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Pasinex Resources Ltd (TSXv: PSE) (FSE: PNx)

Copper Exploration & Development | Commodity Outlook: Neutral

RESEARCH & OPINION

SUMMARY:

1. After a multi-year hiatus, resumption in the compound annual growth of global mine production starting in 2012 has the market for refined copper poised to enter into surplus supply. Page 7
2. Further urbanization and industrialization of China, and to a lesser extent India, will continue to increase copper intensity; persistently threatening to overwhelm annual global copper production by 2019. Page 8
3. It's your father's Oldsmobile – without the rapid copper price appreciation witnessed from 2003 to 2011 (CAGR north of 20%), a return of responsible business practices to the exploration sector is warranted. Though important, potential tonnage will take a back seat to grade, capital costs, environmental impact, and jurisdiction. Page 11
4. Pasinex Resources Ltd, exploring for copper and zinc in Turkey, has a strong technical and experienced management team, and is drilling. Page 12

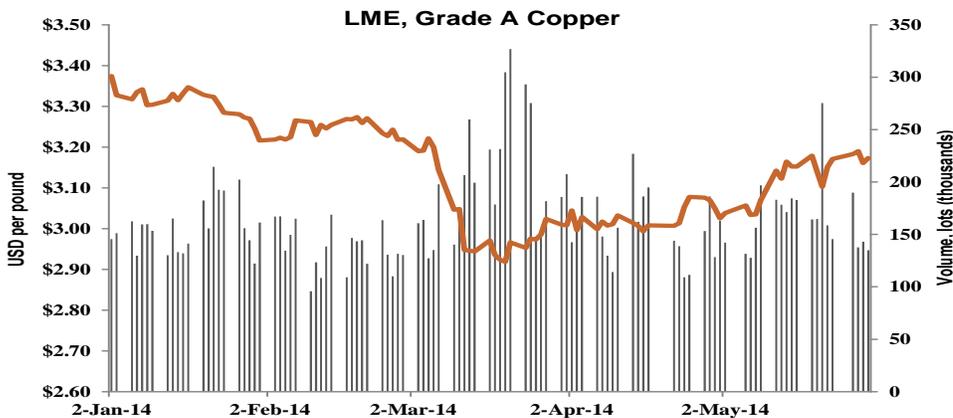


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Introduction – copper, a metal for the ages

Internationally, the market for copper is one of the largest of all metals behind iron and aluminum. The size of the global market for refined copper is over U\$150 billion annually.² Copper has been a material component in the evolution of human civilizations for thousands of years, and the contribution of the metal defined the Bronze Age. Copper is easy to work with, an efficient conductor of heat and electricity, corrosion resistant, and abundant. In fact, the US Geological Survey (USGS) estimates 2013 global land based copper resources of over 3.1 billion tonnes of which 690 million tonnes are listed as reserves.³ These estimates have more than doubled since 1970 as annual world mined copper production has increased. As an added benefit, recycling contributes substantially to the amount refined copper available, with estimates ranging from 20-30% of annual refined copper production.⁴

Copper Pricing – China is the 800 pound gorilla

Except for a brief spike in 1994/95, nominal prices of copper remained consistently below U\$1 per pound from 1980 to 2003. In fact, the annual average price throughout this period had a mean of U\$0.90 and a median of U\$0.82 per pound. The emergence of the BRIC nations from economic malaise has heavily impacted certain metals prices – iron ore being the most notable – but copper, lead, and tin prices all appreciated over 300% between 2003 and 2012 (Chart 1). The shift over the last 20-years in industrial production away from developed countries to China has been both swift and staggering (Charts 2 & 3). China is now the largest consumer of many base and industrial metals, representing approximately 43% of global copper demand in 2012.

Mined Supply – in South America we trust

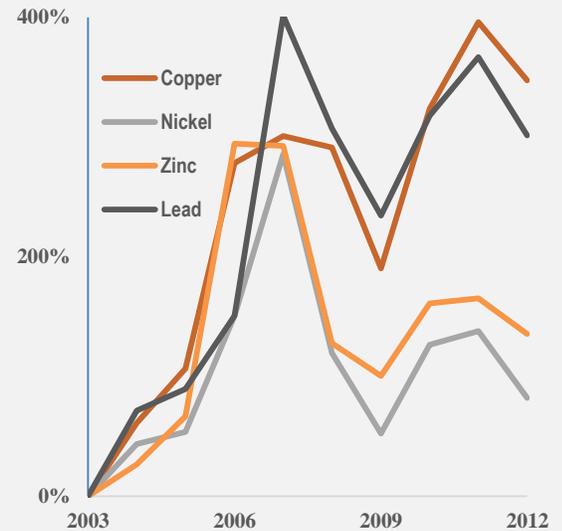
The composition of global mined copper production has also undergone a material shift over the last 30 years. In 1980, global mined copper production was regionally balanced, with North

² Measured as refined copper consumption multiplied by price through 2010-2013

³ [Copper, U.S. Geological Survey, Mineral Commodity Summaries, Feb 2014](#)

⁴ [The World Copper Factbook 2013](#), International Copper Study Group, estimates over 30% of copper consumption was from recycled material in 2011 versus our own estimates that are closer to 20%

