Will China demand overwhelm supply

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## I. Preamble

Thanks very much, Jim, and good afternoon, everyone. I know I'm the last speaker of the day, so the crowd has thinned out a bit and everyone's looking a bit weary, so I'll try and be a little lighter. I'm going to break what I have to say into two segments and talk, maybe more, on a higher level, about the way that I personally and that BHP Billiton increasingly are thinking about China. We're trying to come up with some thinking diagrams, some thinking tools, some models to help us to think about the way China's going to go. In terms of our business, the way China affects us is pretty much 'Velcro-ed' to China growth and the quality of that growth, so it's getting an understanding of what drives that growth. How that growth is going to go forward is critical to us. We need to make some pretty big bets one way or the other with respect to China, and having a good understanding that we can cascade down into the sectoral implications, for us, is important.

So, I have a phrase that I tend to use when I talk about this, and talk about how China has progressed, and this is one of the ways that I try to think about China. Rather than taking a single cut, balance-sheet-type moment in time to contemplate China and analyse China, I try to think of China in terms of continuum – you have to. You have to think about where they've come from, in order to have a realistic assessment of what it means in terms of where they are, and also to be able to judge, from their track record, how well they're likely to progress into the future. So, I call this a marketisation continuum. We can argue about where exactly China is along a path from one to 10 between a command economy and a market economy, and I'm sure there would be vigorous argument about exactly how far we've progressed. Obviously, the European Union has a certain view of that with respect to trade dispute arbitration, and the United States has a view on that in terms of whether or not we call China a market economy or not, but certainly China is moving, and I think that's pretty much inarguable.

Now, the discussion about China's potential has been going on for a long time, and the potential of China has been there for a long time, and a lot of us had dreams about it for a long time. Napoléon had this interesting take that actually you'd better be pretty careful, because when China does wake up, there are going to be some issues for all of us. I think there's a workable hypothesis, particularly in the last couple of years, that China's current phase of growth – current high-speed growth – and the quality of that growth – the texture of the growth – one can argue that China is beginning, finally, to shake the world and realise some of the potentials that we've seen. But foretelling the future is difficult.

You'll hear me, and you've heard other speakers here today, on what's in the future for China, what the issues might be, and where China might go. I'll happily admit to being in a relatively optimistic camp – I usually say I'm in the 'glass half-full' camp. But it is difficult, and that's why I think tools like thinking about a marketisation continuum and thinking about different developmental models are very, very useful, with respect to how you think about China. It gives you a context within which to put what you observe on China.

Now, in simple terms – this is kind of ordinary mathematics – but in simple terms, China is a medium-sized economy by global standards. It's becoming larger very fast – it's one of the fastest-growing of the major economies – but it's still only a medium-sized economy. If you think of it in purchasing power parity terms, it's a significantly larger feature of the landscape, and much of the impact that we're experiencing of China is more a reflection of a purchasing power parity scale of economy than of the real economy and there's a lot going on in the economy that doesn't get written down. There's a lot of people in the countryside trading five bags of rice for a pig that doesn't get written down. There's a lot happening in the service sector that doesn't get written down.

If you see how that might go forward, in time you see China becoming an increasingly substantial piece of the world, and this is quite an important theme that certainly we are thinking more and more about in BHP Billiton, in terms of the medium-term and longer-term outlook for raw materials and for our industry. There is something of a global shift of influence going on with respect to economic activity, and of course that does play into political influence and geopolitical activity with respect to China. So, as you get out a couple of decades from now, China's a pretty meaningful piece of the globe.

Now, analysing China is pretty hard. We've all heard that China is kind of 'big', and Tim, I think, was very articulate about talking about how complex it is, and how much texture there is. There is so much going on, and there are so many constituencies – national, provincial, local – there are so many different entities around. It's a very, very hard beast to fully comprehend, and my own device for comprehending it is to make sure that I'm networking around groups of people who understand it – talking to people like Joe and James and Tim, having a good network – because you can't possibly comprehend it by yourself. I like this old parable – it's a Sufi parable, I believe, but the Chinese themselves also use it very often. It depends a lot on which little piece of the elephant you hold on to as to what you really believe about China, and there's a great danger that we all suffer from grabbing on one little piece or one little anecdote, and generalising from that anecdote. You've got to be careful, and when you think about China yourself, ask yourself 'Well, which bit of the elephant did I grab, and what conclusions am I drawing from this, and are the conclusions that I'm drawing valid?'

