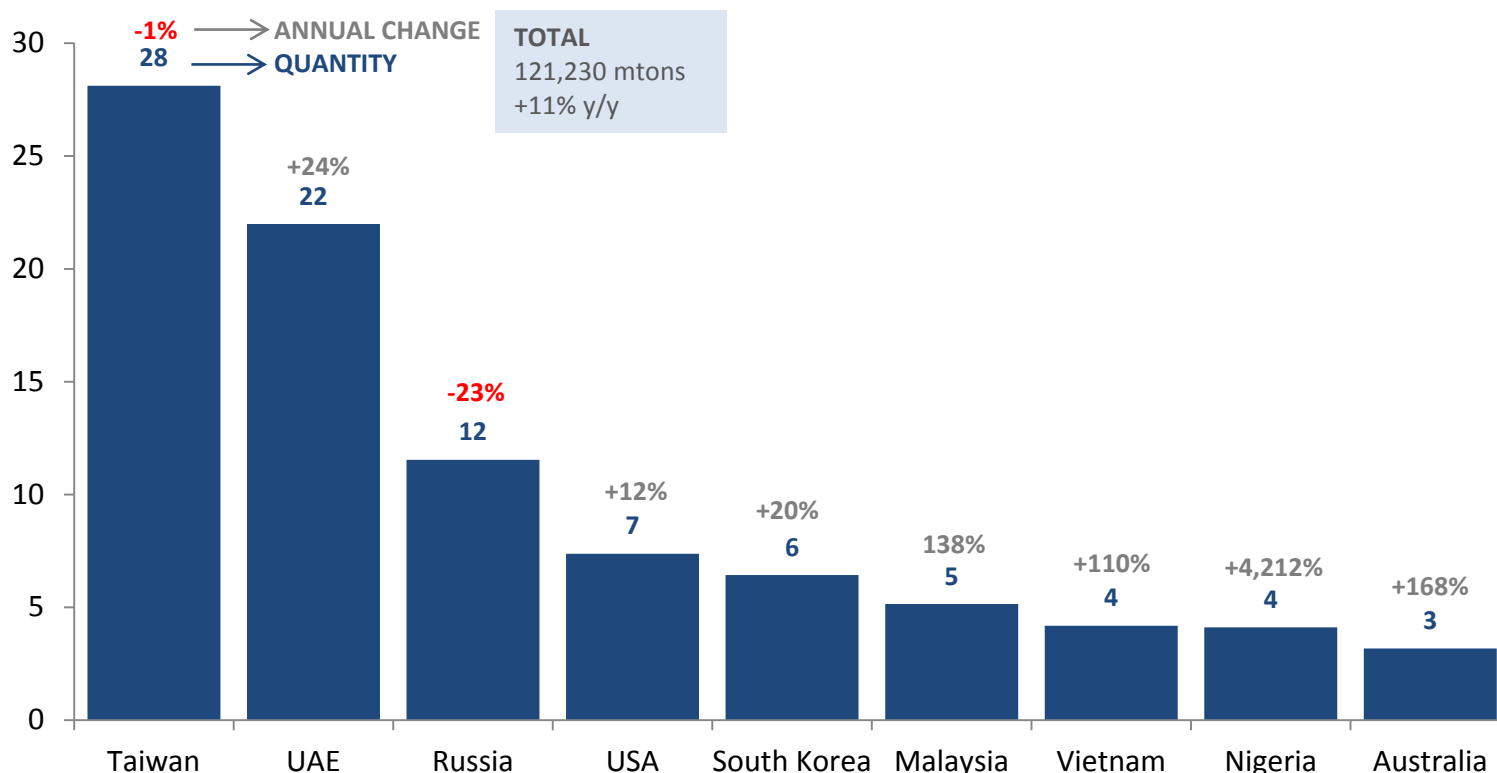


Source: HARBOR Aluminum

China also increased VAP imports...*Dubal/EMAL* penetrating the market

CHINA UNWROUGHT ALLOYED ALUMINUM IMPORTS BY TOP ORIGIN

(January-December 2012 data; thousand mtons)

