

# Metals Deals

Forging Ahead 2008 Annual Review

Mergers and acquisitions activity in the metals industry



# Contents



Introduction . . . . .	01
Report highlights . . . . .	02
Deal totals . . . . .	04
Deal makers . . . . .	06
Deal places . . . . .	11
North America . . . . .	14
Asia Pacific . . . . .	15
Central and South America . . . . .	16
Western Europe . . . . .	17
Central and eastern Europe . . . . .	18
Looking ahead . . . . .	19
Contact us . . . . .	20

## Methodology

Metals Deals 2008 is based on published transactions from the Thomson Financial M&A database, January 2009. Analysis encompasses only those deals which are completed in the calendar year. Deal values are the consideration value announced or reported including any assumption of debt and liabilities. Figures relate to actual stake purchased and are not extrapolated to 100%. The geographical split of the deals refers to the location of the target company or assets. Deals located in the territory of the Russian Federation are included in the totals for central and eastern Europe. The analysis relates to the supply chain for metals and basic metal products, including recycling. The sector and subsectors analysed include base metal mining (e.g. iron ore, aluminium), metal extraction, processing, the production of basic metal products (e.g. strip, tube) and metal recycling. Comparative data for prior years may differ to that appearing in previous editions of our annual analysis or other current year deals publications as a result of fresh information, methodological differences or refinements in methodology and consequent restatement of the input database. The figure 3 analysis counts deals based on when they are announced but is not conditional on them completing. In this way, deals which were announced late in 2008, but have not completed, are included to provide a clearer view of quarterly trends without a bias for deals that have not completed yet due to timing. This is in contrast to the remainder of the analysis in this publication which is contingent on deals completing. A full list of transactions throughout 2008 is available by visiting the Metals Deals website at [www.pwc.com/metalsdeals](http://www.pwc.com/metalsdeals).

# Introduction 01



After forging ahead in previous years, deal-making in the metals industry fell away sharply in 2008 as world demand fell and prices plummeted. The year saw a dramatic and sudden about-turn in the environment for deals. Optimism that China would continue to compensate for

downturns elsewhere was replaced by increasing concern about a weakening in global demand, including China.

Metals Deals 2008 reviews deal activity in the metals industry. The report is the latest annual review edition in our Forging Ahead series on deal-making in the sector. It sits alongside our quarterly Forging Ahead reports and is one of a range of deals publications from PricewaterhouseCoopers<sup>1</sup>, covering the mining, aerospace & defence, renewable energy, power, oil & gas, forest, paper & packaging sectors as well as metals. Together the family of deals reports provides a comprehensive analysis of M&A activity across industries world-wide.

We examine both the rationale behind the overall deal trends and look at the key individual deals. We analyse the year under review in the context of the preceding three years, and look ahead to the future direction of deal-making in the sector.

We also highlight, in a series of deal dialogues throughout the report, some of the critical issues for companies engaging in deal activity within the sector. Drawing on our global experience as an adviser to metals industry M&A players, our commentary addresses all key markets in the sector.

Looking ahead, we examine the effect of continuing uncertainties on deal-making in the sector. We look at the consequences of the very different environment. We consider the immediate outlook for deal-making in the sector will remain subdued. Cash conservation will be the principal name of the game but we do not rule out, once price expectations between buyers and sellers converge and with any easing of market conditions, the prospect of a fast revival in deal activity.

A handwritten signature in black ink, appearing to read 'Jim Forbes', written over a light blue horizontal line.

Jim Forbes  
Global Metals Leader  
PricewaterhouseCoopers (Canada)

<sup>1</sup> PricewaterhouseCoopers' refers to the network of member firms of PricewaterhouseCoopers International Limited, each of which is a separate and independent legal entity.

# 02 Report highlights

## Deals stall with the fall

It is widely believed that the Autumn 2008 collapse of Lehman Brothers was the catalyst for the global credit crisis leading to a deep global recession, resulting in a steep fall in commodity prices and a stalling of deal value. Ahead of this, metals deal sizes had retreated from the high values seen in 2006 and 2007. Average deal value in the first half of 2008 was US\$301 million compared to US\$318 million in the first half of 2007. In the second half of the year, average deal value fell to US\$253 million. These totals are based on completions and, therefore, include a time lag. When analysis is restricted to newly announced deals, the average value of such deals in the second half of 2008 was just US\$125 million. Total deal value of announced deals fell even further – from a high of US\$51.1bn in Q3 2007 to a tenth of this level a year later.

## Big deals replace the mega deals

Gone were the US\$10bn plus deals that had dominated metals deals in 2006 and 2007. In their place came a surge in US\$1bn plus deals. The strength of deal activity, ahead of the rapid turnaround in world markets, was reflected in the presence of 29 US\$1bn plus metals deals in 2008 compared to 20 such deals in 2007. In the absence of the US\$10bn plus mega deals, total value plunged from the record US\$144.7bn in 2007 to US\$60.6bn in 2008 but this headline fall disguises a significant rise in sub US\$10bn value.



### The deals spotlight moves east and south

Chinese and Russian companies played a central role in metals M&A activity. Asia Pacific deals reached record highs with total value more than doubling – from US\$7.2bn in 2007 to US\$16.4bn in 2008 – and their share of worldwide metals deal value multiplying more than five-fold. With nearly half of all deals and a third of total deal value, the region rivalled North America for the largest proportion of 2008 M&A activity in the sector. Similar record increases were recorded in South America, spurred by a flurry of deals for Brazilian iron ore assets.

### All eyes turn to the floor

The industry plunges into the downturn with a mix of fortunes. Some companies face distress with weak share prices and problems in refinancing. In contrast, others have relatively healthy balance sheets. Cash conservation will be the immediate priority but there will be many potential buyers alert to a floor for deal activity. In the short term, a series of divestitures will provide opportunities for smaller strategic acquisitions. A more significant revival will hinge on companies' assessment of the demand outlook but, when positive signs come, there will be a number of players ready to move quickly.