Now, also understanding how China goes forward and, again, the way we analyse China, we tend to analyse China in orthodox, western-model GDP – are they going forwards or backwards in this linear way – whereas a good way to describe it is this Chinese phrase – [Chinese: xun xu jian jin] – which is this idea of progressing in spirals and waves, that bits of China can be going forward, and bits of China can be going backwards, and bits of China can be going sideways. It's not necessarily in the same kind of model of economic progress and economic structure that we would like to think of.

The different parts of the economy, and the different aspects that you observe, can be progressing in different ways. Where is China on the marketisation continuum nationally? I would argue that China is maybe at a six or seven in progress. It depends, and it's quite a legitimate discussion to have about how you feel you've observed that. Regionally, clearly somewhere like Shanghai is a lot further along that marketisation route than somewhere like Shanxi. At a local level, there are some cities that are clearly far more marketised – Shenzhen is clearly far more marketised than Chengdu. If you think about it by industry, the computer industry – even though you can certainly see aspects where there's been government influence in support of the industry – is far more marketised than the coal industry, or the power industry, for example.

There are enterprises that are almost wholly enterprised; they've got their capital from investors, they've borrowed money from the banks at bank rates, they're entirely vulnerable to the market in terms of the way that prices for their products are set. There are others who are entirely protected and entirely based on false economies; state-owned enterprises in many sectors are like that. Then there are individuals. I use the anecdote of a guy I met a couple of weeks ago who's about a 55/56-year-old – state-owned enterprise; old-style manager running an old-style company which is losing money hand over fist, and has got 18,000 workers, most of whom are sitting on their hands doing nothing. That enterprise has no hope, and is irredeemably, structurally unsustainable, but is still kind of 'burbling' along, and one of the reasons it's never going to change is that the guy's mental set is kind of stuck in his life experience, which is back in the command economy, and he has no chance at all of moving that forward.

I contrast him with my secretary, who's 25-years-old, and each morning, when I get to the office, I sit there before she arrives, and I try to guess what colour her hair will be, and she comes in, and she'll have one of any of six or seven different telephones with her, and when you engage her in a personal conversation, she'll talk about the love of her life – her pet schnauzer. The world has moved, and different bits of China and different aspects of China are moving at different paces, so it's really, really important, when we think about China, to try and put it into this context, so that what you observe is put into a broader context, and what you observe is thinking about where what you've observed is on a continuum, where different parts are going at different speeds.

I use this as a very simple model to talk about different Chinese corporations. If you look at any given Chinese industry, in the command economy era, most companies in any given industry were way over there on the left-hand side; they were all bunched up there, they weren't terribly modern, they weren't terribly marketised. There was a little bit of differentiation among them in terms of technology or equipment or capability of their management, but really not much. In the modern era, there are industries where much of the industry is very much marketised. Now, to the extent that we could use an analogy appropriate to this conference, the Chinese steel industry is surprisingly marketised, now it's coming off a platform of state-owned enterprise; it's coming off a lot of legacy investment that has been on very friendly terms; they've got very privileged positions in many instances. But, by and large, the steel industry in China is highly marketised. The steel price in China is very much set by the market, and by many of the measures that you would apply to judging whether or not an industry is marketised. The steel industry in China is very marketised. World steel dynamics did not a terribly serious, but a reasonably interesting, judgement on the top 20 steel industries in the world, and they judged them by about 15 criteria as to the degree to which they were marketised. Guess which steel industry comes out as the world's most marketised steel industry – the Chinese, because most other steel industries in the world are artificially supported, protected behind tariff walls – all sorts of things.

So, it's quite surprising, in some instances, the extent to which this has occurred in various Chinese industries. There are quite a few Chinese industries who are back on the left-hand side there, but in any given Chinese industry, you'll find that there's also probably a bell-curve like the red line, in which some of the leading edge of an industry are very, very good, and the trailing edge are very, very bad – not modernised, not marketised at all. If you look, for example, at the Chinese coal industry that we know very well, the leading edge of the Chinese coal industry is extraordinarily effective. We've visited operations in China which are better than ours – they really are good. Very, very efficient, very effective, and very good by many measures that we would apply, including health and safety and the environment. The trailing edge of the Chinese coal industry is absolutely pre-Dickensian – it's all the things that we've talked about today, and James talked about in terms of the worst of waste that you could possible encounter.

