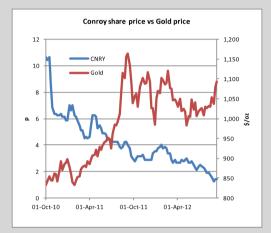
## 2<sup>nd</sup> October 2012

#### **Conroy Gold vs Gold Price**



#### Source: Fidessa

## **HYBRIDAN LLP**

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## **Equities decouple from metal**

Gold has performed strongly with its price nearly doubling since the global financial crisis began in mid-2007. After a sharp correction late last year, gold prices are creeping back up to the peak of September 2011. While indisputable indicators are absent, we believe the key demand and supply factors determining the price of gold will continue to underpin prices at current levels, if not higher.

#### The Gold Hedge

Economic conditions have probably never been more favourable for gold prices. The banking system is broken with rising sovereign yields, unprecedented quantitative easing, exploding inflation and negative real interest rates. Gold is the only hedge in the race to the bottom.

The supply of gold has also been relatively fixed for the last century, with annual mine production a small portion of the total stock of gold outstanding and with a limited ability for annual production to rise in response to a change in the gold price. This distinguishes it from other commodities where substantial supply responses to price changes are possible, at least over the medium term.

#### Stocks underperform physical market

While gold prices peaked nine months ago but are only marginally down since, the shares of mining companies that produce gold have suffered in a much more exaggerated fashion. In the UK, mining stocks on average have fallen by 26% and 30% in the past 6 and 12 months, respectively.

The junior mining stocks (explorers/developers) have been hit particularly hard. The disconnect between commodities and equities reflects the fact that gold miners not only have commodity price risk but also operational risk and geopolitical risks depending on where their assets are located. The junior mining companies tend to underperform senior miners when gold prices fall or stop rising because investors prefer to hold revenue-producing gold miners rather than explorers.

#### Irish gold companies offer stability

Mining costs are going up across the board in major gold producing regions. Bumper profits have fuelled labour unrest, driving unions to demand higher wages. An explosion of new taxes and royalties is pushing up regulatory compliance costs. Investors now need to think long and hard about where to invest in the future.

We believe Ireland offers strong protection against political and fiscal risks. The increasing importance of Ireland, literally on the UK's doorstep, in mining terms has been overlooked. Ireland is now a major base metal producer ranking in the top ten globally in the production of zinc and 12th in relation to lead. Northern Ireland already has a small gold producing mine and exploration suggests that Ireland, North and South, could become a significant source of gold as well as being an international base metals province. Conroy Gold and Galantas are the two Irish AIM-listed gold plays.

For analyst certification and other important disclosures, refer to the Disclosure Section

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#### 1. Gold Industry Trends

Gold market fundamentals have experienced dramatic changes since the dissolution of the Bretton Woods system and a fixed gold price. Shifting dynamics have driven the market's evolution from concentration to dispersion, across both borders and source of demand and supply.

The Bretton Woods system was established on the heels of the Great Depression and the beginning of the end of World War II to address problems that began as early as World War I, when governments began controlling imports and exports to offset wartime blockades. This, in turn, led to the manipulation of currencies to shape foreign trade. The race to the bottom and trade barriers underpinned the devaluation, deflation and depression of the 1930s and early 1940s.

In 1944, delegates from 44 countries met in Bretton Woods, New Hampshire in the middle of World War II to stop the rot and create the world's international financial system. The International Monetary Fund (IMF) was set up to enforce a set of fixed exchange rates that were linked to the US dollar. This gave the US currency - which was linked to gold - the dominant position in the world economy and allowed the US to run a trade deficit without having to devalue. The US, which contributed the most money to IMF, also gained the most voting rights, giving it a veto over major policy decisions.

However, by the 1970s, the US currency was under pressure from a combination of factors, including the cost of the Vietnam war and the growing trade deficit. The Bretton Woods system collapsed in 1971, when President Nixon severed the link between the dollar and gold — a decision made to prevent a run on Fort Knox, which contained only a third of the gold bullion necessary to cover the amount of dollars in foreign hands. By 1973, most major world economies had allowed their currencies to float freely against the dollar. It was a rocky transition, characterised by plummeting stock prices, skyrocketing oil prices, bank failures and inflation.