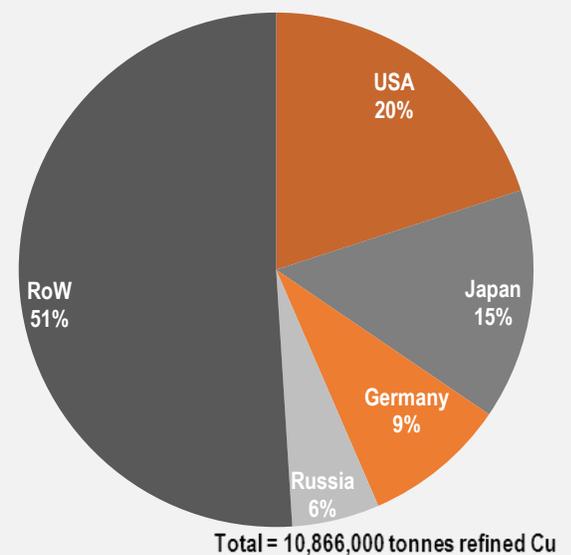
Chart 1. Base Metals Price Performance



Source: IMF

With rapid economic development and urbanisation, China has become the marginal buyer of base metals including copper

Chart 2. 1990 Regional Cu Demand



Source: ICSG and IMF

America representing roughly 28%. However, the current situation is markedly different. Mined copper production in North America has since stagnated; while Latin America and, to a lesser extent, Asia increased production substantially. In 2012, Chile alone represented 33% of global mined copper production (Map 1). Chile is home to many of the largest copper mines including Escondida – the largest copper mine in the world with low cost production (Table 1). For many developed nations within the Organisation for Economic Co-operation and Development (OECD), developing significant new (Greenfield) copper mining projects has become a serious challenge as stricter regulations, environmental concerns, and an inability to accurately predict capital expenditures (Capex) prohibitively increase project costs without removing the risk of significant political opposition. The current hostile environment was evident in the recent saga surrounding the large scale Pebble Project in Alaska.

Table 1. Projected Maximum Annual Copper Capacity

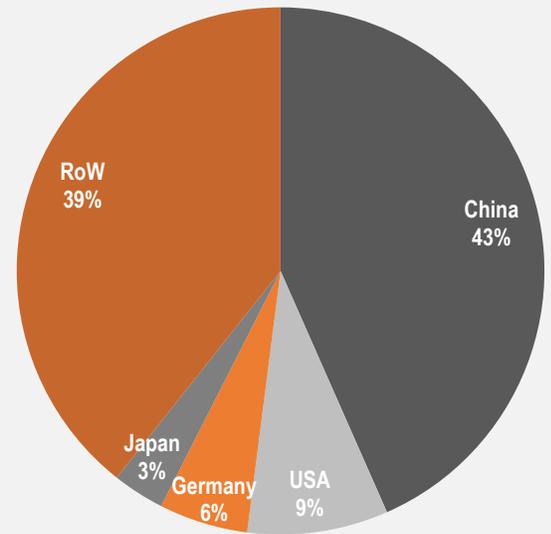
Mine	Capacity (millions of pounds)	Country	Controlling Ownership	Exchange: Symbol
Escondida	2,535	Chile	BHP Billiton	ASX:BHP
Greater Chuquicamata	1,852	Chile	Codelco	-
Grasberg	1,653	Indonesia	Freeport Indonesia Rio Tinto	NYSE: FCX* NYSE (ADR): RIO
Collahuasi	1,146	Chile	Anglo American GlencoreXstrata	LSE:AAL LSE: GLEN
Los Pelambres	1,036	Chile	Antofagasta	LSE: ANTO
Antamina	992	Peru	BHP Billiton GlencoreXstrata	ASX:BHP LSE: GLEN
El Teniente	955	Chile	Codelco	
Taimyr Peninsula	948	Russia	Norilsk Nickel	MCX: GMKN
Morenci	926	US	Freeport-McMoRan	NYSE: FCX
Los Bronces	917	Chile	Anglo American	LSE: AAL

Source: ICSG

The Spread Sheet Effect - sowing the seeds for higher copper prices tomorrow

For major international mining conglomerates, controlling spending is now in vogue. Xstrata (now a merged entity with Glencore) during a

