Financial Risk Management
Strategy Briefing
Thursday, 15 November 2001

CHARLES GOODYEAR: Good morning.

The purpose of today's meeting is really part of a series of meetings you will see from us over the next period of time where we are talking about various important strategic issues or important drivers to our business. Today's focus is around the financial risk management of BHP Billiton.

This item is something that's certainly attracted attention over the last year or so as we went from our hedging strategy last year in Sydney and Melbourne, and as we introduce this topic, particularly from a mining company perspective, in London and in New York and other parts of the world as we went through the merger and obviously went through year end results. So, again, first in a series but also something that there is certainly market interest in and market demand to know about.

Now, in terms of this presentation today, as I mentioned last year about this time we presented our portfolio model as a piece of evidence and a tool that we used to consider the hedging strategy for BHP. Since that time, obviously, lots of things have happened, and the combination with Billiton being the largest one and that has had implications on this model and we felt it was important to show that to you.

In addition, we have developed additional ways to develop this model as we think about risk in the portfolio and how we measure that and how we make investment decisions. Rowen will certainly walk through some of that today.

Let me just introduce Rowen Bainbridge. Many of you know Rowen. He is the Vice-President for Market Risk Management for BHP Billiton. He has been in the company almost two years now and has really taken the leadership role around this model and bringing in some of these portfolio thoughts and market risk management issues to the company. He heads a team of a number of people, some of which are here today, and certainly during the presentation and after the presentation he will be around to answer additional questions that you might have. With that, let me turn it over to Rowen.

ROWEN BAINBRIDGE: Good morning ladies and gentlemen. Over the past few months there has been a lot of talk about the strength, flexibility and growth in the BHP Billiton portfolio. There has also been a lot of talk by Paul and Brian about the need to create a sort of intelligent organisation, a knowledge company of natural resources. This morning I would like to give a presentation which I think talks to those two very important aspects of the new company.

The presentation is titled Financial Risk Management. What it's about is about describing our approach, our philosophy to understanding the financial markets in which we operate and understanding the behaviour of the markets and how that impacts our ability to deliver on our corporate plans and financial targets. It is about understanding what we mean when we talk about diversity and flexibility and strength, what we mean when we talk about those items, and it is about applying thinking more commonly found in a financial institution to a portfolio of natural resource assets.

What I am going to do is talk for about 40 minutes and then I am going to follow the following agenda. I am going to talk about the portfolio model that we have developed which some people saw last year updated for the merger transaction. I am going to talk about the strategy itself and really how it works in practice. In practice really sort of building on some things like how do we think about capital allocation processes and how does this improve our capital discipline. How does this affect our approach to hedging and hedging strategy, and then thirdly talk a bit about how it works in practice in terms of organisation and something called a Financial Risk Management Committee within BHP Billiton which I think you will be interested in.

Then finally talk a bit about this is where we have come to, what we have in the pipeline and where we are going to go, the sort of future vision.

The purpose of inviting you here today and for me standing up and talking to you is really three-fold. I think the first and most important thing is to explain a very important part of a sort of corporate philosophy and strategy and that's about how we balance the pursuit of opportunity with the management of financial risks. So it's a pretty important aspect of the organisation's policies.

The second thing is really to demonstrate what we mean when we talk about flexibility, diversity and strength, to actually give you some real hard tangible evidence of what we are talking about when we use that language, and thirdly, and possibly the most important thing for me, is that you walk away from here thinking that, you know, our approach to managing financial risk is sound. It is not just sound, it is very good thinking and that we are applying stuff that in

financial institutions that you work for it is that sort of best practice approach applied to what is effectively a resources company.

With that introduction, I will talk a bit about our approach. The approach that we have to manage in financial risk has three elements. The first element is really understanding the financial environment in which we operate, understanding the markets, their volatility, their characteristics, how they behave in terms of the commodities that we produce and consume, the currencies of the countries in which we buy and sell, and obviously the capital markets in which we operate for debt and for equity.

The second piece is really understanding how that then plays into our business strategy in terms of the financial targets we set ourselves and the likelihood of us meeting them, the growth aspirations we have, where should we invest and why given a particular market's environment or timing, capital investment decisions like acquisitions or decisions to make share buybacks given equity markets.

Then the third piece is actually linking back into what does that mean for our financial strength. How does the combination of the financial market environment, our business strategy affect our financial planning and our financial strength, and really the strategy is about integrating those three elements and that is really what we are talking about today: how we approach the management of the financial risk in pursuit of opportunity.

The first element is really how do we understand the behaviour of the commodity markets in which we operate? How do we measure that, the behaviour of those markets, the impact on BHP Billiton? The way that we do that is to construct a portfolio model which we call a portfolio risk model and I am going to show you what that looks like. Before I do, I think most people here will be familiar with the concept of a portfolio; the idea that you take a collection of investments or equities, you put them together in a consolidated portfolio with the feature of basically spreading the risk and increasing the likelihood of getting a return. BHP Billiton has a portfolio of assets which we consolidate together with the same objective of spreading risk and increasing the likelihood of return.

Before I show you the portfolio model, I think it is important that we get a common understanding of what we mean by those two important metrics of risk and return. What I am going to do is use a fairly simple example which a lot of people will have seen before.

Really I want to define what we mean by risk and return. I am going to do that using a very simple example. Imagine BHP Billiton just had one business and it was a petroleum business. The next year we expected that petroleum asset to

produce about 10 million barrels of oils, and our price expectations for the next 12 months is $25 per barrel, for example. We could expect a return of about $250 million of cashflow.

What we know is that oil prices are volatile. There's a chance that instead of being $25 a barrel they could be higher than that; they could be 30 or even 35. Or they could fall to 20 or be lower than that and be 15.

We can describe the likelihood of those prices occurring through a probability distribution which you will all be familiar with. We can then multiple that price distribution by the volume that we are producing to turn that into a distribution of cashflows. Now we have a way of describing the return on the business and the variability of the return on the business. What we typically do is to take a standard measure of confidence and a standard measure is sort of 95 per cent confidence level and, say, one in 20 event effectively. If this is my expected return, what are the risks that may return may be less than that? In this example let's say that the 95 per cent confidence level happened to be $150 million. I measure the distance between the two and it turns out to be $100 million of what we call cashflow at risk.