# 04 Deal totals

2008 went from the steep to the deep. A steep rise in commodity prices in the first half of the year was followed by a deep slump. The momentum for deal activity followed a similar pattern as the credit crisis intensified and the full scale of the global downturn, affecting metal-consuming industries such as construction and the automotive sector, was realised. Average announced deal value in the first half of 2008 had retreated from the highs of 2007, only to tail off steeply in the second half to barely a third of 2007 value. Total deal value plummeted even further, to as low as a tenth of the previous year's quarterly highs.

Metals prices that, in some cases, had seen an unprecedented rapid rise in the first half of 2008 went into freefall. Around the world hot band prices fell from over US\$1,000 per tonne to just over US\$500 per tonne by year end. Price declines for copper and aluminium were nearly as dramatic with both shedding around 60% or more of their July and August 2008 price highs. At these lower price levels, it is estimated that a large portion of global aluminium production could be operating at a loss. For example, RUSAL, the world's largest aluminium and alumina producer had to take a US\$4.5bn bail-out loan from the Russian government.

The suddenness and severity of the global recession has led companies to quickly switch their focus away from M&A and make cash conservation their number one priority. The autumn intensification of the financial crisis, with the collapse of Lehman Brothers in September 2008, was the trigger for a rapid deterioration in world market outlook. Ahead of this, metals deal sizes had retreated from the high values seen in 2006 and 2007. Average completed deal value in the first half of 2008 was US\$301 million compared to US\$318 million in the first half of 2007. In the second half of the year average deal value fell to

US\$253 million. The average for 2008 as a whole was US\$275 million (deals announced and completed in the year), compared with US\$352 million in 2007. These averages are based on completions and, therefore, include a time lag. When analysis is restricted to newly announced deals, the average value in the second half of 2008 was just US\$125 million.

As a result of falling deal sizes, while total deal activity was only just short of the 2007 level, aggregate deal value fell 58%, from a record-breaking US\$144.7bn in 2007 to US\$60.6bn in 2008 (see figure 1). Indeed, total deal value fell below the 2006 level and is on a trend to return to levels last seen in 2003-2005. Total announced deal value in the second half of 2008 was just US\$10.8bn, pointing to the prospect of relatively low totals in 2009. Several factors drove the downward trend. Valuations for much of the year meant that there were fewer targets available at attractive prices. Many companies chose to concentrate on the integration of acquisitions made in the busy transaction period before 2008. Others focused on smaller deals. In the second half of the year, falling world markets swept the rug from under deal-making and even those who wanted to do deals found valuation in a falling market an uncertain and hazardous exercise.

As in previous years, domestic deals accounted for the majority of deal volume with cross border deals taking the lion's share of total deal value. However, reflecting the reduced appetite for transacting large cross border deals, the share of total deal value attributable to cross border activity fell to 62% in 2008, below the 73% and 68% shares reached in 2006 and 2007.

Figure 01: Total metal deals, 2003-2008

	Number	Cross border number as % of total number	Value (US\$bn)	Cross border value as % of total number
2008	397	38%	60.6	62%
2007	411	35%	144.7	68%
2006	385	29%	86.4	73%
2005	250	40%	34.8	49%
2004	166	40%	37.0	31%
2003	164	30%	16.1	60%

Source: PricewaterhouseCoopers Forging Ahead deal analysis 2008 annual review

Figure 02: Cross border and domestic metals deals, 2007-2008

	Number of deals		
	2007	2008	% change
Cross-border	143	150	+4.9%
Domestic	268	247	-7.8%
Total	411	397	-3.4%

	Deal value (US\$bn)		
	2007	2008	% change
Cross-border	98.3	37.7	-62%
Domestic	46.4	22.8	-51%
Total	144.7	60.6	-58%

Source: PricewaterhouseCoopers Forging Ahead deal analysis 2008 annual review

Figure 03: Quarterly flow of announced metals deals, 2007 &amp; 2008

	2007				2008			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Deal volume	101	99	100	102	94	109	78	64
Deal value (US\$bn)	48.1	18.1	51.1	21.4	17.0	9.9	4.9	5.9

Source: PricewaterhouseCoopers Forging Ahead deal analysis 2008 annual review

Fig 3 analysis counts deals based on when they are announced but is not conditional on them completing. In this way, deals which were announced late in 2008, but have not completed, are included to provide a clearer view of quarterly trends without a bias for deals that have not completed yet due to timing. This is in contrast to the remainder of the analysis in this publication which is contingent on deals completing.

# 06 Deal makers

The deal-making focus moved away from the mega-deals that had grabbed the headlines in earlier years. There were no US\$10bn plus size deals such as had dominated total value in 2006 and 2007. However, in the absence of such mega-deals, underlying deal value was actually higher than it had been in preceding years. The US\$60.6bn total deal value in 2008 compares with the US\$31.4bn and US\$61.8bn underlying total value of 2006 and 2007 deals, once the value of the US\$10bn plus deals that took place in those years is removed from the totals. Indeed, the strength of activity that took place in much of 2008, before the rapid turnaround in world markets, is reflected in the fact that there were 29 US\$1bn plus deals in 2008 compared to 20 such deals in 2007.

All the deals in the top ten were comfortably above the US\$1bn mark, headed by Russian steelmaker Evraz's US\$4bn purchase of the North American tubular operations arm of IPSCO from Swedish steel producer SSAB. The deal gave the Russian company an important pipeline production presence in the US and Canada. It was one of two purchases by Evraz, highlighting the continuing importance of Russian acquirers, following 2007's US\$30bn merger between Russian aluminium producers RUSAL and SUAL and Swiss commodities trader Glencore. Evraz is Russia's second biggest steelmaker and counts Russian billionaire Roman Abramovich as its largest shareholder.

Back in 2007, Evraz had been reported to be interested in a deal for the whole of IPSCO only for the target to be bought by SSAB in a US\$7.6bn transaction. Evraz sold on US\$1.7bn of the acquired IPSCO assets to TMK, Russia's largest manufacturer and exporter of steel pipes. The IPSCO deal was concluded at a time when surging oil and gas demand was pushing up pipeline demand. Even with a subsequent waning of energy demand, concerns about energy security coupled with new stimulus measures will continue to spur the renewal and extension of energy networks and other infrastructure in North America, leaving Evraz and TMK well positioned.