Chart 3. 2012 Regional Cu Demand



Total = 20,386,000 tonnes refined Cu

Source: ICSG and IMF

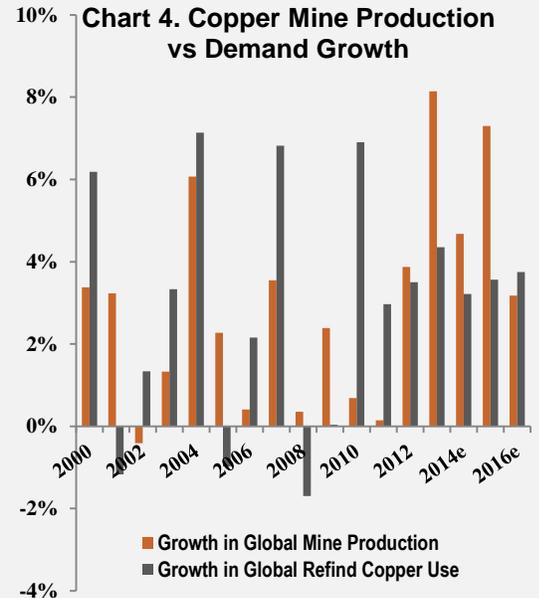
Map 1. Chilean Mine Locations



Source: 5th Annual Global Mining Technology Forum

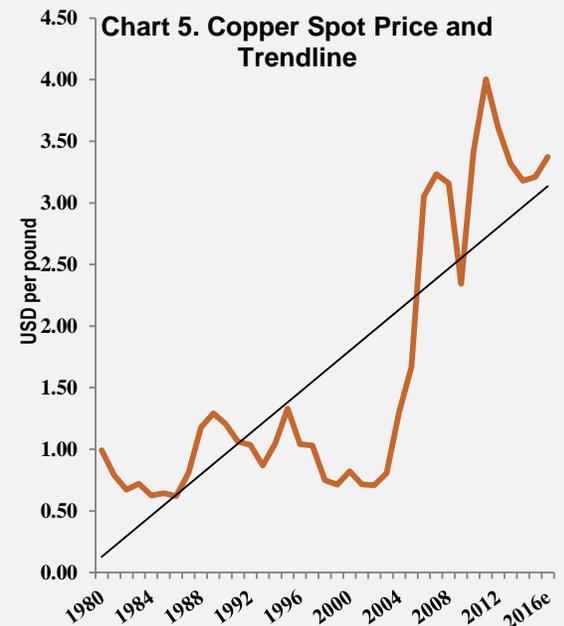
2011 presentation, using Wood Mackenzie data, concluded both Greenfield and Brownfield copper projects had experienced an average capital cost intensity of U\$3.49 per pound worth of annual production from 1985 to 2011, adjusted for inflation. Further, their expectations increased to U\$6.79 per pound though 2012 to 2015 for Greenfield copper projects under construction.⁵ Therefore, it's not surprising to see large mining companies focused on cost.⁶ For example, Freeport-McMoRan Copper & Gold (NYSE: FCX) targeted reductions of U\$1.9 billion in spending for 2013 and 2014, as well as potentially deferring other spending commitments.⁷ Within the mining sector, the time required to develop Brownfield projects through to production is expected to take roughly 8 years, and Greenfield projects twice as long. Though mined production of copper is set to increase over the next few years, increasing demand and reduced capital investment for exploration and development of new deposits will likely lead to material supply shortfalls around 2020 (Chart 4).

The long run trend of falling head grades for copper is an additional concern. Since 2000, average head grades for copper, without adjusting for production weightings, declined from 1.3% to 1.1% in 2012.⁸ Furthermore, the weighted average head grade for mined copper is likely less than 1% as several of the world's largest copper mines have been in production for many decades and are now mining extremely low grade ore (less than or equal to 0.5% Cu). As head grades decline, costs rise for a given tonnage. For low grade mining operations to be economical, scope and/or scale must be sufficient. The economic benefit of scale refers to the unit cost savings achieved from increasing production through efficiency gains and the conversion of certain variable to quasi-fixed costs. The economics of scope refers to the production of multiple products, such as gold or other metals being a notable by-product of several different copper porphyries. In the absence of scope or scale, the long run economics of relatively low grade mining are unstable due to reliance on increasing commodity prices and concentration of operations to low-cost jurisdictions (Chart 5). Unfortunately, political risk and rapid cost



Source: ICSG

Falling head grades, rising costs, and reduced capital investments for many of the largest publically listed mining companies will likely lead to a prolonged global copper supply deficit as early as 2019



Source: IMF

⁵ [The Changing Face of Supply, Xstrata, 2012](#)
⁶ [Metals mired in global uncertainty, Gold, silver, and copper price report 2014, PWC](#)
⁷ [Freeport-McMoRan Copper & Gold Inc., 3Q13 Results](#)
⁸ [The Supply Side of The Commodity Story, Marquest Resource Insight, Gerry Brockelsby, 2013](#)

inflation are serious threats for much of the world. The South African mining industry is a prime example as labour disputes, increasing government demands, and increasing extraction costs squeeze margins.⁹

Copper Mining in the US – uncertain footing

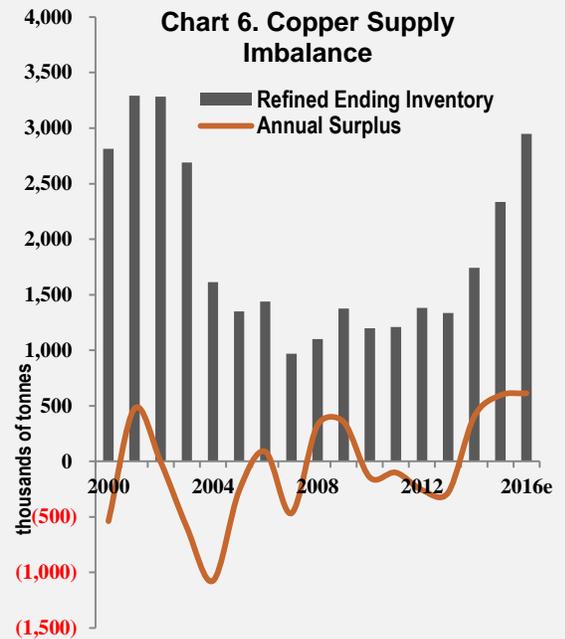
Domestically, the US is home to two world-class legacy copper assets. The Morenci mine in Arizona, owned and operated by FCX, and Bingham Canyon mine in Utah, owned and operated by Kennecott, a division of Rio Tinto (Table 1). Both mines have been operating for over 100 years and now have similar grades for listed proven and probable reserves of less than 0.5%, but are among the world’s largest producing copper mines measured by potential annual capacity.^{10, 11} Over the long-term, it is uncertain whether these operations can continue to increase production to offset declining grades without the price of copper rising substantially (Chart 6).

Due to the difficulty in developing Greenfield mining projects, the US appears reliant on expansion (Brownfield) projects where existing production is, or previous was, in place reducing the likelihood of opposition. For example, Nevada Copper Corp (TSX: NCU), is advancing the Pumpkin Hollow Project in Nevada, which was first explored by US Steel (NYSE: X) back in the 1960’s. From feasibility and technical reports, Pumpkin Hollow likely hosts proven and probable mineral reserves of 1 billion and 4.1 billion pounds of copper for the underground and open pit, respectively.¹² Optimal annual mine capacity from both underground and open pit operations, assuming straight-line production, could total approximately 250 million pounds of copper through 2016 to 2027, before the underground is exhausted (the open pit would continue to operate).

Copper Exploration – finding silver linings

In the current global copper environment, where supplies, excluding secondary production (“scrap”), and first order consumption are largely being driven by single countries, there is upside for investors in well-managed exploration companies who are willing to be patient.

