

# The VIEW from BURGUNDY

JUNE 2006

## AVOID THE COMING OIL SLICK

*The following issue of The View from Burgundy was initially written as a consequence of the times, but the information contained remains applicable and is considered "timeless." The value philosophy described remains useful today and into the future.*

DAVID VANDERWOOD, SENIOR VICE PRESIDENT and portfolio manager of Canadian Equities and Global Focused Opportunities at Burgundy Asset Management Ltd., delivered the following speech on the occasion of the firm's Client Day, May 4, 2006.

The world is seeing an incredible commodities boom. You might be wondering if Burgundy is missing the gold rush. I am here to tell you that nothing could be further from the truth. We see a big slick coming in oil, and trouble for other commodities, and we have positioned our investments to avoid both.

Before I get into why I see the big slick coming, let us remind ourselves why we are all here. Our goal is to compound your capital. With that as our objective, we look to the Forbes 400 list of the most successful capital compounders for guidance. The vast majority of members owned and ran a good business for a long time. Or, in the case of successful investors on the list, like Warren Buffett, they invested in good businesses and held them for a long time.

What are conspicuous by their absence are speculators in commodities. There is only the occasional guy like

Dennis Washington who purchased, in his Chief Financial Officer's words, "on a purely speculative plan,"<sup>1</sup> a closed copper mine at a market bottom in 1985. Copper prices spiked shortly thereafter to make his fortune. But even Mr. Washington was wise enough to invest his huge, but temporary, mining profits into some good businesses, which ensured his place on the Forbes 400 through the inevitable cycles.

### Marginal Production Cost = Long-Term Equilibrium Price

And make no mistake, the cycles are inevitable, and the copper price below is a great example. Commodity prices cycle around their respective industry's marginal

**COPPER PRICE**  
(U.S. Cents/Pound)



Source: Moore Research Centre, Inc. © 1989-2006

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cost of production – or the cost to bring the next so-called “marginal” project on-stream – because both supply and demand respond to price. This is Economics 100 and it works.

When prices are low, high-cost production is closed down. When prices rise, old mines are re-started and new mines are built to cash in. When a commodity is cheap, we use too much of it.

But if the price moves up, conservation kicks in and we find alternatives. So the cure for high prices is high prices.

Today, all commodities are trading above their marginal production costs. A marginal copper mine can be brought on with US\$1.30 per pound extraction costs. Today’s price is \$3.25, so many marginal copper projects are in the works. This new supply will eventually surpass demand, so it is not a matter of whether copper and other commodity prices will fall, but when.

Mr. Washington had the good fortune to find a willing seller at the bottom. Atlantic Richfield Company was divesting its mines because it was losing money due to low copper prices. The history of commodity production is one of booms and busts, and it makes it extremely tough to compound capital because the inevitable capital losses during the busts hammer the compounding equation.

## Negative Numbers Kill Compounding

This is the profound idea behind the magic of compound interest. Negative numbers wreak havoc on the end result because they shrink the base value from which to begin compounding again once prices recover.

This next example demonstrates this concept. The table shows the annual results from two

portfolios, which we have called Volatile and Stable. Volatile generates 30% annual gains followed by 10% losses perpetually, while Stable churns out 20% years followed by break-even results. For both, the result looks the same – the arithmetic average annual return is 10%.

VOLATILE AND STABLE ANNUAL PERCENTAGE RETURNS											
Year	One	Two	Three	Four	Five	Six	Seven	Eight	Nine	Ten	Arithmetic Average Return
<b>Volatile</b>	30	(10)	30	(10)	30	(10)	30	(10)	30	(10)	<b>10</b>
<b>Stable</b>	20	0	20	0	20	0	20	0	20	0	<b>10</b>

This may cause us to conclude that the return to investors after the passage of time will be the same, but that would be wrong. After a number of years – we picked 10, but the math works for any period – the compound annual return of the Volatile portfolio, which included big gains as well as losses, is a full 1.3% behind that of the Stable portfolio, which reported smaller gains, but no losses. This is highlighted in the next table.