But the trouble is it is very difficult to make a judgement about the coal industry as a holistic thing in China. There's a lot of contrast in it, and I'd again emphasise, think about the elephant that you're grabbing, and think about which bit you're grabbing, because this applies in so many different aspects and areas, and across different industries.

Now, Joe talked about this – the way you look at information in China. One of the things we spend a lot of time doing when we do the work that we do in China is making sure that we source our facts well, making sure that we are rigorous in the way that we validate those facts. You can't just take your initial slice of data and toss it into your model, and then rely on the outcome – it doesn't work that way. It's a very, very difficult process, and we've put a lot of time and energy in the front end of the way we analyse China, in getting the right data, working hard to get that data, working very hard to validate that data, through a range of different protocols, and then making sure that the model that we put that data into is a model that understands and comprehends what we're talking about in terms of China, understands the factors that are involved in China. We don't just take one of our normal models and drop data into it.

When we talk about a continuum and a trend, I just put this up as an interesting indicator of how things are trending over the last couple of decades. Now, we can debate fairly actively the definitions of some of these companies in there, but by and large the trend is very, very clear. The trend is that the Chinese economy is moving towards more of a market model and the kind of companies that are active in the economy are less and less state-owned, and there's a couple of reasons for this. The state-owned sector itself is growing in absolute terms, but as a proportion of the economy it's not where the fastest growth exists.

The other thing that's interesting about China in recent times is that that state-owned sector, although it's a smaller proportion of the economy – as a whole, is actually becoming more efficient in many respects. There's a huge number of state-owned enterprises who are absolute 'basket cases', but there are quite a lot of state-owned enterprises which, in recent years, have turned around and become more profitable, and the big, high-profile state-owned enterprises who, in many instances, have got a monopoly position or have a good market and business position and are sustainably very competitive, are actually doing very, very well because they're in a very large high-growth market.

The same applies for how you get money in China if you're a corporation. The way you get money has changed. The old model of you simply going to the bank and they turn on the spigot has shifted. Chinese corporations get their money in different ways. We can argue about the extent to which Chinese banking is still pouring good money after bad, and the NPLs are ballooning out again, but certainly the mechanism by which money is allocated and capital is allocated is changing.

I think one of the important aspects that I like to talk about in China when I talk about it is productivity. China is not simply an investment and cheap labour story – there is actually a very strong productivity growth story in China. In the 1980s, this productivity growth was about taking slack out of an economy that was genuinely moribund. There were a lot of Chinese steel plants in the 1980s that had a lot of installed capacity that wasn't being used, so the first phase was simply about 'dusting off the cobwebs' of the installed capacity and extracting the capacity that was there. But in the 90s, it was about technological renovation; it was about the installation of new capacity, and in recent times it's been about Chinese corporations arriving at world scale, managing themselves better, producing a better quality of product, and getting better work out of their labour force. So the productivity story is there, it's very strong, and it will be ongoing, which leads you to conclude that the Chinese will be a competitive force of some substance going forward.

One thing I think is a useful thing to remind ourselves is that I often find that foreign participants in the foreign economy – including Tim's friend Pat – we tend to overrate our importance to the Chinese economy. Foreign direct investment is less than 10% of total investment in the economy, and has been declining over the past few years, and will continue to decline as a proportion of total investment in China. So, the idea that China is entirely reliant on foreign investment, even though it's a very big absolute number - $53 billion – is it 54? – it's a very big number. I think it's the second largest destination for FDI in the world still. In absolute terms, if it all dried up tomorrow, it would have some impact on China, but probably not as big an impact as we think. So, one of my summaries would be that China is not as fragile, maybe, as we think. China has weathered some significant shocks in the past few years, and is increasingly robust as an economic phenomenon, in terms of weathering future shocks.

Just to summarise this first section of what I'm talking about, what do I think are the key aspects and elements of why this is going to go on, and talk about this marketisation continuum and how they will not only sustain it, but I think continue to enhance it. Following on my elephant metaphor, I think China is a little bit like an elephant on a bicycle: they can't go too slow or they'll wobble and fall over, and if they go too fast in terms of economic growth, an elephant going too fast is a really frightening thing. So, there is a nice happy medium in terms of the appropriate level of growth, and that's what the Chinese Government constantly seek to attain. If they go too slowly, they'll have trouble creating the jobs they need to create for the unemployed, who are rendered unemployed as they go forward with the reform process. Conversely, the reform process has to keep going, otherwise they will continue to come against barriers to sustaining growth, and the key aspect of the whole thing is economic and social stability, because when energy and reserves and economic resources have to be diverted to maintain stability, you get distracted from the main game, which is of course growth and marketisation.