So now I have two metrics, I have the return measure in terms of cashflow and I have a risk measure in terms of the variability of that cashflow. If all prices were more volatile, then the distribution that describes that would be wider. When I take my 95 per cent confidence level it will be further away from my expected return, my cashflow at risk would be greater, the variability is greater, this might be $130 million. If oil prices were less volatile and the distribution were narrower, again I take my sample and I have $30 million. What I can start to do is build a picture of return in cash, we said it was 250, and risk, we said it was 100. That describes the sort of risk return of a single asset portfolio.

Take the time to do that now because it is important as a building block for what you are about to see in BHP Billiton, because we are not a single asset company. Obviously we have a complicated portfolio of many assets and what I would like to now show you is what we look like from a portfolio perspective.

This isn't in the books, by the way, this is just a 3D application that only runs on a computer so it doesn't really print that well. What you see behind me is a risk return chart. On the vertical axis I have a measure of return, cashflow, and on the horizontal axis I have a measure of risk, cashflow at risk. If I was to take my simple oil example and plot it, I would plot it as 250 million cashflow, 100 million of cashflow at risk and I would be able to plot that on the chart. What you see here is BHP Billiton plotted instead.

What you see here is the portfolio clustered around our customer sector groups which are our business lines. You are plotting the cashflow in a year over a one year period versus the variability in that cashflow. So you can see petroleum, carbon steel, aluminium, thermal coal, base metals, steel, stainless steel sectors plotted against the variability of the cashflows of those businesses. The colours on this chart are helpful too because green is good and red is not so good. You want to have a portfolio with as many high returning low risk businesses and a very few low returning high risk businesses. So you want to be as far top left as you possibly can be.

Just a point here, debt is obviously a negative, it is a cost to our business, but it also has variability in terms of interest rate risks so we also model that too.

We introduce this idea of the concept of a portfolio consolidated together, spread risk to increase return. What do we look like at the consolidated portfolio level? All we can do is we can add up all the returns of our portfolio and sum them to get the total cashflow for BHP Billiton over a one year period, and I will show you that now. If we scroll out of the viewer, what we can do is we can add up all the cashflows in the carbon steel, petroleum and other businesses to get to a total cashflow for BHP Billiton. Let's just say, for the sake of argument, it is about US$5 billion. If we then add up the variability or risks in these businesses and add them up, we can add them up and sum them and get to a number which turns to be about US$1.8 billion. That's a number that adds up the various risks in the businesses.

But if I said 1.8, that would mean that versus my $5 billion cashflow of my expected return, one year in 20 I am going to get $3.2 billion, or $1.8 billion less than that 5. But if I make that statement, I am overestimating the amount of risk in my business because the products that we produce don't move in the same direction by the same amount at the same time. Steel prices or petroleum prices don't move in the same direction as interest rates or currencies or other commodities. You get this diversification effect in the same way that the portfolios that you hold, Microsoft or Telstra, have returns that move in different directions at different points in time.

What we need to be able to do is calculate what is the benefit of that diversification? What is the extent of the diversification in the portfolio? The way in which we do that is to construct a model like this and basically run simulations of market prices over a period. I am going to show you how that works now. What you see on the screen behind me is a Monte Carlo simulation where BHP Billiton is living next year 5,000 times. Every flicker you see is a year. What we are simulating here are the market prices that we are likely to face. So on the back panel here, these are the risks that are in our portfolio; manganese, thermal coal,

aluminium, and this is just one scenario, one of the 5,000 we generate, when manganese prices were high, nickel prices were low, oil prices were low but gold was high. That is one event, one year, one scenario that describes a cashflow outcome for us as a business.

What we then do, the viewer here you see the type, the number of risks that we are exposed to. That's not exhaustive. We have about 35 risks that we simulate, that is just a subset of them so you can actually see it on a viewer.

So we live next year 5,000 times. Each year represents then a cashflow that will be a return possibility for BHP Billiton. As the simulation builds, we create a probability distribution that describes the portfolio return for BHP as a portfolio rather than its individual businesses taking account of this diversification effect.

What we can then do is take the expected return, which might be say $5 billion. We then go to the 95 per cent confidence level like the example before. We then sample that to get the diversified cashflow at risk to BHP Billiton. That number turns out to be $800 million.

So if I plot the button on the chart now, instead of adding up my total risk to get 1.8, I can now calculate that the diversified button is only $800 million. So when people talk about the diversification benefits in our portfolio, we have a way of demonstrating and evidencing it. So the diversification effect of the breadth of the commodities that we are in more than halves the risk we would ordinarily have. If we were a one trick pony and all these businesses were the same commodity, we would have $1.8 million, but because we are not, it is spread and that risk falls away.

What the numbers say is if my expected return is $5 billion next year, the variability around that might be $800 million in terms of risk.

Once we have constructed the model we can then drill inside it and have a look. If that's my overall risk and variability, where is it coming from? Here you can see an update. What we call this is the materiality of risk chart and it shows that the key risks for us next year are oil, followed by aluminium, copper, coal, the Aussie dollar, nickel, steel and then it falls off.

As Chip and Paul and Brian went through the DLC merger presentations there was a lot of inquiry about the extent of the diversification which I think I've answered. But there was a lot of questions about why do you still retain petroleum in your portfolio? What is the benefit of that fit for you? There is a lot of strategic rationale that I won't talk about, but from a risk perspective it is also

very important for us to, providing a natural hedge to the other parts of our business. I am going to show you that through a scenario here.

If we were to spin petroleum and not be the petroleum business, what that would mean is we would be refocusing, effectively, as a metals and mining player. One way of looking at that is to say let's take the money I get from my petroleum and reinvest it in assets where I can logically grow and there is no regulatory reason why I can't grow these businesses. What I have done in this scenario is to say, okay, let's get out of petroleum and reinvest the money in things like aluminium and copper. What you can see on the chart there is the base case distribution, what I showed you before building for the overall portfolio, the blue line here. When we take petroleum out and we resimulate our business 5,000 times in the way I just showed you, we get a different distribution here which is green. What you can see is the variability of our cashflows is greater without petroleum than with it in our portfolio. So the diversification effect of petroleum is evident because the variability of our cashflows is greater without it in our portfolio.