COMPOUND AVERAGE ANNUAL RETURNS ARE DIFFERENT		
	Arithmetic	Compound
<b>Volatile</b>	10%	8.2%
<b>Stable</b>	10%	9.5%
<b>Difference</b>		<b>1.3%</b>

While this 1.3% gap may not sound like much, it’s on an annual basis, so it compounds. It also happens to be the difference between reporting an average Canadian equity return over 10 years and one in the top 25%.<sup>2</sup>

## Compound Returns are the Ones You Keep

The important point is this: Despite both portfolios having an identical arithmetic average annual return, the fact that one includes losses hurts its compound annual return. And the compound return is the one you keep.

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This is because of something we call the asymmetry of negative returns. The table below shows how much the subsequent return must be after a given loss, just to break even. Notice how the gap between the two grows as the losses get bigger, a relationship captured by the third column. This is the asymmetry I was talking about.

The more you lose, the worse it gets. And if you ever lose 100%, it's all over. That is why Warren Buffett's number one investing rule is: Don't lose money. And why rule number two is: Don't forget rule number one!

THE ASYMMETRY OF NEGATIVE RETURNS		
Initial Loss of Capital	Subsequent Gain Needed to Get Back to Starting Point	Size of Necessary Gain Compared to Realized Loss
(%)	(%)	(%)
10	11	111
20	25	125
30	43	143
40	68	168
50	100	200
60	150	250
70	233	333
80	400	500
90	900	1000
100	Impossible	N/A

Could the market, as represented by the S&P/TSX Index, be down 20% or even 30% from today's level in the event of a global recession that hammers commodity prices? Sure. And look at how much ground the Index would have to make up just to get back to square one.

### Today's Boom Emerged from the Last Bust

The current commodity bull market is a typical cycle, though a very powerful one. A period of weak prices after the Asian economic crisis of 1997 led to a stretch of underinvestment in productive capacity, so when global demand improved, supply was caught a little short. The world has seen these busts followed by booms countless times. The fact that global growth in

2004 came in at more than 5% – the fastest in 28 years, and 2005 was almost as strong – has thrown fuel on the fire.

With commodity prices now strong, new supply is on the way. For the source, look to the almost-daily expansion of new or existing mines, to the old-mine re-start announcements from major mining companies and to the TSX Venture Exchange. The market value of all the listed companies on this exchange, mostly mining and energy, has grown fivefold over the past five years to \$50 billion. On London's similarly speculative AIM market, the value has risen by a remarkable seven times since 2002 to \$20 billion for each of the mining and oil and gas sectors. It's a great time to finance a mine.

Seeing that kind of new-found riches in the hands of mining and oil stock promoters reminds me of W.C. Fields's reply when asked what he did after coming into some money. He said, "I spent half on whisky and the rest I wasted."

While a lot of this value on the venture exchanges will be wasted on moose pasture, so too will there emerge a lot of marginal – but also some world-class – metals, minerals and oil projects that will eventually be producing. The irony is that many will be money losers, as the new supply they represent drives prices down.

What has got this cycle dangerously nearing bubble proportions has little to do with supply and demand. The huge influx of capital into hedge funds has these vehicles searching for speculations, and it seems the flavour-of-the-month is to ride the commodity wave. New capacity does take time to bring on, with environmental permitting getting tougher and labour shortages in places like Alberta's tar sands slowing things down, so a popular trade has been to bet that strong global demand and delays in bringing on new supply will last long enough to make a killing on commodities.

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This risky investment thesis has worked. With 2006 expected to be the fourth year in a row that the global economy grows faster than 4%, the hedge funds are upping the ante. The weight of money can be a self-fulfilling prophecy for a while. Remember the billions of dollars thrown at technology and tech-heavy index funds in 1998 and 1999, which drove even more buying of absurdly valued tech stocks at the top. It is happening again today, only commodity markets are far less liquid than stock markets, making the price impact and the eventual comeuppance enormous.

Barclays Capital says that institutional investors are holding over \$100 billion in direct commodity investments, double the level of three years ago and up from \$6 billion in 1999. And Scotia Capital, in an April 2006 Metals and Minerals report called "A Financially Engineered Supercycle," states that investments in metal index funds alone are \$70 billion, up from \$15 billion two years ago.

These are huge numbers, given that about \$110 billion worth of these metals are consumed each year, using 10-year average prices. And it is clearly impacting commodity and stock prices.

It's not just the hedge funds anymore, as more and more pension funds and other institutional investors

are jumping on the bandwagon. Feeding this frenzy are investment advisors demonstrating that commodities have performed as well as equities over the past 50 years, with very little correlation. The following chart is the CRB Index, a collection of all major commodities.