**Slide – China – will demand overwhelm supply?**

To talk something a bit more about the topic around this conference, a pet theme that we've got and that obviously we pay a lot of attention to is the extent to which China is really impacting demand, and whether or not supply can keep up. To start off, first and foremost, with the way we think about it at BHP Billiton, clearly, from what I just said before, we think the Chinese growth story is going to keep going and, as a result of that, we think China is going to be a very big feature of our landscape, and is going to be a sustainable consumer of the materials that we hope to be able to continue to supply.

China arrived on the scene in the last two years in a very large and dramatic way, so that shook up our world a little bit. I don't think that any of us claim that we had very, very good forward vision on the size and scale and rapidity of China's arrival in the last couple of years and the change of circumstances that China caused of everything going from what were virtually buyers' markets to becoming sellers' markets. But we think that, as a result of China's sudden arrival and lurching into the scene, that's caused a bit of disruption, and it's going to take a little bit of catching up and restructuring; there's infrastructure there's to be caught up, there's capacity to be developed in order to supply China, so that produces some short-term price volatility, and we think that's going to be around for a little while longer yet.

**Slide – We expect China to be a large and sustainable consumer of imported raw materials**

We definitely expect that supply, in almost all commodities, will develop in order to meet the demand from China. The prices go up, supply comes in. If you look across all the commodities, the horizons are different for different commodities, but by and large all the commodities will get there somehow. As I mentioned before, I think there are very significant implications that are worth thinking about with respect to a global power shift. There'll be an economic global power shift – it's already happening in many industries – and that results in a political power shift as well, which is just as important for the Chinese as it is for us. The Chinese have to behave in a different way, and the Chinese Government and Chinese corporations, etc, are going to have to behave in different ways. Many of our governments and our corporations are going to have to behave in different ways with respect to the Chinese.

Our thesis is that China is going to be large and sustainable; China, as we know, is a big consumer of resources, the Chinese natural resource endowment is relatively limited. We have very clear vision on that in most sectors. In some sectors, there's a potential for China to find more resources; there are other sectors where maybe China's perceived endowment is actually more than is going to be the case over time, but the net effect of that is that China will need to import significant amounts of resources, even in those sectors where she is capable of supplying herself to some extent.

We think that, as countries modernise, develop, and industrialise, they urbanise – it's almost an immutable rule of the way that development takes place – and as that takes place, in China that's going to represent very large numbers of warm bodies. I'll show you some data later on – whether it's solid or not, I don't know, but it's the view that we have. We think that the way China uses resources – the metals intensity and resource intensity of China – is going to be a function of a developmental model that is not similar to anything that we've seen in recent history. If you look at the developmental models of Japan, Korea and Taiwan, these are insular models; they're what we call the Asian tiger economy-type models, and these are models which are essentially investment-driven and very export-dependent and very export-oriented. China has had some aspects of that in its early stages of development, but we feel that China is going to move towards a more continental maritime type of model, for which the major legitimate comparison, I guess, is the United States, where you've got a large land area, a relatively large population, and the basis of that economy is domestic consumption, rather than the external sector. Of course, it will still have a large external sector, but we see China moving more and more towards a model that is driven by domestic consumption and is going to be driven by the needs of urbanisation and the rising aspirations of the Chinese population.

Also an important thing to note, I think – China came on the radar very, very dramatically for much of the business world in the last two years, but China's growth and the policy of reform and the continuum away from a command economy towards a market economy is a phenomenon that's been underway for 20 years – it's not a recent thing – so, again, the way we think of it and the way we analyse it should be in the context of a lot of this stuff's been going on, maybe less visibly than we might think, but it really has been going on for a long time.

**Slide – China is a large consumer but short of resources**

This is just a quick chart, looking at some of the different raw materials that we might supply, and looking at the balances in terms of what China can produce and what China needs to consume. Clearly, China's demand for these things is only going to rise as the scale of the economy continues to expand on the assumption that that growth keeps going, which is our working hypothesis.