Another question, and I think we can also see where the risk is coming from with our petroleum. You are overweighted to aluminium and copper. Oil is still a risk for us because of our natural short position. We are a big consumer of hydrocarbon in terms of diesel and fuels, but it doesn't work in the same that petroleum does as a business unit within the portfolio.

Q. Just a quick question. Clarify again cashflow - is that profit type cashflow or revenue? Your example was it was a revenue cashflow.

ROWEN BAINBRIDGE: We are actually looking in the dark, so it is a margin, effectively, between costs and revenue.

CHARLES GOODYEAR: You may just say again, the numbers you are using a hypothetical.

ROWEN BAINBRIDGE: Yes, okay. Another question that was asked during the DLC presentations was, you know, what do you look like now versus what did you look like before? What I have done here is to run a scenario that says if this is the new BHP Billiton, how does that compare with the old BHP. Again, the blue line is the distribution of cashflows on the risk profile of the new company, and the green is the old BHP. What you can see, I hope, is that they look very similar. In fact, the variability of BHP's cashflows is a little smaller than the variability of BHP Billiton's, but the return is significantly less. So for the same risk you get less return. This has the same risk but a much higher return. It is important to look at it on a relative basis of what we call cashflow at risk to cashflow. That's probably best evidenced in a table rather than on the viewer.

So if we look at the ratio of cashflow at risk to cashflow, if we take these figures at the time of the merger, I think BHP's cashflow around that time was about $5 billion Australian, and I think the variability of cashflow was about 1.25 or 1.3 or 1.4. So the numbers come out to be about 25 per cent. We also monitored Billiton as part of the merger and I will talk about that later. When you put those two groups together and now look at the new company, it is now only 19 per cent. I think Paul has talked about these numbers before. The combined group has reduced our variability by more than a quarter.

That's really what I wanted to show you in terms of the portfolio models that we have done, reviewed. I think in summary the messages that I think I have evidenced are that BHP Billiton portfolio diversification significantly reduces risk. The key risks for us - and there are some major exposures in the portfolio that you should be aware of - are oil, aluminium, copper, coal and currency which you probably know. Very importantly, the new portfolio is stronger than the parts.

Something that has been asked that I haven't shown you through the viewer is the implications of steel in the portfolio. In the same way that I can model petroleum outside and inside, I can model the steel business inside and outside. What we can see there is that the spin out improves the portfolio risk of the new organisation, but it is a very small - it is a small impact which is if I showed you you wouldn't be able to see much change in the distributions, but just so you know we have looked at it to answer the question. The impact is positive but small.

Finally, I think, if you think of the green distribution versus the blue, petroleum's diversification value in our portfolio you has been evidenced this morning.

So that's the model. What I am going to do as I just move forward for the next 15 or 20 minutes is I am going to flick between a Power Point presentation and the model to explain how we use it as a decision making tool.

What we have done so far is just look at the green and the blue. What is the implication of how the markets and their behaviour affect our portfolio. The second piece of our strategy is sort of understanding the business strategy and how that affects our risk profile. The point I want to make here is that market volatility and the correlations between markets affect our risk profile, but so do the assets that we hold.

If you think about it, what we invest in and how we collect our portfolio has an implication on that risk profile. If we just go back to the model for a second, when we talk about petroleum being in and out, whether we have petroleum in our

business portfolio or not has an implication for the risk profile we have as an organisation. So it is two things: it is understanding markets, but also understanding the fact that capital allocation decisions and how we invest affect the overall risk profile of the company.

Why is that important? It is important because too much risk can threaten your corporate objectives. One way to think about this, I think I have used this slide before as well, is to say, if you are a company and you are planning for the next four or five years in pursuit of your corporate objectives, that may be acquisitions or investments and projects, you may have a pipeline that's going to use all the cash over time. Against that pipeline you are going to have a return of cashflow which is this line here. So I am getting cash in. So in this simple model, hypothetical model, I have cash out, cash surplus, cash balance, cash surplus. It is a steady growing company, it is looking good, but that doesn't tell me anything about risks. It doesn't tell me anything about the likelihood of delivering against my targets.

If we think about the model that I have just shown you, what you have to think about is that distribution of cashflows around this cashflow in. There's a chance, if you imagine this as the variability, that I might actually have one in 20 year for a couple of years. In that situation, the company doesn't look quite so promising. He is not going to be able to deliver against his promises that he has told his investors he can deliver against. If the distribution gets wider, such as the spinning petroleum, then obviously your likelihood of delivering fall away again.

It is very important to understand what assets you have in your portfolio because that affects your risk profile and that affects your ability to live on your business plan. Which leads us to the third part of the strategy.

We have looked at markets, we have looked at what's in your portfolio, the next thing is how does that flow back to the financial strength. This is really looking at what can I afford to do, and what are the impacts of having low cost world class assets and diversification on my financial strength? I am just going to show you how we use the portfolio model to look at our financial strength as well.

What I am going to show you is a slightly different view. We have taken the cashflow at risk distribution, or the variability of cashflow returns and we have run it through our financial statements. We have done this over a two-year period rather than a one year period to, sort of, really graphically show this is a - which has more risk than a one year period. If we take that distribution of cashflows and apply it to the distribution of gearing as just a measure of financial strength, and gearing here is gross gearing, debt over debt plus equity, you can see that we have this gearing distribution which just shows how the cashflows

flow through the financials. On the chart here I have plotted - this says single A if you can't read it - the upper and lower quartile bands that S&P expect an industrial organisation to stay within if it is to maintain a single A rating. There are lots of reasons how you get ratings and gearing is just one of them, but it's a good indication that says you have to stay between those bands most of the time if you want to make sure you still get a single A rating. When you look at the distribution from a base case, you know it's very unlikely that we are ever going to be at risk of compromising our credit quality.

But what if we were a one trick pony? What if we didn't have the diversification? What I have plotted here in the green is the effect of the cashflow at risk flowing through as a non-diversified organisation. What you can see is the variability is greater and the chances of actually getting into issues around financial strength are much greater.