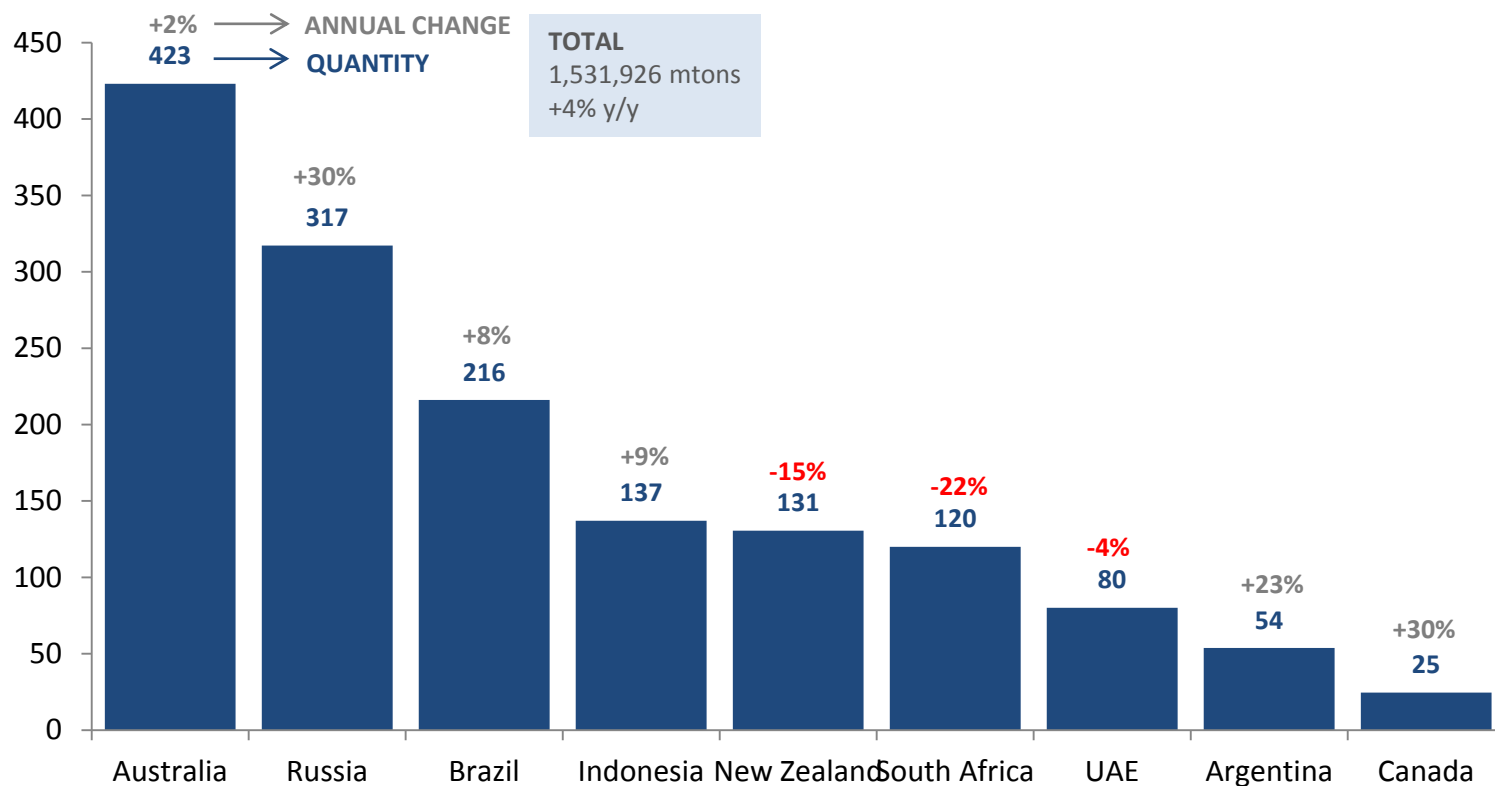


Source: HARBOR Aluminum

UC Rusal mkt share up in P1020 Japanese market on output declines in NZ and SA...