Anglo American's US\$3.5bn purchase of two iron ore projects from Mineracao e Metalicos (MMX) boosted the company's iron ore presence, making Anglo American a significant rival to Companhia Vale do Rio Doce (Vale) in a consolidating market. It gained a 100% interest in the Minas-Rio iron ore project and a 70% interest in the Amapa project.

A complex deal structure lay behind the purchase with the move featuring in two of the top ten transactions – with existing MMX shareholders agreeing a partial split-up as well as the main move by Anglo American by which Anglo American acquired a 63.5% stake of IronX Mineracao SA, a newly formed company owning 51% of the share capital of MMX-Rio Minas Rio and 70% of MMX Amapa Mineracao. Concurrently, Anglo American agreed to acquire the remaining 36.5% stake, which it did not already own, in IronX. Brazilian iron ore assets were also the focus of a US\$3.1bn purchase of a 40% stake in iron ore producer Nacional Minerios (Namisa) by an investor group featuring Japan's ITOCHU Corporation and a group of Asian steelmakers.

Figure 04: Top ten metals deals 2008

Rank	Completion date	Target name	Percentage ownership	Target nation	Acquirer name	Bidder nation	Value (US\$m)	Sector
1	13 Jun 2008	IPSCO Inc-Canadian Tubular Op	100%	Canada	Evrax Group SA	Russian Fed	4,025	Steel
2	5 Aug 2008	IronX Mineracao SA	63.5%	Brazil	Anglo American PLC	United Kingdom	3,493	Other metal
3	26 Mar 2008	Boehler-Uddeholm AG	79%	Austria	Voestalpine AG	Austria	3,485	Steel
4	30 Dec 2008	Nacional Minerios SA	40%	Brazil	Investor Group	Japan	3,120	Steel
5	22 Feb 2008	Jubilee Mines NL	100%	Australia	Xstrata PLC	Switzerland	2,766	Other metal
6	29 Jul 2008	ENRC	8% *	United Kingdom	Kazakhmys PLC	United Kingdom	2,548	Other metal
7	14 Apr 2008	Sukhaya Balka GOK	99%	Ukraine	Evrax Group SA	Russian Fed	2,189	Steel
8	23 Apr 2008	Quanex Building Products	100%	United States	Shareholders	United States	2,020	Steel
9	2 Feb 2008	J Mendes Ltd	100%	Brazil	Usiminas	Brazil	1,900	Steel
10	30 Jul 2008	IronX Mineracao SA	100%	Brazil	Shareholders	Brazil	1,880	Other metal

\* The purchase of a 7.66% stake in ENRC by Kazakhmys, raising its total stake to 22.24%

Source: PricewaterhouseCoopers Forging Ahead deal analysis 2008 annual review



## Managing carbon cost and opportunity

2009 is set to be a watershed year in environmental policy with likely impacts on the metals industry. A new administration in the US has moved early to set out its positive intentions on climate change. It is expected that emissions trading will commence in Australia next year. World leaders will be seeking to reach agreement on a post-Kyoto treaty in Copenhagen at the end of 2009. All this comes against a background of an economic downturn that has caused a marked reduction in carbon prices, with a bearish outlook for the mid-term.

In Europe, the Energy and Climate Change package was approved in December 2008, setting out the policy framework and accompanying measures to reduce emissions. It does so through the continuation and expansion of the EU Emissions Trading Scheme (EU-ETS); targets for non-ETS sectors and new targets for the promotion of renewable energy.

For steelmakers and other energy intensive industries covered by the EU-ETS, contracting output has meant that many companies have accrued long positions in carbon allowances since lower output means lower emissions. Worldsteel estimates that EU steel production fell nearly 46% in January 2009, compared to the same period last year. This equates to a saving of around 15 million tonnes of CO<sub>2</sub>. As a result, some steelmakers have taken the opportunity to realise long positions to assist with the cash needs of the business in the short term.

The downturn in steel and other sectors has resulted in carbon prices losing over half of their value since summer 2008. The market outlook for carbon prices over the next few years is mixed and volatility can be expected. A recent poll by Reuters suggested a range of estimates between 12/tCO<sub>2</sub> and 35/tCO<sub>2</sub> for carbon prices in 2012. This contrasts with the current price of the 2012 EUA contract which averaged 12.54/tCO<sub>2</sub> between 19 January and 18 March 2009.

PricewaterhouseCoopers is a leader in carbon market services. We work on both the buy and sell-side and offer a full range of transaction services, including financial advice, carbon due diligence and structuring for new carbon ventures.

We review the remainder of the top ten deals later in this report under their respective geographic sections. The top ten deals reflect the key drivers of vertical integration, horizontal integration across different metals and industry consolidation, particularly in the iron ore and steel sectors. The steel sector accounted for the majority (67%) of total 2008 metals deal value in contrast to 2007 when three very large deals put aluminium into the majority share with 53% of value (see figure 6).

After the flurry of very big deals in 2007, M&A activity in the aluminium sector was relatively insignificant in 2008. Instead, steel took a greater share and deals for other metals also assumed much greater prominence in 2008 – up in terms of value share (from 5% in 2007 to 28% in 2008) and nearly tripling, in actual total value terms, from US\$6.5bn to US\$17.3bn.

In both steel and iron ore, consolidation remains far less advanced than in aluminium. As figure 5 highlights, the combined market share of the top five companies in both sectors is significantly smaller than their counterparts in the aluminium industry where a series of consolidation deals over the last decade have concentrated the sector much more.