⁹ [Tough choices facing the South African mining industry, Deloitte](#)
¹⁰ [The World Copper Factbook 2013](#), International Copper Study Group
¹¹ Mine Sites, www.infomine.com
¹² [Pumpkin Hollow, Nevada Copper Corp](#)



Source: ICSG

Urbanisation in China is a long-run phenomenon that will take years, while India appears to be in the early stages. Their combined infrastructure investment will overwhelm new mined copper production within the next several years

Table 2. US and China Expansion Potential

	Real Growth (%)			PPP GDP per capita	
	World	China	US	China	US
1998-2007 average	4.02	9.95	3.05	N/A	N/A
2008	2.71	9.64	(0.29)	6,145	48,308
2009	(0.38)	9.21	(2.80)	6,730	46,907
2010	5.18	10.45	2.51	7,487	48,294
2011	3.94	9.30	1.85	8,305	49,797
2012	3.22	7.65	2.78	9,051	51,709
2013	3.01	7.67	1.88	9,844	53,101
2014-2019 average	3.86	6.95	2.75	N/A	N/A

Source: IMF

Copper demand out of China should continue to be robust as Chinese economic growth is expected to remain healthy, albeit slower (Table 2). The urbanisation of China is a long-run phenomenon that will take years, if not decades, to complete. Further, India is a significant wildcard for future demand as bureaucracy and inadequate infrastructure has seemingly hindered economic development up to this point. India’s population could surpass China’s as early as 2025, and is relatively poor when compared to even other BRIC nations; indicating tremendous potential if the Country’s newly elected government is able to make positive changes.

From a supply perspective, the dominance of Chile in primary production has sewn vulnerability into the global supply chain (Chart 7). There are two important challenges facing the Chilean mining industry that will impact the price of copper:

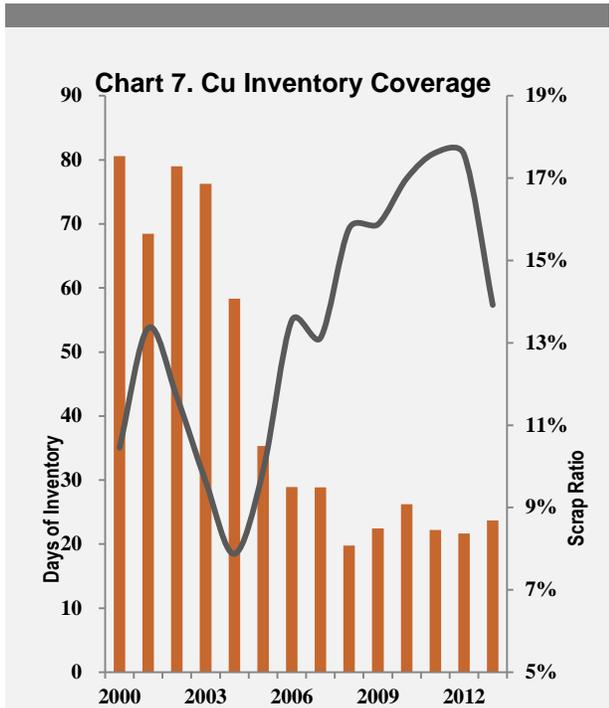
1. Electricity – Chile generates enough power to meet aggregate demand. Unfortunately, there is a clear lack of transmission into the northern Chilean desert where large copper districts are located.¹³ Although, this problem has been known for some time – the compound annual growth rate (CAGR) for electricity costs stand at 11% since 2000 – there has been little action taken due to the required Capex investment and uncertain regulatory environment.¹⁴ Estimates regarding the mining sectors current representation of electricity demand in Chile vary between 20-33%, and these power costs are currently some of the highest faced by any major copper producing country.^{15, 16} Peru, Chile’s northern neighbor, appears to have realized the opportunity to supply electricity to these stranded mining operations; however, development will not be completed overnight. The solution to adequate power resources is becoming increasingly complicated as thermal coal generation comes under attack in much of the world. Until adequate power infrastructure is built, mining operations will likely face increasing electricity costs (Chart 8).

¹³ Julie Gordon, CESCO – Rising power costs threaten Chile’s mining prowess, Reuters, 12 April 2013

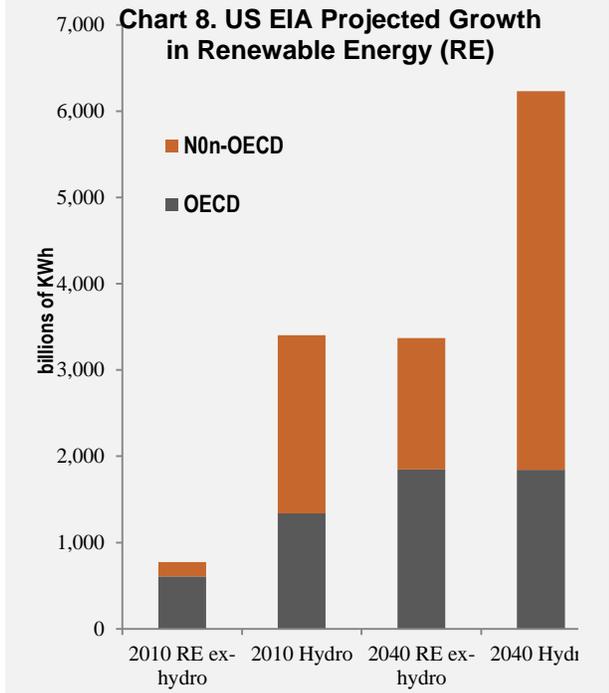
¹⁴ Ibid

¹⁵ Ibid

¹⁶ Michael Schwartz, Copper Outlook, Teck, Jan 2013



Source: ICSG and ZC estimates



Source: US EIA

2. Water – there are limited water resources in northern Chile, and it is both physically and politically impalpable to continue draining aquifers to meet mining requirements over the long term. Desalination facilities are now inevitable, but who is responsible for construction of plants and pipeline network across the region is less clear. What is clear is that desalination will increase costs.¹⁷ BHP Billiton has taken the initiative at the Escondida mine and is currently in development of a desalination facility, expected to be completed in 2017 costing U\$3.43 billion.¹⁸