JAPAN UNWROUGHT UNALLOYED ALUMINUM IMPORTS BY TOP ORIGIN

(January-November 2012 data; thousand mtons)

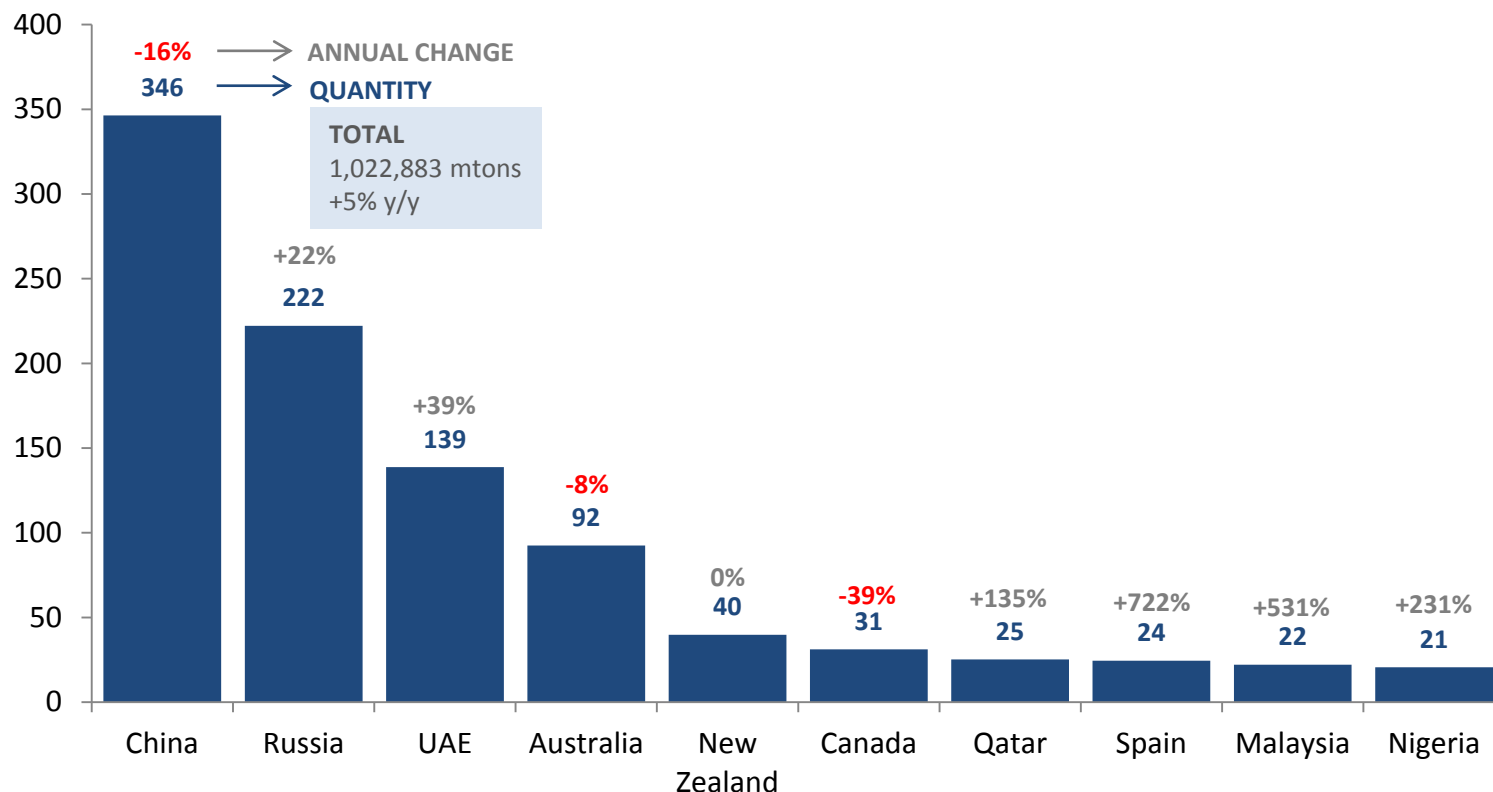


Source: HARBOR Aluminum

...while *Dubal/EMAL* and *Rusal's VAP* exports to Japan grew the most

JAPAN UNWROUGHT ALLOYED ALUMINUM IMPORTS BY TOP ORIGIN

(January-November 2012 data; thousand mtons)