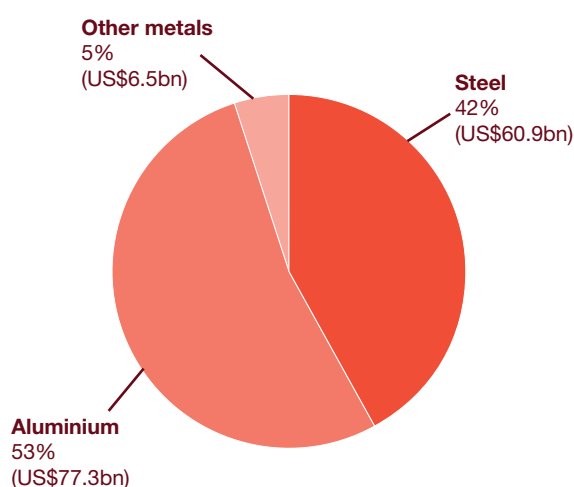
Figure 05: Estimated market share of top five companies by sector

	Iron Ore		Steel		Aluminium
	mill tonnes		mill tonnes		thous tonnes
CVRD	319	ArcelorMittal	103	RioTinto Alcan	4150
Rio Tinto	153	Nippon	33	Rusal	4400
BHP Billiton	115	JFE Steel	32	Alcoa	4050
ArcelorMittal	54	POSCO	33	Chalco	3550
Metalloinvest	41	Baosteel	35	Hydro	1500
Top 5 total	682	Top 5 total	236	Top 5 total	17650
Global total	2145	Global total	1330	Global total	39909
	<b>32%</b>		<b>17%</b>		<b>44.9%</b>

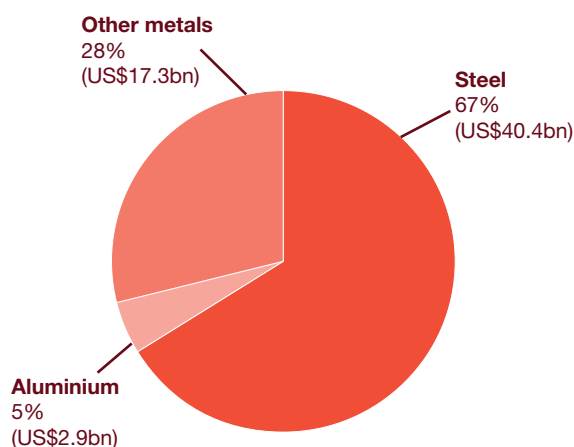
Source: AME Mineral Economics. Note: market shares are based on total global production

Figure 06: Deal making by industry sector

2007 total deal value: US\$144.7bn



2008 total deal value: US\$60.6bn



Source: PricewaterhouseCoopers Forging Ahead deal analysis 2008 annual review



### Finding the liquidity to do deals

Notwithstanding the current economic crisis, the metals industry, particularly the steel sector, must continue to consolidate to insure its future. The recent wave of consolidation was initially funded by cash on hand but, more recently, debt has played a greater part. In the near future, however, it is unlikely that metals companies will be able to fund acquisitions totally with cash. How will the lack of liquidity in the market affect future acquisitions?

A well thought-out acquisition and integration plan and a thorough understanding of the various funding alternatives available are key to successfully raising capital to fund deals. Underwriting corporate debt is limited to large publicly traded entities, leaving private companies with the options of bank debt, sub-debt, and traditional private equity. Each has its own tolerance for risk, unique pricing and structure alternatives and required internal rate of return (IRR).

Credit from banks and sub-debt sources remains tight as lenders take a cautious approach in the face of continuing economic uncertainty. In cases where funds are available, the pricing and terms are often too onerous to justify. Although there remains a significant overhang of capital in private equity (PE), PE investors have pulled back as they grapple with the impact the economic crisis has had on current investees. They are also taking a much more cautious approach as they no longer share the risk with debt providers.

With the reduced availability of credit to fund transactions, acquirers need to look at alternatives to get deals done. Structures which include increased use of earn outs, partial equity retention, partial payment in equity of the acquirer, increased payout time on deferred monies and seller loan guarantees can be used to compensate for the lower purchase price resulting from the lack of access to debt.

PricewaterhouseCoopers' global corporate finance network has the knowledge of and relationships with traditional and non traditional lenders to ensure the right options are brought to each situation. In situations where credit is simply not available, our professionals have extensive experience leading complex transactions from a buyer, seller or refinancing perspective providing appropriate solutions to get the deal done.



The geographical focus of metals deals shifted significantly towards Asia Pacific in 2008. The total value of Asia Pacific deals more than doubled – from US\$7.2bn in 2007 to US\$16.4bn in 2008 – and their share of worldwide metals deal value multiplied more than five-fold. With nearly half of all deals and over a quarter of total deal value, the region rivalled North America for the largest proportion of 2008 M&A activity in the sector.

The other significant surge in deal activity and value came in central and South America where deal numbers and total value rose by around a third on their 2007 levels. The increase was fuelled by a series of deals for Brazilian iron ore targets. Outside of Asia Pacific and South America, deal value in every other region fell away sharply. There were no mega-deals to match the transactions that had buoyed North American, European and Russian totals in 2007 and, with the exception of central and Eastern Europe, there were also big falls in deal numbers.

The balance of activity between the number of deals transacted by parties within the same region and those transacted across continents remained broadly the same year on year (figure 8). In value terms, however, there was a shift away from cross-continental towards regional deal-making. The value share of regional deals rose from 39% to 45%. This was driven by a number of significant regional iron ore and ‘other metals’ deals and was further reinforced by the large cross-continental steel mergers of 2007 dropping out of the 2008 figures.



## CEO perspectives on M&A – looking across borders

PricewaterhouseCoopers' 12th Annual CEO Survey took the pulse of 1,124 CEOs around the world between September 10 and December 2, 2008, capturing their views as the global economy collapsed. It included the viewpoint of a number of CEOs in the metals sector. Although 96% of the metals CEOs rated the downturn in the major economies as the number one threat to their business growth, another key finding was that geographic expansion remains on the agenda as metals companies plan for surviving the downturn and achieving longer term growth.

Thirty-six percent of metals CEOs are focusing on new geographic markets in contrast with 17% of all CEOs responding. Metals companies in the BRIC countries (Brazil, Russia, India, and China) continue to operate in the deals space, both as targets and as acquirers, although with credit availability for deals remaining limited, interest in other strategies for growth is increasing. Better penetration of their existing markets comes second on the list of strategies they believe will deliver the best opportunities for growth over the next 12 months.