I am now going to talk about financial flexibility. Within the portfolio we have many, many business lines; many, many projects; many, many things that we can chose to invest or not invest in. We call these management levers. The idea is that we can invest in discretionary capital expenditure, it might be an acquisition, it might be exploration, we can change our funding requirements, our dividend policy, share buybacks. There are so many things that we have in this broad diversified portfolio through which we can manage our financial risk.

Just to show you the impacts of pulling one lever, what I have done here is run a scenario that say let's just say one of the scenarios that we might run might have some share buybacks in them. What we are doing here is reducing the extent of our planned share buyback, a proportion of that, as one very small lever in the BHP Billiton portfolio. When I run that case through the model we get a different distribution, okay, which is narrowed even further. What it shows you here is that the combination of diversification and management levers mean that our financial strength and our ability to manage our financial risk is fairly comprehensive, and this is part of the analysis that we used recently with the rating agencies to secure a one notch upgrade with a positive outlook. So the power of the financial flexibility and the diversification is really evidenced, I think, by that chart.

In terms of the numbers, just so you can see, the base case means that something like 2 per cent of observations are the other side of that line. 1 year in 50 it might be a problem, after management accident maybe 1 year in 100, and on a diversified basis it will be 1 year in 4. So it tells you the power of diversification.

There is another set of numbers on there but we are looking at whole of company risk. Everything today that I have talked about is the variability of market prices

which is very important for a commodity holder like BHP Billiton. The single biggest source of risk is the indications of markets and how they move on our financial performance.

But there are other risk classes that we need to think about, for example country risk. The risk that the businesses in one of the countries that we operate in gets taken over, expropriated and we lose cashflows, so we need to think about those sorts of events. When we look at our country risk, it is another level of diversification. We actually have a very, very diversified country portfolio as well as a market portfolio. This is a chart that again I think we have used with some of the rating agencies looking at our cashflow by major credit rating of country. What you can see there is that 72 per cent of our cashflows are generated in countries that have a better than A rating.

In terms of operational risk, what if there is a natural disaster and we lose production of a particular asset. We can look at the implications of that by scenarios. We use something like the Longford gas explosion and think about the impact of that on our cashflows as a 1 in 20 year event. So we look at the operational risk and look at what if these markets start to move in the same direction by the same time by the same amount, this sort of correlation diversification affect doesn't work, and that has risks that we need to think about it.

So in terms of thinking of the whole of company risk versus our $5 billion nominal cash over a 12 month period, we have a measure of just how variable that is likely to be given all the possible things that we may face.

In terms of the financial strategy that I have outlined, there are sort of four things that summarise. One is that we have a very integrated approach to financial risk management in terms of, you know, the integration of financial markets, business strategy and financial strength. We have a well diversified portfolio of countries as well as commodities. We have a powerful combination, I think, of diversity, financial strength and flexibility, and I think what you are seeing here is the approach that we are talking using know-how from financial institutions as sort of an integrated approach to managing our financial risk.

In terms of how the strategy gets played out in practice, just to talk about how practically we do it, I really want to cover three things: the capital allocation processes; our approach to hedging and market risk; and the Financial Risk Management Committee which I talked about before.

In terms of capital approval processes, there are four things we look at when we look at a project or an opportunity. We look at the return on the project or the

opportunity: is this a good project to invest in or a good acquisition to buy? We then look at the distribution of the returns of that. What is the likelihood of achieving the return that we expect? What is the risk profile of the project? We then look at the corporate impact. If we were to pursue this opportunity or acquisition, what would be the corporate impact in terms of is it earnings accrued or balance sheet items, how does that affect us on a deterministic level of we pay this for it, these are the cashflows, this is what it is worth. Really what we are talking about today is the portfolio risk analysis: what does this project or opportunity look like in the context of our broader business portfolio? Just to show you what that looks like, I am going to take another hypothetical example.

We may have come up with a hypothetical acquisition which gives us an opportunity to expand our aluminium and base metals business. What we can do is resimulate the model and look at what the impact of that scenario is on our overall cashflows. What we can see here in this scenario is we have our existing distribution or base case, we have made a major acquisition which overweighted our exposure to aluminium and based metals and the new distribution is a lot wider. So the variability of the risk in our business has gone up, but the return has increased too. So we use this tool and the analysis around it to look at, you know, the return improvement but also the risk to that return. Because what we want to make sure is that variability, if you think back to the slide with the cylinders, what does that mean for the delivery of all the other things that we are trying to get done. Is that too much risk for us to be able to deliver on our other corporate promises?

So it is a constant understanding of, as we allocate capital to different businesses, what does it do to our overall risk management as an organisation.

The next thing I wanted to just mention was really give you an update on the market risk strategy. Again Chip talked about last year we used this portfolio model to explain our approach to hedging and why we had changed our strategy. Really with the combined group it further evidences or further supports the approach that we have taken.

Just a repeat or update. The way that we manage risk is really through the strength, flexibility and diversification in the portfolio which I have shown you this morning. In other words, as a general principle we are not going to hedge, we are not going to use financial derivatives and rolling hedge contracts to smooth earnings. We are going to do that using the natural diversification and the management levers that I talked about. The only time that we would hedge is if we felt that we had too much risk to deliver against our corporate financial targets, and we refer to this as risk mitigation. It is really actually putting in a

layer of insurance to make sure that we can deliver on what we said we were going to deliver on.

The third part of the strategy, from time to time markets that pose risk also provide opportunity. If we saw a market significantly deviated from its long-term expectation, we may take a position in that market. We refer to this as risk leverage to distinguish its profit motivation from the sort of insurance driven hedging that we would undertake if we had too much risk. Fourthly, really make sure that we communicate in an open, clear and responsive way. That is really an update and reconfirmation of the strategy that we had previously announced in November.

How that works in practice, just to evidence how we actually use this in practice, let's take this hypothetical acquisition. We have acquired this business and we felt that that new distribution is too much risk for us to have given everything that we have going on. One of the things we might want to do is to say, well, in that case, that's too much risk, it is unacceptable, we would put a portfolio hedge in place where we fixed certain of our commodity price exposures. That would reduce the variability in our cashflows and you can see how that distribution has narrowed. So we have used hedging contracts in the context of a capital allocation decision to narrow distribution for the overall company.