### **1.1** Trends in Demand for Gold

We have identified three distinct trends in the structure of gold demand:

- a. The geographical shift of gold demand since 1970.
- b. Total world demand for gold has been growing gradually since 2003. Data for the first half of 2012 showed demand for gold falling 5% year-on-year; it remains to be seen if this was a short-term dip or a change in trend.
- c. Global demand in the last decade has been driven primarily by investment demand.

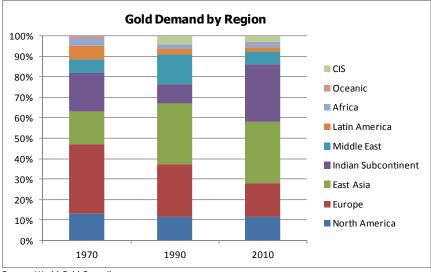
#### Geographical shift

A look at the last five decades since the price peg was removed shows how dramatic the shift from North America and Europe to the Indian subcontinent and East Asia has been. North America and Europe had a combined share of 47% of the global market in 1970, but this fell to 38% and 27%, respectively, in 1990 and 2010. The drop in global share for North America and Europe was compensated for by the Indian Sub Continent and East Asian, rising from 35% in 1970 to 58% by 2010.

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## **Gold Review**

While the chart below shows a general regional shift, it appears not to show much of an increase in dispersion. However, the chart does not capture central bank demand. While the bulk of central bank gold is still held in North America and Europe, a build-up of gold reserves in emerging markets has been a consistent feature over the last few years. Secondly, OTC (over-the-counter) investment demand is excluded due to a lack of granular data and would likely balance the total towards Europe and North America.

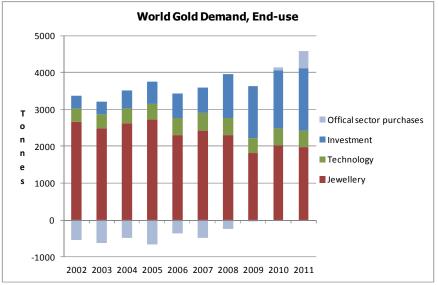


Source: World Gold Council

What is perhaps not in doubt is that global gold demand has been growing steadily since 2003. Investment demand (bar and coin, ETFs, etc) has been the main driver of this growth as shown by the graph below. Exchange-traded funds (ETFs), closed-end funds (CEFs) and exchange-traded notes (ETNs) aim to track the price of gold and are traded on the major stock exchanges. Not all these instruments hold physical gold, e.g. gold ETNs generally track the price of gold using derivatives. Investment demand constituted 37% of the total gold purchases in 2011. Demand from the jewellery and technology sectors has been resilient in recent years.

## HYBRIDAN

## **Gold Review**



Source: World Gold Council

#### End-use demand

While the distribution by end-use in 2011 looks similar to 1970, the regional distribution underlying each category is very different.

Delving into the various categories, one can see that jewellery demand has been a major driver of the shift from West to East. As North America and Europe's dominance of the sector has diminished from a 44% share in 1970 to just 14% in 2010, the Indian subcontinent and East Asia have grown to represent 66% of demand from 36% in 1970.

The estimate of investment demand is not straightforward due to a lack of granular data. In addition, new financial products including ETFs have likely caused a marginal alteration of investment mix. A number of assumptions have been made by the World Gold Council to be able to paint as fair a picture as possible of the distribution of investment.

North American and European bar demand numbers are missing from 1970 and 2000 as they were negative, representing disinvestment (an element of supply, not demand). A stark difference is apparent between 1980 and 2010 as North American and European investment demand's share fell from 74% to 45%. At the same time, the Indian subcontinent and East Asia have accounted for a large share of the remainder of the investment demand with 43% of the market in 2010. China has been one of the fastest growing investment markets. However, Europe has once again become an important player - a trend born in the aftermath of the 2008 banking crisis.