Short Term Price Forecast – caught in the crossfire

On average, copper prices are likely to be range bound throughout 2014 and 2015 before creeping higher (Table 4). Growth in mined copper production stagnated between 2008 and 2011 as a result of the Global Financial Crisis (GFC) and the subsequent decrease in investment spending by large mining companies led to the deferral of several projects. However, the eventual start of production from these projects meant substantial growth in mined copper production in 2012 and 2013. The International Copper Study Group (ICSG) expects continued mine growth of 4.7% in 2014 and 7.3% in 2015.

The ICSG also expects secondary production, which includes the recycling of new and old scrap, to increase. We however, expect some relief on this front as scrap utilization appears positively correlated to copper price movements (Chart 7). If copper prices come under sustained downward pressure, we would expect reduced incentive for recycling processes, alleviating some of the pressure.

In aggregate, we estimate growth in global production of refined copper to remain in excess of requirements for the next several years as deferred mining production continues to enter the market. We do not expect the situation to reverse prior to 2017/18, preventing copper prices from mounting a sustained rally. However, there is no expectation for a collapse in copper prices due to a combination of factors:

¹⁷ [Matt Craze, IDE Targeting 6-8% Desalination Growth in Chile, Peru, Bloomberg, 25 Feb 2014](#)

¹⁸ [BHP Billiton Results for the Half Year Ended 31 Dec 2013, BHP, page 6, 18 Feb 2014](#)

	World	Chile
2007-2012	5.4%	9.9%

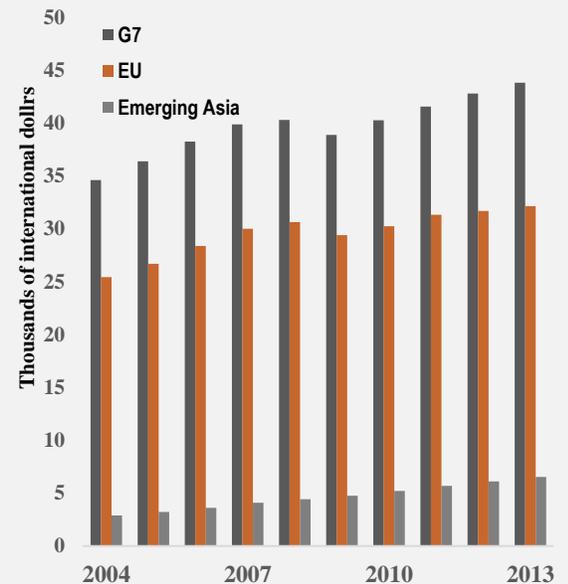
Source: Reuters, IMF, and ZC estimates

Chile, the global leader in mined copper production, is likely to faced continued cost pressure

Average Price		Trading Fluctuation Range	
for year	Target	Min	Max
2014	3.18	2.65	3.72
2015	3.21	2.68	3.75

Source: ZC estimates

Chart 9. GDP, PPP per Capita



Source: IMF

	1996-2003	2004-2012	2013-2019 est
mean	76	29	39
median	76	26	36

Source: ICSG and ZC estimates

- Continued cost pressures for many of the largest mining operations¹⁹ – these pressures will likely continue as labourers demand higher wages, governments look to recoup spending commitments, and average ore grades continue to decrease (Table 3).
- The International Monetary Fund (IMF) expects global growth in purchasing power parity to remain resilient underpinning continued demand for many base metals (Chart 9).
- Days of inventory²⁰ - the ICSG estimates an annual surplus of global refined copper production of approximately 400 thousand metric tonnes (893 million pounds) in 2014.²¹ The last annual surplus took place back in 2009. However, current days of inventory have fallen by more than half from pre-2004 levels of well over 2 months of annual demand (Table 5). Reduced inventory coverage indicates relatively short lived disruptions would have an asymmetric impact on pricing of the metal.

Copper Demand Drivers – should we be worried?

Copper demand is a function of four major segments (Table 6):

1. Real economic growth

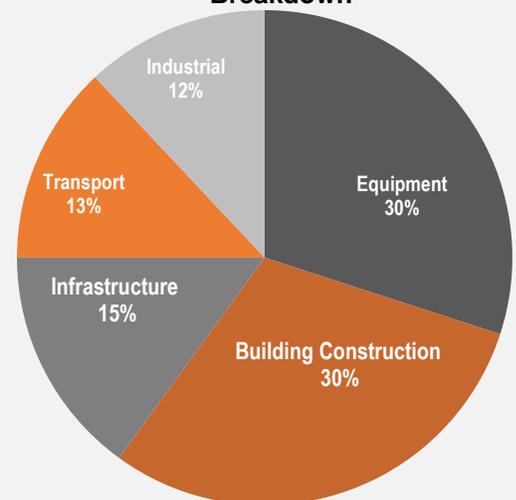
- Transportation systems – according to the Copper Development Association the average vehicle in the US contains over 50 pounds of copper, and even more for electric cars. The average railroad locomotive uses 11,000 pounds of copper, while electric subway cars, trolleys, and busses contain a weighted average of 2,300 pounds.²² When these numbers are combined with farm and industrial equipment, as well as airplanes, the critical nature of copper in the development of modern industrial societies is plain.