So when we say only hedge when we have to, only hedge when we are concerned about overall portfolio risk, that's the sort of scenario that we are describing.

Another thing that affects our business isn't just the capital allocation decisions, it's the markets in which we operate, clearly. There are times when markets become volatile, correlations change and we need to take account of that too. So on a daily, weekly, monthly basis we are constantly monitoring the markets in which we operate. If there was a scenario where we had Gulf War type events in some of the metals market, that would change the variability of those commodities, that would make our business more risky. I can show you a scenario here, I call it a high volatility scenario, where we take our current cashflow and we assume that all the markets in which we operate become very, very volatile. What you are seeing here is, even with diversification, you still have quite a lot of variability as a consequence of increased volatility of markets.

What we would look at there is the same thing: is that too much risk for us? Should we look at some sort of portfolio hedge, put it in place and narrow the distribution. So it is not just things that we buy, it is also markets in which we operate that affect the variability of our cashflows.

That begs the question: How do you come to the conclusion that you have too much risk? Well, we agree the amount of risk that we should hold in the portfolio with the ExCo of the board. So we have board approved limits for the amount of risk or cashflow variability that we have, and there are four limits that we really monitor on a continual basis. There's the cashflow at risk limit that we have talked about, the absolute variability of our cashflows. The risk that gearing will be exceeded versus a specific target level, so we monitor the gearing risk. We look at the ratio between cashflow and cashflow risk to deal with the risk return and measures like that, and we also have limits for any strategic transactions that we may want to take in a particular market, strictly limits on those as well. Just to note here, we do all those in the context of all the other risks that we face. So we think about the whole of company risk, too.

So we monitor risk within a group of limits, and we also report it. We report our performance to the board and we also report our performance to our external stakeholders too with regular policy updates which is why we are here today explaining what we are doing. Just a point that view based activities, which is sort of more of the opportunistic ones, would get taken to the P&L rather than get hedge accounting to actually distinguish between their profit motivated nature and their hedging nature. That is all about having clear, precise, open disclosure and telling you exactly what we are up to.

The third thing I was going to mention in terms of practice, how it gets played out, we have something called the Financial Risk Management Committee. It involves the top eight officers of the firm, myself and Willie Murray who is the Treasurer, and we meet to consider and monitor financial risk. We own the financial risk policy and limit framework and it is a very efficient decision-making forum. We meet regularly on a monthly basis and it is part of the regular monthly ExCo agenda items, we sit and we consider measures of financial risk and policy. We cover financial risk, market risk, credit, funding, risk leverage opportunities and country risk. So we really cover the whole gambit of financial risks for the firm. To the extent that we needed to make a decision outside a monthly timetable, then we have the process of a sort of quorum to be able to effect those sorts of decisions, so it is pretty rapid and responsive to the decision-making effort.

Summarising the strategy in practice, there are really four things. The portfolio risk management piece is very much part of our capital allocation disciplines. What you have seen today is really the link between - it is really part of our capital allocation disciplines. The self-insurance model, this idea of the natural diversification is something we are going to retain going forward rather than being involved in hedging activities. Something that should have come through, hopefully in the way I have described it, is this constant monitoring and portfolio

valuation process - daily, weekly, monthly - as we allocate capital to different businesses we are constantly reviewing and thinking about and understanding the risk in our business, and just finally, the point about our commitment to communication in terms of the way we disclose what we are doing remains as very important going forward.

Just really finishing off, in terms of future direction, what we have actually built is a way of approaching financial risk by thinking in terms of cashflow and cashflow at risk. It's medium-term based. We have a one-year model and a three-year model, but it is really a sort of risk assessment decision talk. Where we would like to take it eventually is to be looking at the longer term of value impacts. So in the same way that portfolio managers look at optimization, looking for the portfolio that's the right balance of petroleum, minerals, whatever it happens to be to find the perfect return combination, that's some way from where we are but obviously as we continue to learn and use knowledge from financial institutions, that's where we hope to take it to.

When I started I said there were three things I wanted to get out of this morning's presentation and it was firstly to explain an important building block of policy. How do we balance the pursuant of opportunity with the management of financial risk, and I think in conclusion we have an integrated approach that balances markets, business strategy, and financial strength.

The second thing I said was really I wanted to evidence and demonstrate what we talk about - when we talk about diversity, strength and flexibility what it is that we are talking about, and this morning I think I've demonstrated just what it means to have a truly diversified portfolio.

Finally, this idea that what we are doing is sound and it supports our corporate business objectives and really, you know, using knowledge from financial institutions to think about a portfolio of assets and taking what was effectively a commodity prices tool a year ago and integrating it as part of our capital discipline is something that is important to us to communicate.

That is really all I wanted to talk about this morning and I guess, Chip, unless you wanted to say anything I will just open it up to questions.

Q&A Session

Q. I just have a question about the distributions. They all look lovely and smooth. I am just wondering if you can talk about skew in the way that the BHP Billiton portfolio has come together, and are you evidencing any skew to the upside or

skew to the downside at all in your scenarios, or can you alter the shape of the curve of the distribution so that you get more upside, less downside?

ROWEN BAINBRIDGE: I think Lawrence is asking the question when we are looking at these distributions through the portfolio model they are all sort of symmetrical, they all seem to have a nice bell shape curve, and I think the question you are asking is have we looked at skew. Are we looking at situations where the probability distribution should be skewed one way or another.

The answer to that question is yes in part, and if I show you a backup slide here, this was just a backup slide on risk to gearing where I showed levers where we were looking at using more levers just to bring us back to balance. So this is a distribution here where we were looking at a particular decision and saying if we wanted to move our gearing in a particular direction using the full available lever that we were using, it could be a capital investment decision or deferring exploration, then you would see that change, the expected return from what we were expecting, to something that's over here. So that is what you are talking about, skewing distributions.

So on a scenario basis, yes, we can use the technology to be able to look at skew and look at changes to what's the likely outcome.

Q.. Have you benchmarked yourself against your peers with respect to your portfolio risk model, and looked at, say, Rio and Anglo and looked at their risk relative to their portfolio of assets? You know, one of them might have titanium, for argument sake. Can you compare and contrast your risk to some of your peers?