Technology demand has maintained a remarkably consistent share of the total over the last four decades at just over 10%. This is despite a changing backdrop and at times, strong price increases. With electronics becoming the dominant force behind technology demand, as dental usage shrinks, the regional shift from high-cost producers to low cost producers has been a natural process. East Asia and the Indian subcontinent are at the helm of gold use in technology with a combined regional share having grown from 17% in 1970 to 67% in 2010. This concentration of demand does however go against the grain of increasing diversity elsewhere and could render this sector vulnerable to a downturn in the region or key product markets. However, we would expect countries such as China to continue on their current growth path in the medium term, supported by a backbone of fiscal and monetary ammunition, solid domestic demand and investment in industrial capacity. Furthermore, gold continues to develop new diverse functions within technology thanks to its unique properties and applications.

The geographical and end-use shifts have many underlying drivers, among which are: deregulation and market reform; buyer motives; asset performance; geological constraints; liquidity; and economic imbalances.

#### Motives for purchasing gold: the markets

The evident shift in demand from West to East is substantially influenced by the regulatory and reform development in emerging markets following economic liberalisation. Openness and greater participation in global trade and capital markets have increased consumer access to gold and have driven wealth creation in newly industrialised nations. In addition, changes in regulation specific to the gold market such as the three consecutive Central Bank Gold Agreements (CBGAs) and the self-regulation by mining companies with regard to forward hedging, have also supported the stabilisation of the gold market. Finally, new products and ways to access gold such as ETFs and gold accumulation plans have released pent up demand and increased access and flexibility for individuals as well as institutions.

The shift from West to East has also broadened the motivation for holding gold. Whereas Western gold buying motives crudely involve profit, status wealth preservation or diversification, buying motives in other regions also include affinity, auspiciousness, savings, and gifting. The rebalancing of geographical demand has also widened motives for buying gold which, ceteris paribus, increases stability in the price.

One consequence of increased globalisation and capital market integration is that the performance of the financial markets becomes increasingly intertwined. This is evident in the increasing correlation between global asset prices, most notably equities. Gold's globalisation, in contrast, has decoupled it from other asset classes as the motives and drivers of gold have become more, not less, heterogeneous.

Another driver, and ultimate beneficiary, of the changing dynamics of the gold market has been liquidity. Liquidity in the gold market is far greater than commonly perceived. Greater liquidity provides assurance for larger as well as smaller investors. It also provides better pricing transparency and enables gold to be bought and sold more easily; the latter being key during times when cash may be in short supply. Furthermore, recycling markets in the West are less developed and prone to higher margins than in India for example, where jewellery can be bought and sold with ease. Increased liquidity provides a more ductile market, buffering price swings.

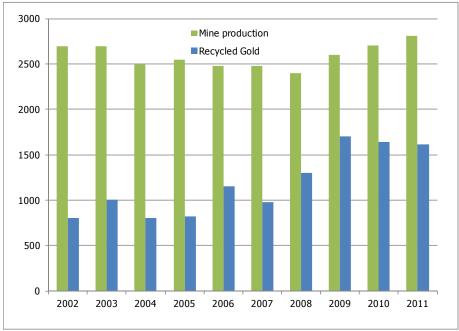
Finally, the combination of the rise of Asian and Latin America economies and the global current account imbalances has generated increased demand for sizeable holders of foreign exchange reserves to diversify. This demand is a primary driver of the shift in central bank activity from net sellers to net buyers, and is expected to continue given low gold to total reserve ratios.

The recent turmoil in the Euro area debt markets, the consequences of global fiscal complacency, and geopolitical upheaval, has focused attention on gold as a bastion of wealth preservation, reliable collateral pledge, and monetary asset. The current environment draws parallels with similar conditions in the 1970s or 1990s and there is ample speculation that gold will mirror its behaviour in the past. However, such parallels overlook the evolution of gold fundamentals. The structure of demand and supply has changed radically over the past 40 years, driving the gold market

towards increased stability, dispersion, liquidity and transparency. This evolution renders many historical parallels superficial and often fallacious.

#### **1.2** Supply of Gold

The supply of gold has been relatively fixed for the last century, with annual mine production a small proportion of the total stock of gold outstanding and with a limited ability for annual production to rise in response to a change in the gold price, as shown in the chart below.