**Slide – Consumption, as a % of the world total, doubles every decade**

If you look at recent growth – and again this goes back to the comment that I made about Chinese growth not being entirely a recent phenomenon, but being a compound phenomenon, and it's been going on for a while, consistently doubling for a while, and obviously in recent times there's been something of a trend-break in terms of the quality and the quantity of that growth, so there are going to be some big numbers out there. I appreciate the dangers of 'drawing hockey sticks in straight lines', so don't take this that BHP Billiton does draw hockey sticks in straight lines – we've put a lot of wrinkles in between these decade-long steps.

**Slide – Urbanisation and associated infrastructure are the key drivers of growth**

Again, this comes back to the urbanisation thing. If you look there from left to right, you start to see that there's quite a lot of people moving around, and if you take the implications of those people moving around on several levels, you'll find there are some massive economic implications. If you take a farmer off the farm – if you facilitate that by giving him the capacity to either sell or collateralise his land and give him a bit of money in his pocket to go to town, and he goes to town, he's got the ability to at least put down the deposit on a small house – by virtue of coming off the land, as a farmer on the land his net marginal value to the economy is relatively low – in fact it's pretty much zero – whereas once he goes into a manufacturing job his net contribution to the economy increases a couple of percent. If he goes into a service job, his value to the economy can increase by four, five or six percent, so the very fact of 300-odd million people moving around – and some figures that you'll see will be more than that – the very fact that their marginal productivity, when they move from the countryside into a manufacturing job or a service industry job, increases has a significant impact on the economy, and those people will need to be housed.

The other thing that does happen is, as people come off the farmland, you get the capacity for the agricultural sector to become more efficient. You get the ability to consolidate plots of land, etc, in the countryside, and there's quite a lot of traction to be had just in the early stages of that consolidation. You don't have to go from quarter-acre plots to 500 acres in order for significant agricultural efficiencies to be extracted; it's the transition between quarter-acre plots and 10-acre plots, where the maximum amount of agricultural efficiency is extracted. So, the very fact of these people leaving the countryside also will induce an increase in efficiency in the agricultural sector, which enhances the total productivity of the economy as well. So, there can be some fairly interesting implications in this phenomenon.

**Slide – Urbanisation and associated infrastructure are the key drivers of growth**

This is just more talking about the levels of income that are likely to be around there. Some people think that's surprisingly small – you've got this $6,500 level, which is called a mass affluent level of income – but that's the level of income at which people can start thinking about accessing their future income; it's where people can get a mortgage and, as we've noted in the last couple of years in China, access to future income and getting a mortgage is a very, very powerful element of the growth, and has big implications for us in terms of our commodities.

**Slide – China's resource intensity will be a function of a Chinese "continental maritime" model**

Just looking at a couple of particular sectors that we look at; the breakdown of how steel is consumed in China. Obviously, construction sticks out like a sore thumb, and that's because most of you have probably been to China recently, and if you look at the building that's going on in cities, the infrastructure that's being built, etc, steel is going into those high-rise buildings. It's going into those new highways and bridges and things like that, so the bulk of steel is in this construction sector steel that's going on, and that's also where, of course, the bulk of the Chinese steel industry is. The other sectors – up here, people talk about automotive as a really important sector, but actually if you're an iron ore producer, you don't really worry too much about automotive. It doesn't represent a huge amount of the steel that's produced. It's very high-value and it's very important to your customer – the automotive steel is in the $3,000-$4,000 a tonne zone sometimes, construction steel is in the $300-$400 a tonne zone, but there's so much more construction steel it pulls through so much more iron ore, so we care about that. We're happy that our customers can sell to the automotive sector, because that increases their profits and means that they're better set to pay us, but what we really need to understand, when we analyse our customers' customers and where these raw materials are often going to be used, we need to understand that construction sector, and if anyone is looking for a challenge in their life, I'd like to invite you to analyse the Chinese construction sector.

**Slide – China's resource intensity will be a function of a Chinese "continental maritime" model**

A similar story – it's going to be in the power transmission infrastructure, and it's going to be in people building buildings – office buildings and particularly apartment buildings. Modern apartment buildings – even in China, where maybe it's not as high-tech as it is in the UK or western Europe or the United States – still needs lots of copper in it. People have more appliances to plug in in their home these days, so they need more copper.