ROWEN BAINBRIDGE: I think last year when we went through the preliminary analysis we did do some preliminary benchmarking in that we just take public available information that you have and try to build our estimation of what are the risks that they have to buy commodity and currency, and we did build a portfolio model of one key competitor.

What we discovered was that in terms of risk return as BHP, we were about the same level of diversification, so the sort of cashflow at risk to cashflow was about the same as our major competitors, but we haven't repeated that since. We should do that, but on the basis that our risk return has improved with the combined portfolio, my judgment would be that our risk return would be better, but we haven't repeated that work since.

Q. With regard to the timeliness of your program. If Chip said to you today, "I have a great idea and there is an opportunity out there", how long would it take to

go from a data room processing the data to go to the ExCo which would make the decision on a portfolio for a new opportunity?

CHARLES GOODYEAR: If you are asking how much time does this take, relatively short. If you are asking how much time in the data room and to get the data, that's going to vary from opportunity to opportunity. Doing this work the key things really are having the relationships between the various commodities and currencies and so on. Once you have that you just show me an asset profile and we can end up doing that.

ROWEN BAINBRIDGE: I think the challenge is not market data, it is the data of the target which I think is what you are saying. You are talking, its days. I know when we went through the due diligence on the BHP Billiton merger we took the data and we put it into the model and we got results back in days, so it is pretty quick.

Q. The how do you translate it to the ExCo if you needed to do it outside of a board meeting or outside of a normal ExCo date?

CHARLES GOODYEAR: If it is something that needs to happen outside of the ExCo, there will be many decisions that will need to be made; in other words, if there was some significant acquisition there would be a meeting around that. One of the things Rowen didn't mention is that to have an impact on the overall portfolio you need to have a pretty material transaction, something in the order of US $3 or $4 billion. Now, we run everything over US $1 billion, but when you are talking about a $35 billion enterprise, so if something has - 3 per cent of its value we run, but you really need to be closer to 10 per cent to really have much noticeable impact on it.

Q. Have you looked at the risk return profile change to the company when you spin off steel, and could you elaborate a bit more on who the aluminium based metals target is?

ROWEN BAINBRIDGE: We have looked at steel spin out and what I said before about it being relatively marginal to the overall risk return of the BHP Billiton portfolio. I mean, I can show you through the viewer but it is actually quite difficult to see. You actually get a small change in return and risk, and it is quite hard to actually view which is why I didn't try and show it through the presentation. The dots are quite difficult to see.

The conclusion is that without steel the risk return profile of BHP Billiton increases but it's very small. So it is really not a huge deal. I think the decision to spin steel is not a portfolio risk decision.

CHARLES GOODYEAR: Right. Steel last year represented about 7 per cent of EBIT for all of BHP Billiton, and that included One Steel through October last year. So its contribution, the book value or asset value for steel is a book number that's 3.5 to 4 billion Australian. So it would actually fall below that 10 per cent kind of number that I mentioned earlier. That's why you don't see a big impact on it, but as Rowen said, we have run that just to make sure we understand the impact that we are having.

Q. I have a question about the strategic transactions. How are the people that take the decision to make them compensated? Are they rewarded with a bonus if they get it right? What happens if they get it wrong, and what sort of limits do you have on how much you are prepared to gamble?

CHARLES GOODYEAR: Let's see, in terms of strategic transactions, how are people rewarded. Essentially everybody in the company has either an option system or a performance share that is tied to the performance of the stock. That goes from senior management, really, as I say, I think 97 per cent of the company has those kinds of compensations. So there's not a system in our system where you get paid to do the deal. You get paid for the ultimate performance in the company in the long run. So short-term bonus is tied to shareholder value adding, and long-term bonus is tied to stock performance. So that part, it is not related necessarily to doing the deal.

The second part of the question - oh, how much are we willing to gamble. Well, hopefully "gamble" isn't exactly the word we use here, but in terms of looking at appropriate investments, Rowen mentioned four financial tools that we look at. We'll look at return on the opportunity; we'll look at point returns around high/low scenarios; we'll look at a distribution around that project or the opportunity itself; we'll look at the income statement/cashflow balance sheet impact and we will look at this. What we are looking for is transactions which have high returns, minimal risk around them, a credit to cashflow earnings that don't disrupt our balance sheet, and we have a series of targets that we've talked about, and obviously we would hopefully work to Lawrence's skewing. We would like to have no downside and lots of upside but unfortunately you very rarely find a project that hits all of these.

I wouldn't say that there is a limit per se. We are at a size that means there is not a lot of targets out there that are going to blow through something that looks like us. For instance, on the gearing side or when we saw the EBITDA to interest, we want to be over eight times of the business cycle which is a gearing of 35 to 40 per cent. We want a strong single A credit. So if you have some big cash transaction

that destroys the balance sheet, that would be inconsistent with the objectives that we've set.

ROWEN BAINBRIDGE: I think the question you were asking a specific how much are we going to risk on taking a few on a market et cetera. I might just say we are not going to disclose how much we risk, all I would say is it is small. I think the slide says to a limited extent. Where we see an opportunity from time to time, it's small.

CHARLES GOODYEAR: It would not be material.

Q. Just a question about comparing targets. Putting yourself back 12 months, there were a couple of aluminium based medal targets out there. One was based in the South Pacific, the other one was based somewhere west of that. Comparing the two options, did that sort of come into your model and you look at your model and say if you buy something in this part of the world it makes the portfolio riskier, whereas if you got exposure to, say, the rand or something it diversifies the portfolio, you'd get the return without the risk.

ROWEN BAINBRIDGE: I will answer it on two levels. The first one is what I am showing here are just scenarios, randomly - they are not particular targets. They are just sort of saying let's make this business bigger or smaller and see what the effect on the cashflows are. That's the first point.

The second point is when we look at a target, there's a whole number of levels that goes through in terms of business rationale, what's the strategic fit, how do we make money, how do we deliver value, all these sorts of things, and part of the valuation exercise is understanding the risks associated with that investment; the country risk, the operational risk, et cetera. Then ultimately we would try to model it eventually in that tool.