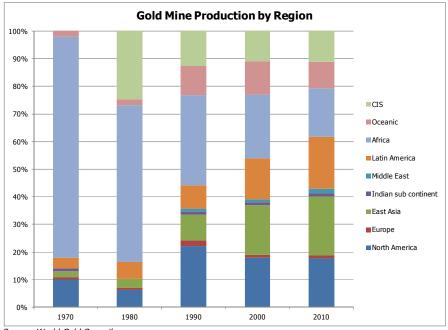
Source: World Gold Council

Like the demand side of the equation which has experienced a global balancing between East and West, dominated by the US, Europe, China and India, the supply side has witnessed a true dispersion across the globe. Mine production has historically constituted between 60-70% of total supply (recycling was not measured in 1970), with recycling, net central bank sales, net producer hedging and disinvestment forming the rest.

One of the most visible differences between the current market and that of the early years of a freely traded gold price is the geographical concentration of mine production.

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### **Gold Review**



Source: World Gold Council

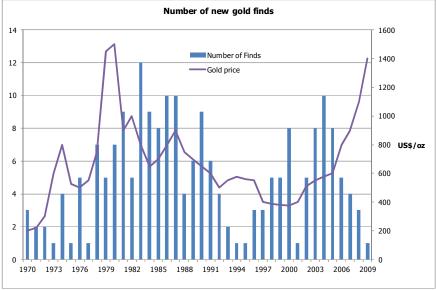
South Africa's dominance during the first two decades was striking. In 1970, the country produced 79% of 'free world' (non-communist bloc) gold. Estimates for communist bloc production at the time were around 350 tonnes, which would have reduced this share to about 62%. However, as communist bloc supply was not available to the global market directly (traded via central banks) the former percentage is more indicative of influence.

Dominance by a single state meant that protocols had to be put in place to ensure that South Africa's supply served global interests as well as domestic ones. One such agreement was made between South Africa, the US and the International Monetary Fund (IMF) in 1970 as the market price fell temporarily below the monetary price of US\$35/oz (a two-tier system of fixed and free price existed until 1971). It was decreed that in the event of urgent foreign exchange requirements, South Africa was allowed to bypass the market and sell its gold directly to the IMF.

Today, no single country supplies more than 14% of global production. In 2010, China was the largest single country producer with a 13% share, closely followed by Australia (10%), United States (9%), Russia (8%), and South Africa (8%). This lack of concentration serves as a buffer against supply risks stemming from individual countries, a feature of gold that differentiates it from the other precious metals, which have significantly higher production concentration.

Recycled gold supply, for which no figures were available in 1970, has experienced a marginal geographical dilution over the last 30 years. 1980 was a year of geopolitical crises, mostly centred in the Middle East with war between Iran and Iraq, American hostages in Tehran, the Soviet occupation of Afghanistan among others. These events took their toll as the Middle East became the centre for recycled gold, constituting 35% of global total (Iran led the way with 17%, followed by Egypt and Turkey). By 2010, recycled supply had become less concentrated with East Asia the largest regional contributor at 27% (China was the largest single contributor at 8.4%).

While there are arguments for and against peak commodity production, most notoriously crude oil, there are signs that gold production is facing constraints going forward. Analysis by Metal Economic Group shows that the number of new finds in the latter half of the last decade was decreasing even as prices were rising rapidly. A study on the number of new finds by Chris Blain over 50 years from 1950 to 1997 documented a peak in the mid 1980s. One noticeable difference between the two is that as the price was rising in the late 1970s, the number of new finds was increasing. This, as noted, has not been the case over the last few years. The fall in finds cannot be attributed to a lack of exploration spending. In fact, this figure has been rising since 2002 and is now over four times higher than it was at the beginning of the decade, despite the global recession in 2008.



Source: World Gold Council

#### 1.3 Price of Gold

Gold has performed strongly with its price nearly doubling since the global financial crisis began in mid-2007. After a sharp correction late last year, gold prices are creeping back up to the peak of September 2011. The key question today is whether gold prices have been reset at a higher level or are we at the top of a bubble that's about to burst. The answer to this question determines the profitability of current mining projects.

While indisputable indicators are absent, we believe the key demand and supply factors determining the price of gold will continue to underpin prices at current levels, if not higher.

### 1.3.1 Unique asset

Gold has peculiar characteristics compared with other commodities and financial assets, which explains its historical popularity as a currency and a store of value.