Real Economic Growth	Urbanisation
Transportation	Building Construction
Manufacturing	Power & Telecom Infrastructure
Consumer Durables	Electronics
Capital Investment	Regional
Compulsory Reinvestment	Population
Technology - hardware	Geography & Environment

Source: ICSG and ZC

Increasing capital and operating costs for the global mining sector combined with reduced inventory coverage should prevent copper prices from falling back toward pre-2004 levels, even as the market absorbs excess refined copper production over the next few years

Chart 10. 2012 Copper End Use Breakdown



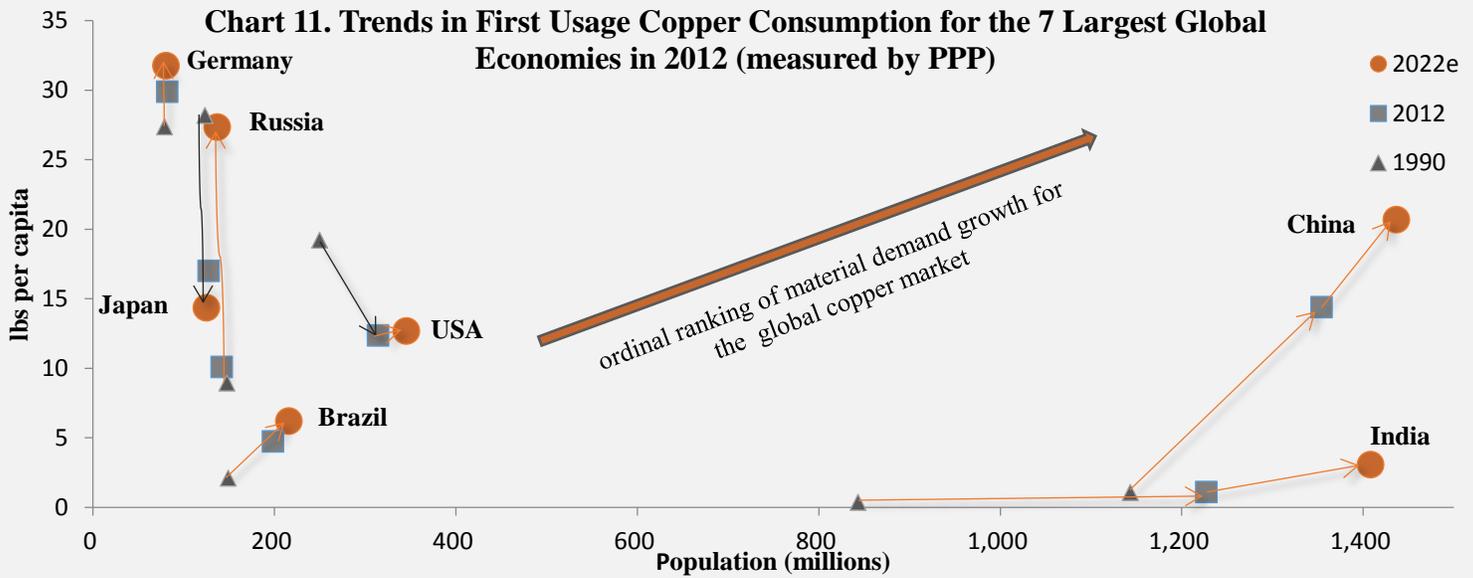
Source: ICSG

¹⁹ [Cost Inflation to Bite Miners' Results in 2013, Fitch Ratings](#) and Zimtu estimates

²⁰ the number of days of estimated current demand could be supplied through existing inventory

²¹ 1 metric tonne = 2204.62 pounds

²² [Copper Facts, Copper Development Association](#)



Source: ICSG, IMF, and ZC estimates

- Industry – much of developing Asia is transitioning from rural agrarian based economies toward urban manufacturing based economies that require increasing amounts of commodities including copper (Chart 11).²³ As China’s economy continues to emerge, there are other Asian nations looking to “emerge”. The ASEAN-5 (Indonesia, Malaysia, Philippines, Thailand, and Vietnam) have had recent geopolitical struggles, yet many have made substantial progress since the late 1990’s. In particular, Indonesia and Vietnam appear to offer strong industrial growth potential.

2. Urbanisation

- Building Construction – China and India should continue to require massive infrastructure investment as urbanization continues, of which copper will be instrumental (Table 7). Intensity of copper use should be materially higher during development and construction of physical infrastructure than in developed economies.²⁴ In China, between 2002 and 2012 over 178 million people moved into urban centers. BHP reports copper usage intensity in China increases by a factor of 2-3 times when comparing urban centers to rural villages.²⁵

Transition of non-OECD Asia, home to a substantial share of the global population, from agrarian and natural resource exports to industrial economies will require greater copper intensity

Table 7. Select Urbanisation Rates			
Country	2012	2002	1992
China	52%	39%	28%
Germany	74%	73%	73%
India	32%	28%	26%
Japan	92%	82%	78%
Russia	74%	73%	73%
USA	83%	80%	76%

Source: World Bank

²³ Ismail Oladimeji Soile, [Intensity of Use Hypothesis: Analysis of Selected Asian Countries with Structural Differences](#), International Journal of Energy Economics and Policy, Vol. 3, 2013

²⁴ Ibid

²⁵ [Shaun Verner, Our confidence in the long term outlook for copper, BHP Billiton, slide 40, 30 Sep 2012](#)

KPMG expects on average 15 million people to move into urban centers every year in China between now and 2030. Copper wiring and piping, as well as copper alloys are used extensively in both commercial and residential construction. In the US, the average single-family home of approximately 2,100 square feet uses 439 pounds of copper, while the average multifamily unit of 1,000 square feet uses 278 pounds of copper.²⁶

- Power & Telecom Infrastructure – copper is one of the best metals for conductivity and corrosion resistance. Though silver is a better conductor and gold more stable, the price differential of these two metals relative to copper prohibits substitution (Table 9). Therefore, copper is ideal for power cables, building wiring, and telephone wire.