CHARLES GOODYEAR: I think that's right. We have the danger going through this presentation of people saying, "This is the answer"; it's not the answer. It is one part of the broad story that starts with people who can identify good exploration projects and turn those into things that we can develop and then do it on time and on budget and operate them at low cost, and so on and so forth.

I remember giving at least a very small derivative of this. Somebody said why don't you go and buy an airline company. You have to start off with what your skills; what's your technical skill, what's your market knowledge, what's your country risk management ability. You all have great ability to go out and create a portfolio of various securities that you would do a similar thing on, but your skill is obviously doing your financial analysis and coming up with something that

works and works for you. What we try to do is identify those opportunities that we can apply our skills to.

So it is not simply saying let's create a portfolio that minimises risks and hopefully skews the upside, it is one of trying to use that as one part of the analytic process that has to be driven off what our particular skills are. So when looking at particular opportunities we don't start here. In fact, this is appropriately towards the end of the process, by no means the beginning of the process.

Q. Chip, expanding on that airline thesis, you know quite a lot about digging stuff out of the ground and putting it on ships. If you hold as a semi-truth the adage which says more money is made in buying and selling, ie the trading of mineral assets, than is made out of the exploitation of the oil bodies, why don't you start a division which is an investment banking division in which you buy and sell mining assets?

CHARLES GOODYEAR: I will tell you in terms of the broad strategy we have the capability, and there are a couple of others in our industry, that have the capability to be opportunistic in the tough times. If you are a single commodity company and markets turn down, you may have some of the greatest projects in the world but you can't do anything about them. At the time you do do something about them is when copper is $1.20 which is the absolutely worst time to put your money out there.

So certainly as a broad business strategy the time we ought to be buying or constructing projects is at times when commodity prices are low. The best copper mine bought at $1.20 copper price is going to be a financial disaster. That's a fact. The engineers may love it, but that's not what we are in business for. We are here to make money. So broadly, absolutely correct.

In terms of how do we look at that, there's a couple of different ways. Our customer sector groups recognise, I think I mentioned last week, our capital budget is exactly the same as it was when we planned it last June, last May. So we haven't adjusted the capital budget despite the significant fall in some of the commodities that we are in. In fact, if some opportunities come along we would certainly be opportunistic there.

But our customer sector groups have the capability to look within their business, and then outside the business the area that we call B Cap, which is our out of the box growth. That is certainly some of the things that they look, are there other ways for us to participate, whether it is finance projects on a special basis or make acquisition that make sense outside of the specific customer sector groups, we

certainly look at that. But you do need the capability to be able to integrate them to make them work.

Q. Partially related to that is that I notice that people who participate in the trading of commodities, with the exception of Enron until recently, seem to make a lot of money doing that. You have a very good knowledge of who your customers are, you know where the stuff comes out of the ground once again. Is that also one of the levers whereby you pull the portfolio to the desired top left-hand corner of the matrix, ie, getting involved in the trading end of the products that you produce, market making, if you like?

CHARLES GOODYEAR: As we have discussed, we have put two marketing hubs, one in Singapore and one in the Hague, and their jobs are clearly to developed those customer relationships, understand our customer needs. In our business, at least I think in the near term, we are more considered to be aggregation. How do we service that customer need? What production do we have to do that? Are there other ways that we can source product that we can then sell into that customer demand, as opposed to do we feel lucky today about a particular one.

We do know a lot about copper and aluminium and certainly nickel and other products, but we don't know a lot about currency. We are not going to impact currency markets. We are not going to impact interest rate markets. In those things that we do know, consistent with meeting our customer demand, we would certainly be looking at the aggregation element of it, but simply going out and trading a commodity that would be some way from where we see ourselves at the moment.

Q. I just have a question in relation to I presume a lot of this framework is put together given some of the poor investments in the mid-90s. I was just wondering, and this partly ties in with Lawrence's question on skew, what happens when you try to look at scenarios, and take, say, magna as an example, and you fix a longer term price. Having had a sustained period of high prices it is just wrong, and your nice even distribution doesn't capture some of the downside risks, how is that taken into account in this sort of framework?

ROWEN BAINBRIDGE: I'm not sure that I understand that question, actually. Can you ask me that again?

Q. What I am looking at is, this is obviously very assumption based, your Monte Carlo analysis gives you a range of commodity prices for a particular commodity. Part of the magna problem seemed to be an investment premised on an artificially

high price, easy with hindsight but that was the situation. Does this offer you enough skew in terms of your modelling to basically keep you away from magna?

ROWEN BAINBRIDGE: I think what we would do now is understand the variability in that copper market and see how that played out through the portfolio. We would then run stress tests on the copper price to say if it is 1.20 and the average is $1 or 90 cents what does that mean in terms of expected return?

So I think the processes that we have in place would address the issue of paying too much for an asset and having a hockey stick price forecast is what I would say, but it is not just this tool. It is the whole series of - I was going to say it is the IRC type process, Chip.

CHARLES GOODYEAR: There are several ways that we would deal with that issue, but I think it boils down to, in that particular question, the range of outcomes here. I think there are a couple of things to note. The development of that probability curve for the whole company is based on historic correlations between all of those various market risk factors. So it is not - you say "assumptions". The assumptions are based on historical performance and in some cases, where available, the futures market. So it is not just me sitting around saying, "I think diamonds are going to work this way relative to petroleum". There's a history to that and that's what's measured in the model.

If you look at that, then you would say that within that context you want to capture the range that could occur, in that case in copper prices, when other items are occurring in the overall economy.

So it would pick that up, but I think what's critical, as Rowen said, there's other things that we use to make sure we understand what is possible in terms of the outcome on the specific asset. We certainly would - the skewing that would happen by having a big range in copper would have an impact on that chart that you saw here, but that is already picked up in what you say. I would say, I know magna was five years ago, that tool didn't exist five years ago at BHP, and I would say it is unlikely that in many, many businesses you could really look at it exactly that way at that time. So there are a lot of issues around magna, only a portion of which is the tool that really exists to look at in that way.

Q. Just with regard to the model mechanism, have you individually modelled over the next one and three years the individual operations, or is it on the basis of the fiscal year 01 EBITDA and the incremental changes to EBITDA as a result of the revenue part of the line?