Twenty-four percent of metals CEOs intend to complete a cross-border merger or acquisition over the next 12 months, but most of them are pessimistic about the extent to which these transactions will improve their companies' short-term profitability. Only 4% see M&A as their main means of growing revenues over the period – a view that makes sense, since tumbling metals prices have already called the economics of several recent acquisitions into question. Conversely, interest in joint ventures and strategic alliances is growing – 76% of metals CEOs expect to participate in an increasing number of collaborative business arrangements over the next three years.

However, expansion into new geographies is not a cure all. The global scale of the economic crisis means few regions are left unscathed, unlike in previous experience where companies could refocus sales to increase supply to regions less affected by a downturn. Many companies, particularly steelmakers, are therefore cutting back on production, curbing their plans for expanding and going into cash conservation mode.

Figure 07: M&amp;A activity by continent

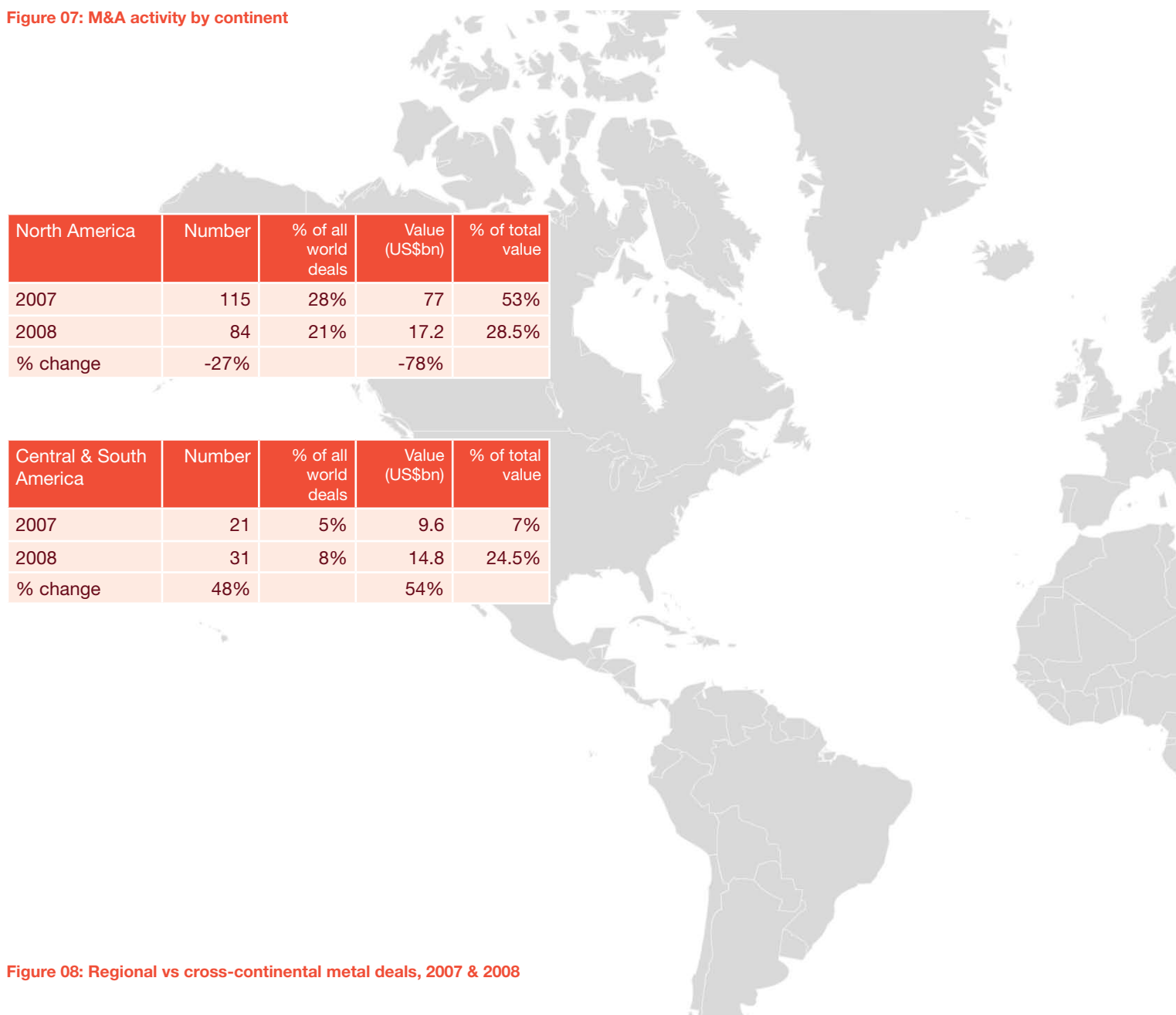


Figure 08: Regional vs cross-continental metal deals, 2007 &amp; 2008

	2007						All sectors	
	Steel		Aluminium		Other Metals			
		% share of total steel		% share of total aluminium		% share of total other metals		% share of all deals
Regional								
Number	188	76%	41	73%	79	75%	308	75%
Value (US\$bn)	22.7	37%	33.1	43%	1.3	20%	57.1	39%
Cross-continental								
Number	61	24%	15	27%	27	25%	103	25%
Value (US\$bn)	38.2	63%	44.2	57%	5.1	80%	87.6	61%

Totals may not sum due to rounding

Source: PricewaterhouseCoopers Forging Ahead deal analysis 2008 annual review



Western Europe	Number	% of all world deals	Value (US\$bn)	% of total value
2007	104	25%	20.1	14%
2008	65	16%	8.5	14%
% change	-38%		-58%	

Central and eastern Europe	Number	% of all world deals	Value (US\$bn)	% of total value
2007	23	6%	30.8	21%
2008	32	8%	3.7	6%
% change	39%		-88%	

Asia Pacific	Number	% of all world deals	Value (US\$bn)	% of total value
2007	148	36%	7.2	5%
2008	185	47%	16.4	27%
% change	26%		128%	