In contrast to other commodities, gold does not perish or degrade over time, giving it unique properties as a very long term store of value. Gold mined today is interchangeable with gold mined many hundred of years ago. The supply of gold has also been relatively fixed for the last century, with annual mine production a small portion of the total stock of gold outstanding and with a limited ability for annual production to rise in response to a change in the gold price. This distinguishes it from other commodities where substantial supply responses to price changes are possible, at least over the medium term.

Another important attribute of gold is its relatively less prominent use for industrial purposes, compared with other commodities including precious metals such as silver and platinum. Only around 10% of gold demand in 2011 came from industrial uses with the balance coming from jewellery and investment demand. As a result, gold lacks the strong link to the economic cycle that other commodities have and gold thus has low or negative correlations with these and other financial assets.

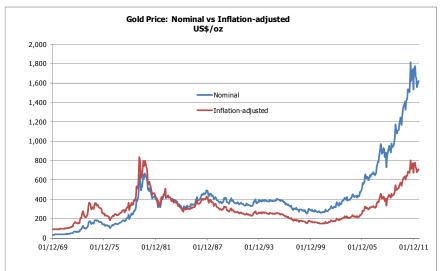
Gold is also unusual among financial assets in not delivering a yield as paid by bonds or equities, however, it has a significant advantage which is its lack of default risk.

These factors give gold an unusual set of behavioural characteristics compared with other financial assets.

#### 1.3.2 Inflation hedge

Gold is often described as an inflation hedge because in the very long-term the purchasing power of gold has been remarkably stable. In the 1830s, the price of gold in 2010 dollars was around US\$450/oz with the real price much the same in 2005.

However, the reality is more complex because often it moves over shorter periods without any apparent link to inflation. Currently, the gold price stands well above the long-term real average. However, it would be wrong to assume a rapid reversal in price anytime soon. It is possible that gold's real price eventually falls back not as a result of a fall in its nominal value but by a substantial rise in general inflation which the current gold price is forewarning.



Source: World Gold Council, US Dept. of the Treasury, Hybridan LLP

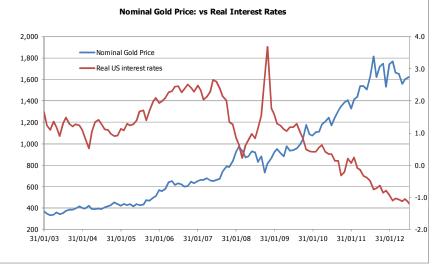
#### **1.3.3** Political/Economic instability hedge

Gold also outperforms in periods of financial stress and political turmoil which results in steep declines in the value of equities and fears about bond and bank defaults. And conditions remain fragile today, particularly in the Eurozone. It is becoming increasingly likely that we are heading towards a combination of debt monetisation (inflationary) and country default (Greece, possibly others). However, the whole process is likely to be drawn out for years and this is positive for gold.

#### 1.3.3 Real interest rates

Another factor that can influence gold prices and to some extent is related to inflation is the level of real interest rates. As gold lacks a yield of its own, the opportunity cost of holding decreases with a fall in real interest rates.

Currently, the central banks are pursuing low real interest rates and loose monetary policy. Moreover, with a break-up of the Eurozone the role of the euro will be jeopardised and there are not many alternatives to the US\$ for international reserves.



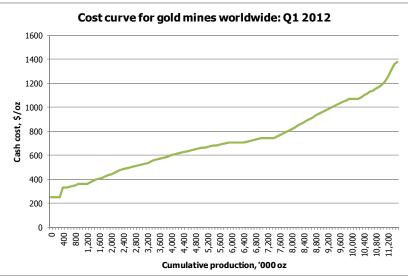
Source: World Gold Council, US Dept. of the Treasury

Even the US\$ is losing its lustre as a reserve. The Federal Reserve recently launched a third round of quantitative easing and pledged to keep interest rates at rock bottom until at least the middle of 2015.

#### 1.3.4 Reduced Volatility

Investors may also be drawn to gold for reduced volatility. A stronger East-West balance raises the probability of non-correlating business cycles reducing demand volatility. For example, the risks currently posed to Western investment demand by inflation prospects are likely tempered by disinflationary trends in many emerging markets. This geographical demand shift is likely one of the reasons that average gold price volatility is lower for each year since 1980.