This shows you how "end-date sensitivity" can influence results. The end date used to generate these impressive commodity returns today comes after the most impressive price spike in history. If you had measured the 50-year returns from 1950 to end in 2000, then you would have come to a very different conclusion, namely 47 years of going nowhere, save for two brief spikes in the 1970s.

Of course, 2000 was the time to buy the stocks of commodity producers, when everybody was convinced that tech and telecom were the only games in town, but only deep-value contrarians were interested because the trailing five-year returns were brutal.

## The Five-Year Psychological Cycle

Today's commodities hype speaks to what Legg Mason's Bill Miller calls the five-year psychological cycle. People want to buy today what they should have bought five years ago, namely oil and commodity

stocks, because of their great five-year trailing returns.

Back then, everybody wanted tech stocks, venture capital and U.S. mega caps because they had great five-year trailing returns. The time to buy them was five years before that, in 1995, when they were cheap. But in the mid-1990s,

**REUTERS-CRB® INDEX (CCI) (1967=100)**  
(Monthly close) September 1956 - March 2006



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the herd wanted small and mid-cap stocks and banks, which of course had outperformed during the preceding five years because they were cheap and out of favour in 1990. And so on. Taking advantage of this five-year fallacy is what being a contrarian is all about. It means using a longer-term time horizon than most are comfortable with. And that is why it works.

So it is no surprise that a lot of money is chasing commodity exposure, whether through direct ownership or ownership of resource stocks. Of course, with little or no income from these commodity holdings, and with their history of volatility, they hardly qualify as buy and hold investments. So these new buyers will eventually be sellers. And with risks increasing with rising prices, all we can say is: look out below.

In Canada, investors are not worried, as resource stocks today make up 47% of the S&P/TSX Index (see the following table).

SECTOR MARKET VALUE AS A PERCENTAGE OF S&P/TSX INDEX		
	Technology	Resources
July 2000	41%	–
May 2006	–	47%

Source: Burgundy Investment Team Research

This is a bigger weighting than tech at the top, and we all remember what happened after that. PIMCO's Bill Gross calls it the tyranny of index investing, where owning a so-called "safe" position in an overpriced index turns out to be anything but safe. Investors learned this lesson after 2000 and are poised to learn it again.

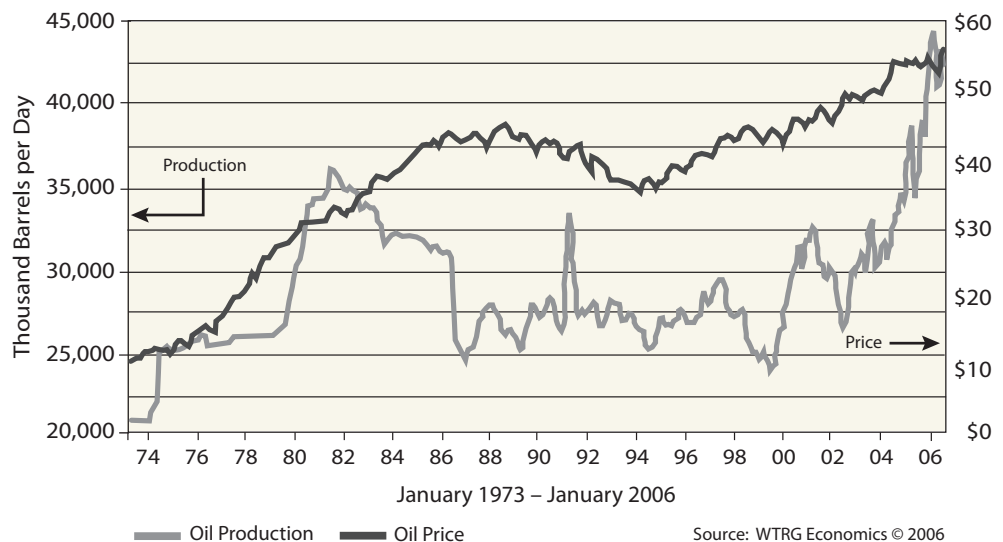
Some claim that oil is different, that it is the one commodity that we really could run out of. Proponents of this theory, such as investment banker Matthew Simmons in his recent bestseller, *Twilight in the Desert*, cite a paper published by Shell geologist Dr. King Hubbert in 1956, which correctly predicted the peak and then rapid decline of U.S. lower 48 states oil production. The oil bulls feel that the same thing is happening on a global level.