	2008						All sectors	
	Steel		Aluminium		Other Metals			
		% share of total steel		% share of total aluminium		% share of total other metals		% share of all deals
Regional								
Number	158	70%	32	84%	97	73%	287	72%
Value (US\$bn)	20.1	50%	0.6	22%	6.8	39%	27.5	45%
Cross-continental								
Number	69	30%	6	16%	35	27%	110	28%
Value (US\$bn)	20.3	50%	2.2	78%	10.5	61%	33.1	55%

# 14 North America

North America 2008 metal M&A activity fell sharply from the highs of 2007. The number of steel and aluminium deals halved and the total value of deals in these sectors plummeted from US\$76.7bn in 2007 to US\$15.8bn in 2008. In contrast, M&A activity in the 'other metals' sector stepped up a gear from 2007 with a 50% increase in smaller deals for a variety of metals targets. However, together, these only accounted for US\$1.7bn of the total US\$17.2bn North America metals M&A value transacted in 2008.

Much of North American deal activity was driven by foreign acquirers, notably Russian companies. Three quarters (76%) of North American metals deal value came from cross-border transactions. 83% of the cross-border transaction value was for steel targets (see figure 9). In the first half of the year, such interest was buoyed by a weak dollar. The largest North American deal was Russian steelmaker Evraz's US\$4bn purchase of the North American tubular operations arm of IPSCO from Swedish steel producer SSAB (see p6).

Russia's biggest steelmaker, Moscow-based OAO Severstal, was also a key player. In May 2008, Severstal completed an acquisition of Sparrows Point, a fully integrated steel mill in Baltimore Md., from ArcelorMittal. In June 2008, it entered into an agreement to acquire Esmark Inc., a manufacturer and distributor of flat-rolled and other steel products. In July 2008, it completed its acquisition of WCI Steel, a market leader in the production of value-added steel products.

Combined with its 2004 purchase of Rouge Industries, Severstal is now the fourth-largest steelmaker in the US. However, in common with other leading steelmakers, the severity of the downturn saw it ending the year with major production cuts and cancelled capital investment – in Severstal's case, it cut US production by 30% and deferred indefinitely a worldwide US\$8bn investment programme. US\$2bn of the US\$4.2bn total value of domestic activity was accounted for by a single deal – Quanex Corporation's spin-off of its building products segment – but, such was the dominance of foreign buyers, that even this was spurred by foreign interest. The deal was part of the merger of the remaining Quanex Corporation with a subsidiary of Brazilian steel group Gerdau SA.

Figure 09: M&A activity in North America

	2008		
North America	Steel	Aluminium	Other Metals
Domestic			
Number	17	2	29
Value (US\$bn)	2.8	0.3	1
Cross-border			
Number	22	4	10
Value (US\$bn)	10.8	1.9	0.4
All deals			
Number	39	6	39
Value (US\$bn)	13.6	2.2	1.4

	2007		
North America	Steel	Aluminium	Other Metals
Domestic			
Number	49	14	20
Value (US\$bn)	5.5	2.3	0.1
Cross-border			
Number	22	4	6
Value (US\$bn)	24.5	44.4	0.2
All deals			
Number	71	18	26
Value (US\$bn)	30	46.7	0.3

Source: PricewaterhouseCoopers Forging Ahead deal analysis 2008 annual review

2008 was the year when the centre of gravity of metals deal-making became much more evenly balanced between east and west. Chinese companies played a central role in world M&A activity. Asia Pacific deals reached record highs, in terms of both the total number and value of deals, exceeding previous peaks recorded in our annual review series (see figure 10). Asia Pacific came close to North America in terms of deal volume and value in 2008 as producers scrambled to respond to demand spurred by the booming growth of the region.

Asia Pacific deal-making was led by a big increase in the number of large, US\$1bn plus deals – up from just two in the region in 2007 to eight in 2008. Three of the eight deals were for Australian targets as companies moved to secure raw material supplies. The other five deals were for targets in China, Hong Kong and Japan as companies scaled up to respond to booming demand. The Australian deals were headed by Anglo-Swiss mining company Xstrata's US\$2.8bn purchase of Australian nickel company Jubilee Mines. The deal was one of no fewer than six moves by Xstrata during 2007 to acquire Australian mining companies. The Jubilee deal helped spur a big jump in the value of Asia Pacific 'other metals' deals, which rose from US\$0.5bn in 2007 to US\$7bn in 2008 (see figure 11).

The big story of 2008, however, was the deal-making role played by Chinese companies, Chinalco and Sinosteel in particular. The year saw the increasing emergence of Chinese investors in Australian mining resources. Chinese steelmaker Sinosteel gained control of Midwest Corporation. It had faced competition for Midwest from Murchison Metals but emerged victorious in July 2008. The Sinosteel move and the involvement of Chinalco in mining giant Rio Tinto are the most high profile manifestations of a trend that is being given added momentum by the distress faced by many more junior mining companies in Australia and the need to turn to Chinese investors.

Both the number and value of Asia Pacific steel deals rose significantly (see figure 10). The slow consolidation of the Chinese steel industry lay behind a number of deals, notably the Hebei provincial government-prompted formation of the Hebei Iron and Steel Group in June 2008, comprising Tangshan Iron & Steel, Handan Iron & Steel and Chengde Xinxin Vanadium & Titanium. Hebei rivals Baosteel for top spot among Chinese steelmakers. In December 2008, as the group faced worsening market conditions, it announced a US\$2.5bn move to

merge the three companies which had been separately listed subsidiaries. Earlier in 2008, another provincial government, Shandong, led the state-owned parent companies of Laiwu Steel and Jinan Iron and Steel to merge to form Shandong Iron and Steel Group.