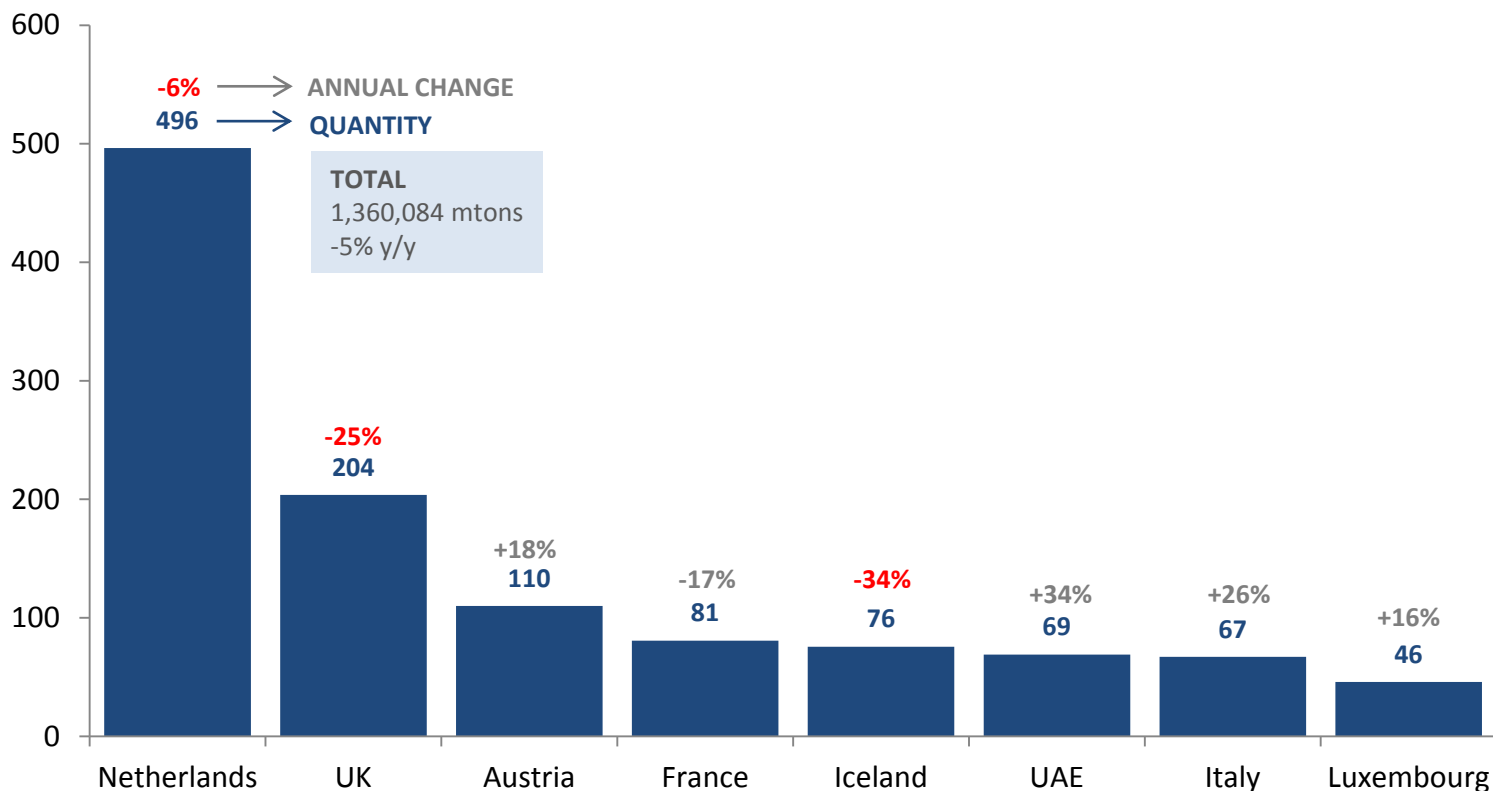


Source: HARBOR Aluminum

Dubal/EMAL sending more P1020 to Germany as Glencore scaled back a bit...

GERMANY UNWROUGHT ALLOYED ALUMINUM IMPORTS BY TOP ORIGIN

(January-October 2012 data; thousand mtons)