We don't buy it. And neither does Exxon, the biggest oil company in the world. Exxon's current estimate of world conventional oil resources stands at over 2 trillion barrels, and a similar amount is held in higher cost oil sands and oil shale deposits. There is enough oil to supply the growing demand for decades.

## Oil, Like All Commodities, Responds to Price

The new supply will come, with a time lag, just like in the past. The following chart shows non-OPEC production in grey and the oil price in black. See how rising prices in the 1970s and early 1980s led to big production increases. This jump in competing barrels forced OPEC to slash production in half in the early 1980s.

**CRUDE OIL PRODUCTION (MBOBL/D)**  
Non-OPEC Countries Averages/Totals



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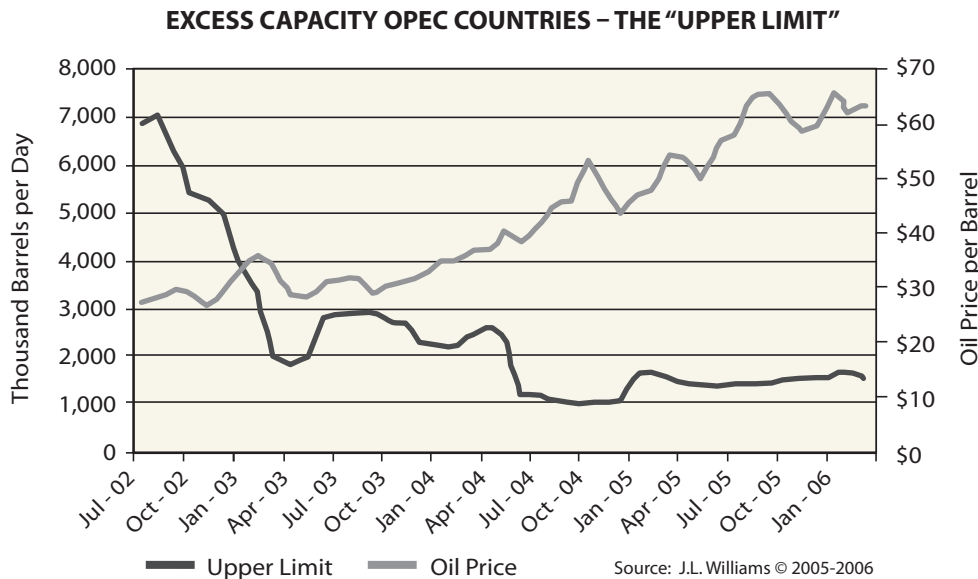
Finally, Saudi Arabia concluded that its market share loss was big enough, so OPEC oil production was increased. This drove the price of oil down, causing the decline in non-OPEC volumes that you see in the mid-1990s.

Canada's oil sands, currently at 1 million barrels per day, is forecast to hit 3.5 million barrels by 2015.

Analyst Daniel Yergin at Cambridge Energy Resource Associates added up all of the oil projects underway today, field by field. His conclusion: The

world's production will see its biggest surge ever over the next five years. And these projects are funded and in development. Is adding 15 million barrels per day, or a compound annual growth rate of 3.3%, enough supply, given the huge growth in China?

Yes! Out of 85 million barrels a day in global demand, China accounts for 7 million, but only



Fast-forward to today and OPEC's production – after getting cut to stabilize prices in the late 1990s – is back to the peak of the early 1980s (see chart).

The oil price bulls see the previous chart, showing a big drop in OPEC excess capacity, and salivate: "This must mean that OPEC's production has peaked." We don't believe it. OPEC has had huge excess capacity for over two decades and didn't need it. Now that they do, drilling in places like Saudi Arabia is ramping up and volume growth will follow.

Even Exxon Mobil (a perennial oil price bear that has preferred to buy back its shares rather than increase exploration spending to drive higher volume because it felt US\$18-20 per barrel was the long-term equilibrium price) is investing in expansion. Exxon has just announced that it will increase spending to \$100 billion over the next five years, which should bring its own huge volumes up almost 5% per year. And output from

30% of this is for transportation. The bulk is for power generation. About eight years ago the Chinese authorities began the biggest expansion of coal-fired power plants in history, culminating today with a new one being opened every month. After seven years of electricity shortages, by sometime next year China will actually be producing a surplus of electricity. So yes, its transportation demand for oil will rise. But it will be offset by reduced electricity demand as the new power plants come on stream.