**Slide – China's "continental maritime" growth model is sustainable and will strengthen over time**

Speaking about the continental maritime model and why we believe it's sustainable, you've all heard about the high savings rate in China. China has an extraordinary savings rate – there are cultural underpinnings to that. There are also underpinnings to that in terms of how secure or insecure people feel, and you've got a population in China that's had 20 years of economic reform – they don't feel terribly secure about the future in many respects, so they like to have money in the bank, and they need money in the bank for their kids' education, for health in case they get unemployed, and for their future retirement. As James alluded this morning, the social security mechanisms in China are not yet terribly well-developed, so people are predisposed, both culturally and by virtue of their immediate circumstances, to save, and that's not going to change a lot in the near future. Even as consumption has risen in many Asian countries, the savings rate doesn't necessarily decline that rapidly, so I'd suggest that the China savings rate would be a useful mechanism underpinning growth into the future.

**Slide – China's "continental maritime" growth model is sustainable and will strengthen over time**

The urbanisation and development of the second- and third-tier cities away from the coast – there are well over 100 significant cities that are growing quite spectacularly. My colleague, Andy Shaw, recently took a tour around some major cities well away from the coast, and there is a spectacular amount of growth going on, so it's not just all Guangdong, Shanghai and Beijing that is changing. China is a very strong domestic investment story, and of course a lot of that investment is by the Government or prompted by the Government, but as I tried to show earlier on, the way that corporations are accessing capital and the way capital is coming into the economy are coming from different sources now, so the structure of how that investment is occurring in the economy is changing, and the private sector is beginning to emerge.

The Government is clearly committed to growth. I don't think any of us have too much doubt about that. We think that the recent overheating has been well-managed and well-contained. We think the Government have had some overall initiatives, but many of the initiatives have been very targeted, not just on particular industries, but particular participants in industries who were exhibiting behaviour or doing developments which were what the Government regarded as undesirable and economically irrational. We think that the leadership continues to change in terms of its capacity to manage the economy. It's more and more sophisticated and more and more economically literate.

I alluded before to the productivity improvements. Those productivity improvements give you a range of advantages moving on. One of those advantages is that China has these very, very dramatic factor cost advantages in competitiveness. We've recently done some work on capital construction cost advantages in China, and it's very surprising and it takes a bit of work to do a proper 'apples to apples' comparison between what a Chinese industrial installation would cost versus a western one, but there are some substantial and very real advantages that the Chinese carry into the way that they build their factories. The infrastructure has improved very, very rapidly and dramatically. In the last five to seven years, the Chinese have virtually built an interstate freeway network and they continue to do so, and everyone who has been there has observed the other major infrastructure that's been developed, including telecommunications, etc.

China was never terribly dependent on exports, but what dependence there was is declining, and is going to decline over time. We see the Government and the Party actually having increasing confidence. Through the 1990s even, they stumbled a little bit occasionally in terms of their confidence with what they were doing. They did make some mistakes, but in recent times they seem to have righted the shift to some extent, and there's a reasonable degree of confidence, not just with how they're managing in, but with the tools they have to manage it, and also how they've dealt with different crises; how they dealt with SARS last year, how they dealt with the overheating issue late last year and this year. Also, they don't have much of a choice. They're on the track, they're rolling along, and the capacity that the Government would have to try to roll back the reforms or try to roll back the process now is very, very limited.

**Slide – But China's exact version of the "continental maritime" model is yet to be clearly identified**

There's been a lot of this stuff around in recent times, and it's a very useful intellectual exercise to start thinking about how are we going to really try to make a judgement on how China's going to consume metals, and therefore consume raw materials, going out into the future. We use these metals intensities models. Now, there are some real issues with these. First of all, do you use real per capita GDP or use purchasing power parity – that makes a huge difference? The second thing is you've got several sets of variables which influence exactly where the China curve might go. If you look at this, the variables are whether or not you have an insular economy which is very export-oriented, so that could give you a steeper curve in terms of metals intensity, but if you had a continental economy, like the US, that might give you a flatter curve. That doesn't help to explain why Japan has a flatter curve, so another variable comes in, that earlier era economic development tended to be less metals-intensive and gave you a slightly flatter curve; latter era like Taiwan and Korea gives you a steeper curve. So, you get a couple of tensions there between what curve you think China might follow. China's a latter era, theoretically more metals-intensive modernisation, so it should follow a steeper curve, but China's a continental maritime economy.

The other factor when you do per capita on China is that the denominator is pretty big – there's 1.3 billion people. How do you allow for that when you do these numbers? Purchasing power parity is one way to do it. If you plot this by purchasing power parity, you'll find that a hypothetical China curve might be quite flat. Whoever can come up with a good workable hypothesis on all these dots is going to make a lot of money, I think, but for the moment it's a very, very useful exercise for people analysing this, and for companies like us, in terms of trying to understand and develop a good workable forward view on China, and I'm certainly interested in anybody's views on this, but there are some significant variables which can throw out your thinking on it quite dramatically.