Figure 10: The rise of Asia Pacific metal deals

	2004	2005	2006	2007	2008
Number	49	72	154	148	185
Value (US\$bn)	4.6	4.4	15.1	7.2	16.4

Figure 11: M&A activity in Asia Pacific

	2008		
	Steel	Aluminium	Other Metals
Domestic			
Number	77	16	33
Value (US\$bn)	4.2	0.1	2
Cross-border			
Number	27	6	26
Value (US\$bn)	5	0.1	5
All deals			
Number	104	22	59
Value (US\$bn)	9.2	0.2	7
	2007		
	Steel	Aluminium	Other Metals
Domestic			
Number	60	9	35
Value (US\$bn)	5	0*	0.3
Cross-border			
Number	24	5	15
Value (US\$bn)	1.3	0.4	0.2
All deals			
Number	84	14	50
Value (US\$bn)	6.3	0.4	0.5

\*where value was less than 0.1US\$bn

Source: PricewaterhouseCoopers Forging Ahead deal analysis 2008 annual review

# 16 Central and South America

Deals in central and South America reached record levels in 2008. Although only accounting for 8% of all deals, they contributed 24% of worldwide metals deal value. Total deal value in the region reached US\$14.8bn, up by 54% on 2007's US\$9.7bn level and more than sixteen times the total deal value just two years earlier in 2006 (see figure 12). Brazilian iron ore deals dominated – the eight biggest South American deals were for Brazilian targets and seven of these eight were for iron ore assets.

South American deals were fairly evenly split between deals involving buyers from within the region and those from outside. However, the largest deals for the Brazilian targets were from outside buyers. Two US\$3bn plus deals headed the list of South American deals - Anglo American's US\$3.5bn purchase of two iron ore projects from Mineracao e Metalicos (MMX) and the US\$3.2bn purchase of a 40% stake in iron ore producer Nacional Minerios (Namisa) by an investor group featuring Japan's ITOCHU Corporation and a group of Asian steelmakers. Both are discussed on p6. A third large deal was the US\$1.9bn acquisition of iron ore mining company J Mendes by Usiminas, from Nippon Steel. The move was the latest in a series of moves by Usiminas and Nippon to step up capacity in the fast expanding Brazilian market.

Brazilian targets accounted for 89% of 2008 target value in the region. Only two deals above US\$500 million featured targets outside Brazil. In Chile, the cable business of Santiago-based Madeco was bought for US\$794 million by Nexans of France. In Argentina, ArcelorMittal completed its tender offer for the remaining 34.7% stake, which it did not already own, of Acindar Industria Argentina de Aceros, a Buenos Aires-based manufacturer of non-flat steel and steel products, for US\$543 million.

Figure 12: The rise of South American metals deals

	2004	2005	2006	2007	2008
Number	15	13	14	21	31
Value (US\$bn)	1.8	1.4	0.9	9.6	14.8

Totals may not sum due to rounding

Figure 13: M&A activity in central and South America

	2008		
	Steel	Aluminium	Other Metals
Central & South America			
Domestic			
Number	12	0	2
Value (US\$bn)	4.9	0	0.1
Cross-border			
Number	10	0	7
Value (US\$bn)	6.2	0	3.5
All deals			
Number	22	0	9
Value (US\$bn)	11.1	0	3.6

	2007		
	Steel	Aluminium	Other Metals
Central & South America			
Domestic			
Number	5	0	0
Value (US\$bn)	0.7	0	0
Cross-border			
Number	14	0	2
Value (US\$bn)	6.5	0	2.5
All deals			
Number	19	0	2
Value (US\$bn)	7.2	0	2.5

Totals may not sum due to rounding

Source: PricewaterhouseCoopers Forging Ahead deal analysis 2008 annual review

# Western Europe 17

Deal activity slowed considerably in western Europe with deal numbers down by over a third, from 104 in 2007 to 65 in 2008. Total deal value reduced even more sharply, although this was due to the impact of Tata Steel's US\$14.7bn acquisition of Corus on the 2007 total. Excluding this single mega deal, underlying deal value actually increased, from US\$5.5bn in 2007 to US\$8.5bn in 2008.

The 2008 western European deal list was headed by three US\$1bn plus deals. The largest was the completion of the US\$3.7bn all-Austrian merger of speciality steelmaker Böhler-Uddeholm and Voestalpine, Austria's biggest steel group. Voestalpine's move came after Böhler had rejected a takeover offer from private equity fund CVC Capital Partners. The other two US\$1bn plus deals both featured London-listed targets with production and mining assets in Russia and Kazakhstan.

Copper miner Kazakhmys raised its stake in its Kazakh rival, Eurasian Natural Resources Corporation (ENRC). The US\$2.5bn purchase lifted Kazakhmys' stake to 22.24% from 14.59%, in a move widely seen as a tactical play to prevent large acquisitions by ENRC, including the threat to Kazakhmys itself. Earlier, ENRC had made an indicative bid for Kazakhmys which was rejected. There had been considerable speculation about a merger between the two but, in a Spring 2009 announcement of the company's results, Kazakhmys' chairman was reported as saying the commodity meltdown had killed any possibility of a merger in the foreseeable future (Financial Times, March 6 2009).

A London-listed company with Kazakh assets was also the focus of the third US\$1bn plus deal in the 2008 western European metals deal list. Russian miner and steelmaker Mechel took over Oriel Resources in a US\$1.5bn deal. Oriel operated a ferrochrome smelter in Russia and had developed chromite and nickel mines in Kazakhstan. The purchase enabled Mechel to expand its ferroalloy business as well as use its existing coal production for Oriel's smelting operations. Mechel is Russia's largest producer of stainless steel, the primary end use for chrome products, and had entered the ferroalloy market with its purchase of ferrosilicon producer Bratsk Ferroalloy Plant in Siberia in 2007.