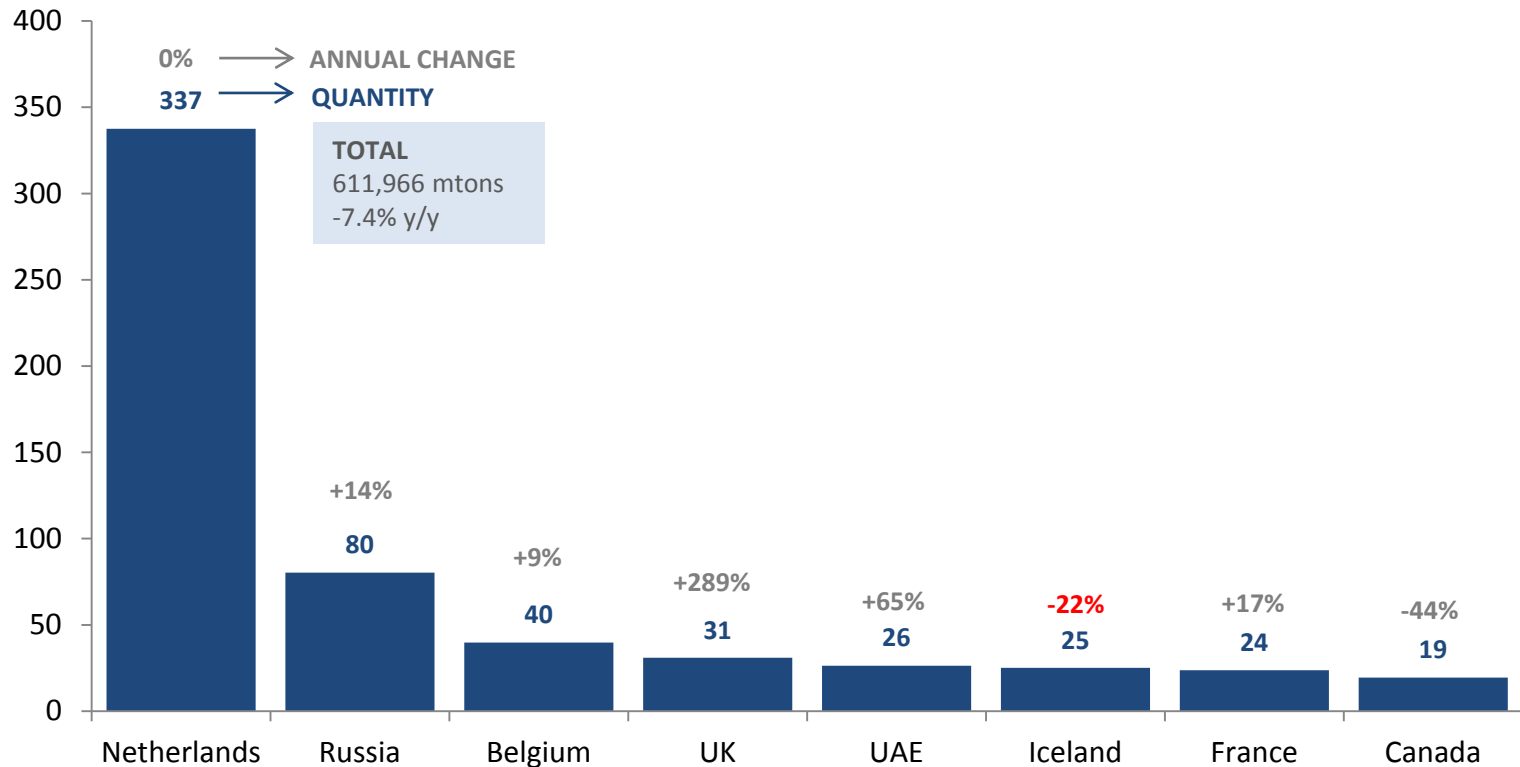


Source: HARBOR Aluminum

... while *Dubal/Emal* and *Rusal* increased its VAP exports to Germany