#### 1.3.5 Production cost



Another factor that is likely to underpin the gold price is the structure of the marginal cost of production.

Source: Company reports and Hybridan LLP estimates

### 1.3.6 Official sector buying

The behaviour of central banks and other parts of the official sector is also likely to underpin gold prices. One reason is that they hold around 15% of all above-ground gold stock. In the 1950s and 1960s, when the Bretton Woods system was operative, central banks were generally significant net buyers of gold. After the break-up of Bretton Woods, the 1970s and 1980s saw a broadly flat trend in central bank net purchase but this gave way to a period of substantial net sales in the 1990s and early part of this century. This included the sale of the majority of Britain's gold reserves for prices between \$256 and \$296 an ounce.

Since 2010, central banks have once again become net buyers of gold, the first net purchase since 1988. China and other Asian central banks have been driving net purchases, with central banks of Russia and Kazakhstan also joining in recently. In Q2 2012, official sector net gold purchases increased 138% year-on-year, according to the World Gold Council.

Given the negative outlook for sovereign bonds including Treasuries and unprecedented expansion by the Federal Reserve and ECB of their balance sheets, we expect central banks worldwide to continue to diversify their reserves into gold. 2. Gold Equity

#### 2.1 Equities disconnect from the physical market

While gold prices peaked nine months ago but are only marginally down since, the shares of mining companies that produce gold have suffered in a much more exaggerated fashion. As the tables below show, mining stocks on average have fallen by 26% and 30% in the past 6 and 12 months, respectively.

The junior mining stocks (explorers/developers) have been hit particularly hard. The disconnect between commodities and equities reflects the fact that gold miners not only have commodity price risk but also operational risk and geopolitical risks depending on where their assets are located. The junior mining companies tend to underperform senior miners when gold prices fall or stop rising because investors prefer to hold revenue-producing gold miners rather than explorers.

#### 2.2 Rising cost of doing business

With commodities off their peaks, investors have been focusing and becoming increasingly concerned with production costs and the impact on margins. Costs are going up across the board. Bumper profits have fuelled labour unrest, driving unions to demand higher wages. An explosion of new taxes and royalties is pushing up regulatory compliance costs. The price of haul truck tyres alone have tripled in the past decade to \$100,000. Energy and power prices are also on the rise. Capital expenditures, too, are reaching a new peak. In the rush to produce, mining companies continue to expand in more challenging provinces. This not only triggers expenditure on new equipment, but significant long-term infrastructure investments including railways, ports, housing and schools. To exacerbate the situation, political uncertainties and currency volatility are making it exceptionally difficult to contain costs in dollar terms.

As the table below shows, gold producers have not been unaffected with margins starting to come under pressure. In particular, the major gold producing areas of South Africa and South America have been hit hard by rising wage and power costs and indirect costs of the social and political instability.

Gold cash costs by year, \$/oz

	2007	2008	2009	2010	2011	2012/Q1
Average Cost	394	470	485	579	655	780
Average gold price	695	872	972	1225	1571	1650
Difference	302	402	488	646	916	870

Source: Hybridan LLP estimates

One of the main battles to maintain profitability is with government taxes, resource sector profits have long been tempting to governments. In recent years, mining royalties have increased in Australia, Chile, Peru, South Africa, Ghana, Tanzania and Burkina Faso, while new export duties have been introduced in India, Kazakhstan and Russia. In Indonesia, mines are now obliged to help the country meet its energy commitment before they can access export markets.

Notably, the bid to increase national revenues now extends beyond the introduction of new tax legislation. In addition to royalties, which tend to be charged against revenues, many governments have begun to impose super-profit

taxes, discovery bonuses, resource rents, license fees, environmental levies and reconstruction tolls. Amid these rising levels of resource nationalism, some countries are even threatening to renegotiate existing tax stability agreements, throwing mining company financial projections into disarray and heightening political risk.

For companies already invested in potentially fiscally-unstable regimes, this new level of taxation is bound to affect profitability. At the same time, it is spurring mining companies and investors to think long and hard about where to invest in the future. To maximise returns and manage political uncertainty, the financial models must strike the right balance of jurisdictions, social and economic imperatives.