3. Capital Investments

- Technology – energy supply concerns and environmental worries, combined with increasing efficiencies and decreasing system costs for renewable energy technologies will continue to fuel renewable energy growth over the long term (Chart 8). Renewable energy plants require more pounds of copper per megawatt (MW) of capacity added than traditional fossil fuel plants (FFPs) and nuclear power plants (NPPs) (Table 8).²⁷ Aluminum substitution for land based renewable technologies is a concern. However, the corrosion resistance of copper is important for offshore wind, which is likely uneconomic in the current environment but whose advantages should ensure eventual development along the US eastern seaboard.²⁸

4. Regional factors

- Population – global refined copper usage per capita (RCUC) increase from 1950 to 2012. However, between 1973 to 1993 RCUC was fairly constant at 4.4 pounds per capita before trending higher; again, illustrating the impact of non-OECD Asia development on copper usage intensity (Chart 12). Continued convergence of non-OECD Asia toward developed OECD should continue to drive RCUC from 6.6 in 2013 to 7.5 pounds of refined copper per capita in 2019 (Chart 13).

²⁶ [Copper Facts, Copper Development Association](#)

²⁷ [Market Study: Current and Projected Wind and Solar Renewable Electric Generating Capacity and Resulting Copper Demand](#), BBF Associates

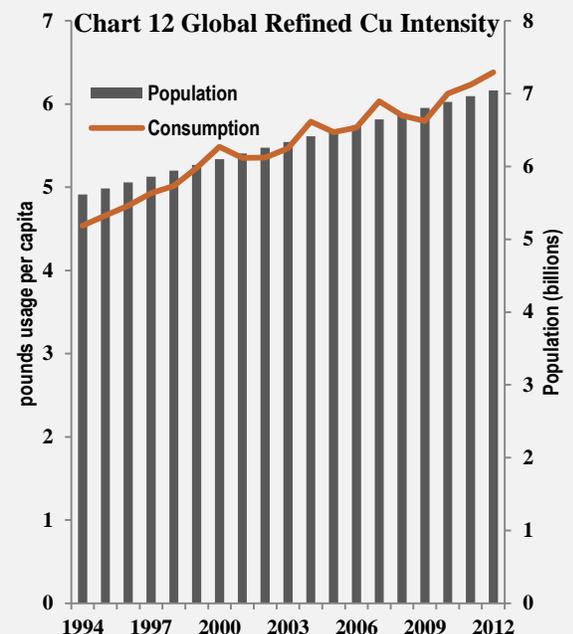
²⁸ Ibid

Energy Input		Pounds of Cu per MW*	
		Min	Max
Conventional FFPs and NPPs		2,000	3,000
Wind	Onshore	5,600	14,900
	Offshore**	21,076	
Solar	Photovoltaic (PV)	5,400	15,432
Geothermal		2,000	3,000

Source: BBF Associates & J.A. Kundig, Ph.D.

Metal	Conductivity	Corrosion Resistant	Price (U\$/oz)	Substitution Potential
Al	4th	Poor	0.05	modest
Cu	2nd	Good	0.20	n/a
Ag	1st	Good	19.08	low
Au	3rd	Very Good	1,259	very low

Source: NDT Resource Center



Source: ICSG and World Bank

Long Term Outlook – exploration to benefit from mining sectors Capex cannibalisation

Copper supplies are likely to exceed demand in 2014 and 2015; we further expect this situation to persist for 2016 and 2017. This is less than an ideal environment for promoting rising copper prices. However, the economics of copper mining have changed dramatically over the last 11 years. Operating costs for the sector have risen substantially while head grades have, and are expected to continue to, decline.²⁹ Additionally, copper inventories are also near historic lows preventing prices from moving back to pre-2004 lows. Over the 10 year forecast period, copper price are likely to rise as capital costs and regulatory risks for large scale mining development projects have become significant hurdles deterring investment into future production (Table 10).

Conclusion – junior exploration focused on grade over tonnage will add significant value

Expectations for the copper mining sector suggest there is little value in defining and proving-up low grade-large tonnage copper deposits in the current market, especially where environmental concerns are forefront (Table 11). If the economics weren't enough, the prospective Pebble Mine Project in Alaska – now orphaned as Anglo American and Rio Tinto have withdrawn – illustrates the difficulty in receiving regulatory and political approval is in much of the developed OECD when there is significant pressure from environmental groups.³⁰ However, all is not lost, as previous exploration seemed to pay only marginal attention to grade and capital cost; instead preferring large tonnage-long life copper porphyries. Intuitively, the larger the project size the more access to financial and political capital is needed. In contrast, projects with potential average head grades above the world average should attract investment dollars even with reduced tonnage.³¹ To clarify, deposits with mid-sized aggregate tonnage (reserve size of approximately 450 million pounds of copper), and an average in excess of 1.2%, will have greater financing options and likely receive regulatory approvals faster, all else equal.³² The

²⁹ [Gayle Berry, Capex cannibalisation pushes copper further towards a mid-decade deficit, Barclays, Oct 2013](#)

³⁰ [Pebble Mine's 2013 Year End Review: "One Foot in the Grave?", Huffington Post, 7 Jan 2014](#)