**Slide – Let's not forget that China's growth is a long term phenomenon, not just a function of the last 2 years…..**

Now, as I said, China is not a phenomenon of recent times; China has been growing for quite a while. In the middle there you see a nice little dip down – that was as a result of Tiananmen Square in 1989 – but apart from that China has grown at a relatively healthy clip for quite a long time now, because some of those figures are official figures, and Joe will immediately point out that some of the figures in the 90s are as phoney as all hell. But, still, the reform process and China as a significant economy growing at a reasonable rate is not a recent phenomenon, and certainly not a phenomenon of the last couple of years, although there has been a textual change to that growth in the last couple of years.

**Slide – There will be short term spikes and cycles but we expect no major disruption to supply**

What do we think in terms of the businesses that we're in? As I said, because China has arrived recently at such a dramatic scale of purchaser of raw materials, there's been some volatility. We think those short-term bits of volatility will stay around. We also think that there's variability by each commodity. As I said a minute ago, the horizon for different commodities to come into a supply and demand balance is different – some will come sooner than others – so price development, naturally, will be different for each commodity in terms of how the markets perceive where they are relative to a proper supply and demand balance.

We believe that higher prices are very powerful inducers of capacity. When you look across all the commodities that we're in, the higher prices will bring capacity expansion to bear, whether it's us or whether it's other people, but it will happen, and as a result of that we believe that, inevitably, and in the next few years, in almost all the commodities, the gap between the supply and demand will be filled. We've looked at this across all our businesses, and we believe this very strongly, that we have the capacity in some businesses. We and our major peers, like Rio Tinto, etc, have capacity; we have capital; we have capability to develop capacity for China. Conversely, in many commodities, there are a lot of other identified resources out there where people can do expansions or greenfield developments which will fill the gap.

**Slide – Price development will be different for each commodity**

Just to give you an example of how price development looks a bit different between two different commodities, here's an example we've identified, both in terms of our own capacity, that we have available and latent in our existing resources, and other identified resources around the world that can relatively quickly come in at certain prices, so this simply tells you that there's plenty of copper out there, and if the copper price stays up, that capacity will come in.

**Slide – Prices are very powerful inducers of new capacity**

Again, talking about the copper example, and some work that we've done trying to demonstrate that the capacity is there.

**Slide – The gap between supply and demand will be filled (iron ore)**

In the iron ore business, as I said, the price development in each business will be slightly different, and each industry has its own characteristics. In the iron ore industry, you've got the big three. All of us have resources that we can develop; all of us have capital and capability and existing infrastructure, so we can do either incremental changes, de-bottlenecking or significant scale expansions, and these are the expansions that are already identified and that will come into play to supply China.

**Slide – The implications of this longer term global power shift should not be ignored**

Now, this is a suggestion that I've made in terms of a global power shift. The economic shift comes first, and you can see it in terms of the interest in China and China's importance now to so many businesses, and China's importance to so many countries as a trading partner at the moment. Over time, you can see where China is going to become more and more important globally as an economy, and there are significant implications in that in terms of how China will interact with the rest of the world and how we interact with China as corporations and governments.

**Slide – Conclusions**

So, wrapping up, we think Chinese growth has been around for a while. We think that Chinese growth has certainly moved into perhaps a bit of a trend-break in the last couple of years, in terms of scale and quality. We think it has good, strong long-term underpinnings. We don't think that overheating was a fundamental structural problem in the Chinese economy; we think it was confined to certain participants in certain sectors, and to give you an example of that, there are about 200 iron and steel-producing companies in China, of whom the top 85 produce over 90% of the total steel-making in China, so there's over 100 companies producing less than 10%, and believe me – most of the grief, most of the overheating, most of the undesirable and structurally unsustainable developmental behaviour was occurring in that 100 at the lower end.

We have an expectation that China is going to keep on buying raw materials and will be a significant feature of our landscape and our lives going forward. There are plenty of expansions under way in businesses like BHP Billiton and Rio Tinto, etc, designed to supply Chinese demand. We naturally are doing a lot of work in China and beyond China to make sure that we are very well-positioned to both understand what China needs and also to be able to supply as the demand develops as we think and hope it will. Thank you very much.