Figure 14: M&A activity in western Europe

	2008		
Western Europe	Steel	Aluminium	Other Metals
Domestic			
Number	26	4	9
Value (US\$bn)	3.7	0*	2.6
Cross-border			
Number	18	5	3
Value (US\$bn)	0.7	0*	1.5
All deals			
Number	44	9	12
Value (US\$bn)	4.4	0*	4.1

	2007		
Western Europe	Steel	Aluminium	Other Metals
Domestic			
Number	40	10	12
Value (US\$bn)	0.9	0*	0.9
Cross-border			
Number	19	8	15
Value (US\$bn)	15.8	0.1	2.3
All deals			
Number	59	18	27
Value (US\$bn)	16.7	0.1	3.2

\*where value was less than 0.1US\$bn

Totals may not sum due to rounding

Source: PricewaterhouseCoopers Forging Ahead deal analysis 2008 annual review

# 18 Central and eastern Europe (including the Russian Federation)

Like the western European trend, a big headline fall in deal value in eastern Europe and Russia, due to a single 2007 mega deal, disguised an underlying rise in metals deal value between 2007 and 2008. RUSAL's three-way merger with SUAL and Glencore had boosted the 2007 total by US\$30bn from an underlying US\$0.8bn. Total 2008 deal value was US\$3.7bn, more than four times the underlying 2007 value. Deal numbers in the region rose from 23 to 32.

The largest deal was the completion of a US\$2.2bn acquisition by Russia's Evraz Group of various Ukrainian assets - the Sukhaya Balka iron ore mining and processing complex; the Dnepropetrovsk iron and steel works with a total annual capacity of 1.8 million tonnes of pig iron and 1.23 million tonnes of crude steel; and three coking plants with a total annual capacity of 3.52 million tonnes of metallurgical coke. The deal enabled Evraz to increase its iron ore self-sufficiency and ensure further upstream integration. It also created captive coke-making demand for the excess production of the company's coal mines in Siberia.

The one other significant deal in the region saw the board of GMK Norilsk Nickel OAO buy back US\$968 million of stock. The move is one of a number of transactions involving Russian billionaire Mikhail Prokhorov's Onexim investment group. Earlier in the year, ahead of the crash in commodity prices, the group sold a 25% plus one share of MMC Norilsk Nickel to RUSAL for an unspecified amount. However, the dramatically changed market conditions have since forced RUSAL's loan provider, state-owned bank VEB, to pledge the Norilsk Nickel stake back to the Russian state as a condition of a US\$4.5bn bail-out loan.

Figure 15: M&A activity in central and eastern Europe

Central & Eastern Europe	2008		
	Steel	Aluminium	Other Metals
Domestic			
Number	8	0	12
Value (US\$bn)	0*	0	1
Cross-border			
Number	10	1	1
Value (US\$bn)	2.2	0.3	0.2
All deals			
Number	18	1	13
Value (US\$bn)	2.2	0.3	1.2

Central & Eastern Europe	2007		
	Steel	Aluminium	Other Metals
Domestic			
Number	8	5	1
Value (US\$bn)	0.7	30.1	0*
Cross-border			
Number	8	1	0
Value (US\$bn)	0.1	0*	0*
All deals			
Number	16	6	1
Value (US\$bn)	0.8	30.1	0*

\*where value was less than 0.1US\$bn

Totals may not sum due to rounding

Source: PricewaterhouseCoopers Forging Ahead deal analysis 2008 annual review

Continuing financial market uncertainty, economic slowdown and a collapse in worldwide demand sets the stage for a challenging deal-making environment for the immediate future at least. The balance sheet landscape of the sector is varied. Some companies face distress with weak share prices and problems in refinancing. In contrast, others have relatively healthy balance sheets after achieving recent record results. For all companies, cost reduction and cash conservation will remain the principal name of the game. Before the crisis, return on capital employed (ROCE) was the priority. Now, liquidity and maintaining and improving the company's creditworthiness are the two top priorities. For the time being, ROCE has assumed secondary importance.

The suddenness, pace and scope of the current downturn set it apart from previous downturns in recent history. Steel in particular saw strong orders at the start of September 2008 with a market collapse midway through the month. Lakshmi N. Mittal, president of the board of directors and chief executive officer of ArcelorMittal observed on November 5: "While this might show how customers misjudged the severity of the coming economic downturn with strong orders still coming in September, it is fair to say that everyone in the world misjudged the impact of the financial crisis" (Steel Business Briefing, November 6 2008).

However, in contrast to before, consolidation has left the larger players in the industry in a more flexible position to shut down production and manage capacity across the globe. The discipline that is now afforded the industry as a result of this recent consolidation should help them manage better through the current economic cycle. In previous downturns this would have served them well as there was always at least one region where demand continued. However in the current crisis, there is no region where there is strong demand. In steel, in particular, companies entered the downturn off the back of record results and some have strong balance sheets, notwithstanding acquisition-related debt. In aluminium the picture is more mixed and the debt load is weighing heavy on key players such as RUSAL and Rio Tinto Alcan.

The pressure to restructure will intensify the longer the downturn continues. The outlook for demand is uncertain. In steel, for example, European demand has slumped by 40% and worldwide demand is likely to fall a further 10-15% in 2009. Many observers remain pessimistic about a pick-up in demand during 2009 or even, any significant revival in 2010. Government economic stimulus measures will be watched carefully but the main focus will be on the outlook for big consumption sectors such as automotive and construction. In such an environment, even those buyers that are in a strong position to make deals are likely to prefer to adopt a 'wait and see' stance for the short-term at least.

However, there is also the prospect, once the price expectations between buyers and sellers converge and with any easing of market conditions, of a fast revival in deal activity. In the short term, a series of divestitures will provide opportunities for smaller strategic acquisitions. A more significant revival will hinge on companies' assessment of the demand outlook but, when positive signs come, there will be a number of players ready to move quickly. The big question mark, of course, is how long we will wait for positive signs to emerge. In previous downturns, there was a sense that recovery was in sight but, at present, there is no consensus on how long this crisis will last.

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## Acknowledgments

Data analysis for this industry summary was provided by Ben Mitchell in the PwC UK Corporate Finance Group, and the report was written by Dominic Byrne (The Bigger Picture Consultancy). Special thanks are due to Dean Mullett, Ian Milborrow, George Fintikakis, Erica McEvoy and Karen Ip for their contribution to the project management, research and writing of this report. Thanks also go to Robert McCutcheon, Malcolm Wren, Peter Albrecht, Richard Sykes and Mark Birri in the Global Metals practice for their feedback, and to PwC's LTT & LMT Assurance Design Team for the design and production of this paper.

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1



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