The world also uses less oil per unit of GDP each year. This is from continual improvements in technology and energy efficiency. And it holds true in both the wealthy OECD nations as well as the non-OECD countries.

This is why the compound growth in demand over the next 25 years is expected to be only 1.6% per year.

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So the math is simple. Over the next five years, with supply growing at 3.3% per year and demand at only 1.6%, it is a matter of when, not if, the oil price cracks.

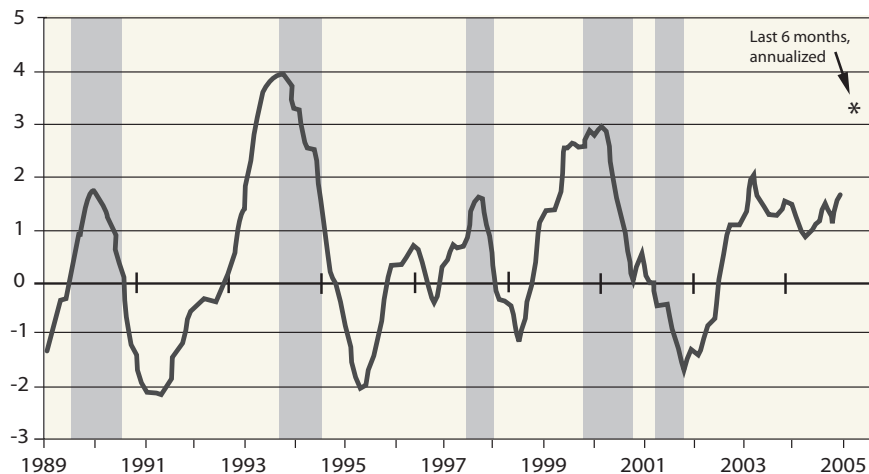
So why are oil prices hitting new highs, despite U.S. inventories being the highest since May 1998, which was just prior to the crude price hitting US\$10 per barrel? It's not supply and demand. After global energy meetings in Qatar last week, Saudi Arabia's oil minister stated that "nobody is asking for additional crude,"<sup>3</sup> and this from the world's biggest exporter. Even U.S. Energy Secretary Sam Bodman stated that oil markets are well supplied.

A significant premium in the oil price comes from a big hedge fund impact. Analyst William "Buff" Brown, the president of WHB Energy Research, after analyzing the historical effect on pricing from inventory and the purchases of forward contracts, estimates that the oil price impact of financial speculators is US\$23.20 per barrel. And this is just from investments in commodity index products in the last two years. With no income from this direct oil exposure, and lots of volatility, these fast money buyers will eventually be sellers.

So our conclusion: With all commodities trading way above their marginal cost of production, a big slick is coming in oil, and a big downside in all other commodities. Economics 100 will work. Lower demand and massive new supply will be the response to today's great prices. It is simply a matter of when.

Here's a final clincher. As Warren Buffett likes to say: When playing cards, if you don't know who the patsy at the table is, it's probably you. Well, historically, foreign buyers of Canadian stocks have been the patsy. They bought gold stocks after they doubled in 1993,

**STRONG FOREIGN INFLOWS**  
(line, rolling 12 month sum as % of market cap)  
have preceded TSX declines of 10% or greater [shaded]



Source: Statistics Canada, S&P, UBS

tech stocks at the top in 2000, and commodity stocks today. They seem to epitomize the five-year psychological cycle.

UBS published a report two weeks ago highlighting that foreign purchases of TSX stocks have crept up to 3% of market value. As you can see from the black line and black star, this is typically a peak level.

You can also see by the shaded areas that almost all big drops in the TSX have started when foreign buying has been at its strongest. Bill Miller might say that the foreign buyers' investment thesis goes something like this: Yes, commodity prices are high, and so are commodity stocks... and they will stay this way longer than normal... before we lose your money.

That sounds to us like a recipe for some asymmetric negative returns.

### Endnotes

1. Jordan, Carol L. "Washington Corp. buys Anaconda's Butte copper unit; no restart soon – Anaconda Minerals Co." American Metal Market. September 25, 1985.
2. Watson Wyatt.
3. Bloomberg News, April 24, 2006.

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