GERMANY UNWROUGHT UNALLOYED ALUMINUM IMPORTS BY TOP ORIGIN

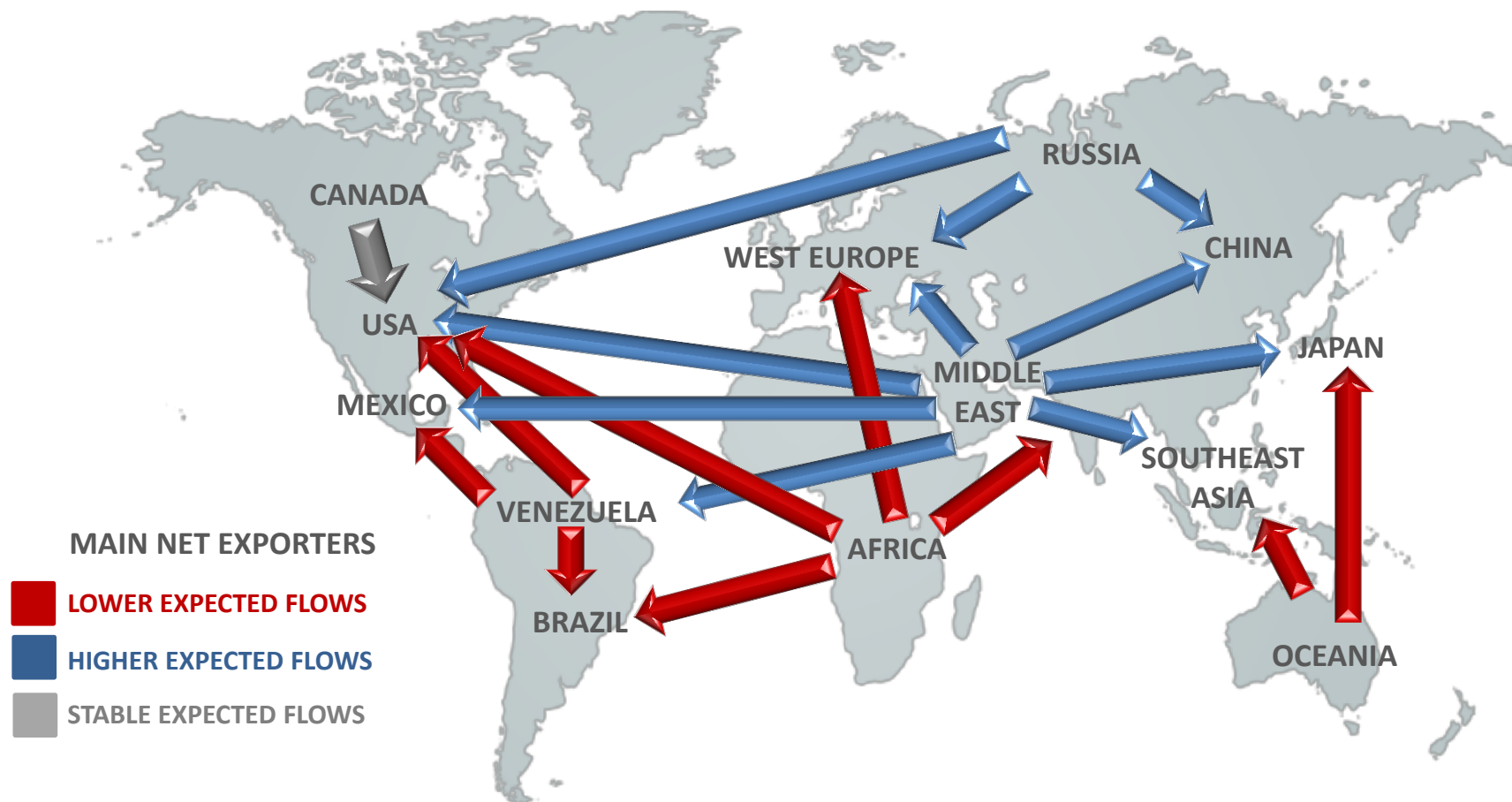
(January-October 2012 data; thousand mtons)