ROWEN BAINBRIDGE: You have seen what is effectively a sanitised version of the model for demonstration purposes. The model that we have internally is really building off our business plan. So the forecasting that we do on a quarterly basis in terms of the plan going forward is a model of the assets. It's the actual model of the company that helps us forecast and plan.

So in terms of putting distributions around those risk factors, it is the variability in copper price outcome in terms of certain cost items, things like fuel oil or electricity. It is currency, it is royalty, it is a whole number of things by asset. If I showed you the assets viewer, it would just be a whole range of dots, it would be too much to see. So we do actually do it from a bottom up basis.

Q. And the main function is obviously market related risk. It is mainly revenue type risk, but as you say you do the costs. Do you do the same sort of distribution on the impact of various costs?

ROWEN BAINBRIDGE: Yeah, to a degree. I mean, basically you can only model what you have history for. So some markets don't have a great deal of history so there are some data constraints. I think as time goes past our modelling gets better and better and better. I think when we started we had 22 market risks that we used to model, now we have 35. I think just perhaps the question there about what does this look like. If you just imagine it is the sort of work in the way that a bank works in terms of managing its balance sheet in terms of regulatory capital. They are trying to model, they will have a certain risk capital number that they have to stay within and they will have to report regulatory capital through time. That in a way is very analogous to what we are doing.

They have a business model in the bank in terms of what they invest in, fixed income, asset management, whatever, and they revalue that portfolio on a daily, weekly, monthly, quarterly basis to understand the variability of the risk they have in their business. That's actually what we are doing. It is bottom up generated.

CHARLES GOODYEAR: You may have seen when we took petroleum out there was still a risk around oil. That is because the cost elements that oil represents in the business still represents a risk.

Q. In terms of the board limit with respect to ratio cashflow risk and projected cashflow, can you tell us what that is?

ROWEN BAINBRIDGE: No.

Q. In terms of the modelling, you look at historical correlations for the purpose of this whole model on each commodity, have you actually looked back at the correlations or the behaviour relative to cost curve; ie, that your range of expected outcomes is also a function of your cost curve? As your cost curve falls over time your range of outcomes will also change, so you may be projecting forward a range of outcomes that will never occur.

ROWEN BAINBRIDGE: I will answer that in two ways. The first one, I said "no" to the first question. I think the limits that we have agreed we do not disclose and the reason for that is about competitive behaviour. I am sure our competitors would love to know the sort of limits that we put, because it may affect our billing strategy --

Q. But no-one could work out what your cashflow at risk is.

ROWEN BAINBRIDGE: We can model another company and deduce their cashflow risk, and so if you knew what the limit was you could understand how much cash they would risk, so we just does disclose that. That's the first question.

Secondly, the sort of portfolio management process analogous to the bank is a constant stress testing environment. So we look at historical correlations. We then look at how robust that correlations are. So over a 10, 15, 20, 30 year period how variable is correlation. We then look at implied, looking at forward curves, looking at not just historical volatility but what the actual exchange markets are telling the markets pricing.

So would we look at the thing you are describing, yes, is the answer. Have I got the answer in my head, no. But the process of testing what happens if, how does it work when, is very much part of what the group that I work in is charged with. In the same way that in a bank you do stress tests on regulatory capital and understand what is going on in the tails and things like that.

Q. In terms of your model and looking at commodities, have you impacted the effect of productions in output that the group's production would have on commodities?

ROWEN BAINBRIDGE: We can do that. Basically we can make production a variable - we can model the variability of production in terms of cashflow risk, yes. I guess what I showed you on the slide there is probably - we can model it in two ways. One, look at the actual variability of the production of an asset versus plan, that's one way, or we can model event scenarios where an asset stops producing and look at the cashflow in that way.

Q. So you might make recommendations to the board to cut back on iron ore production?

ROWEN BAINBRIDGE: No, I don't think so. What this is not is some sort of fly-by wire computer that is a scenario planner for the organisation, it's not that at all. It is just a modelling tool that helps us to understand diversity, impact on financial strength, and how the collection of assets impacts risk profile.

CHARLES GOODYEAR: Last year's EBITDA, for instance, was $5.3 billion. And to think about, as I said earlier, some transaction obviously in a value sense to be some 10 per cent of the existing enterprise value. It is unlikely that, particularly any short-term move and certainly one done in any rational kind of way, would have much impact on this number at all in the way that it would be looked at.

So decisions on what's the right production level in near term is driven by other factors, rather than what is the impact on the portfolio.

Q. Does this tool have power of veto of any decisions made at the - I think you call it the Capital Project Review Committee, or is it part of the tool in arriving at that decision in the first instance?

ROWEN BAINBRIDGE: I think the Capital Projects Review Committee has now been replaced with what is called the Investment Review Committee as part of the merger. "Veto" is a pretty strong word. We have a number of functional tests on any opportunity; tax, regulatory, cashflow risk, operational. We all go through assessments of its impacts and one of the tests that we put on is portfolio impact. If it was a very large transaction what we would put forward is a recommendation to deal with the risk.

The Billiton example is an excellent example of that, where we have taken - that is a huge transaction for the organisation. We modelled it through the framework and, you know, we had conversations that said do we understand the portfolio risk, yes.

CHARLES GOODYEAR: That's more the way to think about it. Because I mentioned there's four financial things. Highly unlikely every transaction or any transaction hits every criteria and gets a star. Not in a competitive marketplace it won't. But instead, the example that Rowen showed using his aluminium and metal was only to say when you do this deal your risk spreads, you have a greater risk. You look at that thing and say, gee, your overall cashflow is higher. What can you do to get you back to a risk profile that you are comfortable with? It doesn't say don't do the deal, it says what can be done to turn that transaction into

something that makes sense, and if we want to do it, great. If it doesn't meet that criteria then obviously we would have to most likely pass on it.

If someone came up with a big enough deal that came in here, that skewed the risk for adjusted return on capital so much, it would be unlikely the Executive Committee is going to say, "Hey, go for it anyway", because that's not consistent with the idea of managing risk from our point of view, but there's not a veto. There's no one single veto.