³¹ Assume unadjusted for weighting unless specified

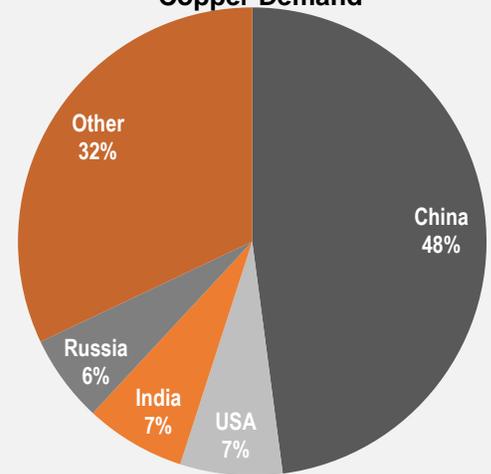
³² [World Copper Resources, Princeton, 1988](#)

Table 10. Copper Price Forecast

Annual Average	LME spot price (US\$ per pound)
2013	3.32
2014e	3.18
2015e	3.21
2016e	3.37
2017e	3.59
2018e	3.74
2019e	4.03

Source: LME and ZC estimates

Chart 13. 2022 Projected Regional Copper Demand



Total = 28,124,000 tonnes refined Cu

Source: ZC estimates

Table 11. Cu Supply-Demand Expectation

thousands of tonnes	Mine Production	Refined Copper Production	Refined Copper Consumption
2010	16,053	18,984	19,129
2011	16,076	19,596	19,697
2012	16,699	20,128	20,386
2013p	18,059	20,991	21,273
2014e	18,904	22,362	21,957
2015e	20,283	23,335	22,740
2016e	20,927	24,205	23,593

Source: ICSG

economics should improve with increasing head grade, all else equal; while a smaller operation may perversely increase the likelihood of approval.³³

Of course, there are other considerations including location, existing infrastructure, potential mine type, management, access to capital, share structure, environmental impact, etc. However, initially using grade, tonnage, and jurisdiction to vet projects provides value within the investment decision process.

Zimtu Portfolio: Introducing Pasinex Resources Limited – Copper, Zinc, and Precious Metals

Pasinex Resources (CSE: PSE) is a Canadian junior mineral exploration company predominately focused on zinc and copper assets in Turkey (Table 12). PSE is also one of Zimtu Capital’s (TSXv: ZC) core holdings. The recent Fraser Institute annual survey of mining companies ranked Turkey in the top 1/3rd of all jurisdictions globally for mining policy attractiveness.³⁴ More importantly, Turkey has improved in ranking consistently over the last the surveys, indicating improving government mining policy. Turkey’s economy is rapidly integrating with Europe and has proximity to large Asian markets.

It appears the strategy for PSE is to prefer grade to tonnage, with a pulse on current market conditions for the commodities being explored for and potential financing restrictions. This has allowed PSE greater operational flexibility, which has been utilised by shifting exploration focus toward their zinc-lead asset to take advantage of expected relative outperformance of zinc to copper over the next few years. PSE conducted Ground Penetrating Radar to help further define targets for the current phase 1 drilling program on its 50% owned Pinargozu zinc-lead project in Adana Province, Turkey.

PSE has a well-established Turkish mining company, Akmetal, as a joint venture partner on its projects, adding further credibility to PSE’s business plan. The clear defining feature for PSE is the strong technical expertise and accumulated business experience of the senior management team (discussed below). Furthermore,

Going forward, junior copper exploration companies will need to utilise viable business plans focusing on grade, manageable capital costs and tonnage, infrastructure adequacy, environmental impact minimisation, and include multiple exit strategies

Table 12. Pasinex Share Information		
Symbols	CSE:	PSE
	FSE:	PNX
Shares Outstanding		67.85 M
Options:		1.60 M
Warrants:		9.33 M
Fully Diluted:		78.77 M
Market Cap (as at closing bid on 06/03/14):		C\$6.11 M

Source: Pasinex Resources Ltd and Stockwatch

³³ Stuart Levit and David Chambers, [Comparison of the Pebble Mine with Other Alaska Large Hard Rock Mines](#), Center for Science in Public Participation, Feb 2012

³⁴ [Miguel Cervantes, et al, Survey of Mining Companies 2013, Fraser Institute, 3 Mar 2014](#)

management team has placed a high degree of relevance on corporate ethics; the Company has endorsed the Prospectors and Developers Association of Canada Principles for Responsible Exploration.

Potential Risks – due diligence is always recommended

As with all small capitalisation exploration companies there are inherent material risks commensurate with the potential reward. Looking at PSE, the most notable risks for investors are:

1. Daily share transaction volume (lack of liquidity)
2. Perceived Geopolitical concerns
3. Required capital for ongoing exploration and development

The Big Two For Pasinex – impressive technical expertise and operational experience

President and CEO, Steve Williams is an expert in metallurgy and has over 30-years of experience in the mining sector which included the role of Managing Director at SGS Canada. Steve holds a Bachelor of Applied Science (Extractive Metallurgy) from the Western Australian School of Mines and an MBA from Tulane University. Steve has also authored many technical papers and is sought after lecturer for his knowledge of geological metallurgy and mineral business development.

VP Exploration, Clinton Smyth, is a qualified professional geologist. Clinton holds his Master of Science in Geochemistry as well as Computer Science, and has 35 years of experience in the mining sector working throughout the world. Clinton has served several different roles in his 25 years tenure with Anglo American Corporation including VP of Exploration in Australasia, and as VP Exploration in Africa.

Golcuk Copper Project

Pasinex' Golcuk Copper Project occupies a 40 square kilometer mineral claim. There has been some historic small-scale mining of the surface mineralisation at Golcuk. More recent exploration has seen the drilling of 20 diamond drill holes in a concentrated area, the best

returning 13.5 meters averaging 2.6% Cu and 41.9 g/t Ag.³⁵ Pasinex is currently planning drilling to test for extension and expansion of the mineralisation to the north-east of existing drilling, though no timeline is given.

Map 2. Golcuk Project Location Map



Source: Pasinex Resources Ltd.

³⁵ <http://pasinex.com/exploration/golcuk-turkey/>

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