Source: HARBOR Aluminum

No major changes expected in the trade picture... Middle East/Russia to gain the most

MAJOR INGOT/BILLET ALUMINUM TRADE FLOWS 2013





1. RECENT DEVELOPMENTS

SUMMARIZING WHAT WE SAID

1. The vicious cycle that locks metal away from the consumer iterated itself again in December, pushing premiums up across the board and to fresh highs in January in the Americas and Europe.
2. Premiums defied Q4 seasonal patterns and have started Q1 in strong note on pick up in physical demand.

2. OUTLOOK

1. Conditions behind record premiums will not go away soon. Ingot and Value Added Products should continue to reach fresh highs during 2013. More upward pressure expected in H1. The Americas and Europe especially vulnerable to upward pressure.

3. WINNERS

HARBOR'S ASSESSMENT

1. Traders/Financiers/Warehousing companies.
2. Primary producers in ROW as current levels of premiums leave less than 10% of ROW capacity under water. *Alba*, *Qatalum* and *Rusal* gaining market share in the US. *Rusal/RTA* and *Dubal/Emal* in China. Local and foreign traders sales growing strong in Mexico.

4. THOSE AFFECTED

1. Consumers as metal availability continues to shrink and premiums to rise while premiums are hard to hedge. Regionally speaking, the Americas & Europe hurt the most.
2. Traditional suppliers in North America and Europe as consumers look for alternative sources (including building own casthouse).

5. WHAT TO EXPECT

IMPLICATIONS

1. The vicious cycle locking metal away from consumers will stay roughly intact, thus pushing premiums up to fresh highs at the time the Americas and Europe will face a slight increase in their domestic deficit.
2. Industry participants complaining more about the current LME structure/rules but without effectively changing the situation. LME popularity among consumer plummeting but among traders increasing.
3. Consumers actively seeking ways to hedge premiums and find new suppliers (other than their traditional regional sources).
4. Producers trying to have more exposure to higher premiums via shorter contract terms or floating premiums and direct contact with clients (not by traders). Producers selling to warehouses, will continue practice during 2013.

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- Scott Kelley**, Chief Executive Officer, *Service Center Metals*
- Boris Santosi**, Head of Sales & Marketing, *Aluminum Bahrain (Alba)*
- Eugenio Clariond**, Chief Executive Officer, *Cuprum*
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