In this context, China's dominant role both as a producer and consumer of gold, both at home and abroad, has clear implications. As a growing consumer of precious and rare earth metals, China has shown tendencies to restrict exports to ensure that there is sufficient supply for its technology industries. It is also influencing the supply of gold from African countries, in particular with a focus on the mining belt of central southern Africa, an area well endowed with copper, iron, gold, manganese and other base metals. China has made large equity and debt investments not just in mining but also supporting infrastructure.

For major consumers of gold outside China, there is a risk that they are increasingly cut off from a large proportion of suppliers controlled by Chinese companies. They are likely to look at more stable sources of supply of gold such as Ireland.

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#### Performance of UK-listed Mining Companies (by market cap)

Performance of UK-listed			
Company	Market Cap (£m)	% change - 6 month	% change - 1Yr
KARELIAN	0.4	-72.9	-819
GMA RESOURCES	0.4	-63.8	-82.9
ALBA	0.5	-57.6	-517
ASTAR MINERALS	0.9	-56.5	-83.3
LP HILL	11	-52.9	-60.0
ATH RESOURCES	1.5	-87.4	-917
RARE EARTH MINERALS	2.0	-317	-65.0
NAMIBIAN RESOURCES	2.1	-6.9	80.0
CONNEMARA	2.2	-38.6	-30.0
AURUM MINING	2.8	-13.6	-24.0
GREATLAND	3.3	-40.4	-58.2
CICMINING	3.5	138.5	55.0
AFRICAN MIN & EX	3.6	-11.9	-43.9
CREAT RES	3.7	-65.1	-74.1
CONROY GLD & NRES	3.9	-45.7	-62.0
VANEMINERALS	3.9	-25.0	-40.0
PALMARISCAP.	3.9	-56.5	-58.3
NOVENTA	3.9	-80.5	-86.2
ECR MINERALS	4.4	-44.9	-62.9
ALEXANDER	4.4	-25.7	-48.0
ARIANA	4.6	-58.7	-68.2
TRIPLE PLATE	4.6	-68.0	-76.9
SUNKAR	5.0	-25.5	-200.0
SUNRISE RES	5.3	7.1	-7.7
BOTSWANA DIAMONDS	5.5	3.2	28.0
NORTH RIVER	6.1	-514	-53.3
EURASIA MINING	6.3	-17.9	-410
ORACLE COAL	6.4	-52.3	-65.0
REGENCY MINES	6.9	-57.7	-62.4
EDENVILLE ORD	7.1	-42.9	-56.1
TERTIARY MINS.	7.2	-26.7	-10.2
GALANTAS GOLD COM	7.4	-33.3	-53.2
SERABI	7.6	-54.2	-68.4
MINCO	7.9	-18.2	-18.2
SCOTGOLD	8.3	-214	-9.8
KOLAR	8.4	-46.0	-64.7
NORICUM	8.5	-51.1	-69.9
STELLAR DIAMOND	8.5	-48.9	-44.2
SOVEREIGN M INE	8.5	-47.8	-54.5
THOR MINING	8.7	-10.0	12.5
PATHFINDER MIN.	8.8	-200.0	-80.6
OVOCA GOLD	8.8	-54.4	-63.7
OXUS GOLD	9.1	-51.1	0.0
KALIMANTAN	10.5	10.6	36.8
ANGEL MINING	10.6	-37.9	-512
HAMBLEDON MNG	11.0	-64.8	-77.9
OROGEN GOLD	11.1	-22.7	-16.2
DIAMOND CORP	11.8	-4.9	-54.1
CENTRAL RAND	12.2	-32.9	17.7
ATLANTIC COAL	12.2	-8.6	-28.1
CHURCHILL MIN	12.9	-24.1	-410
GOLDSTONE RES	13.1	-27.7	-44.6
Source: Hybridan LLP estimate			

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## Performance of UK-listed Mining Companies (by market cap) contd.

Ferrormance of ok-liste			
Company	Market Cap (£m)	% change - 6 month	% change - 1 Yr
BISICHIMINING	13.7	-13.3	-17.5
HERENCIA	14.0	-58.3	-55.4
ORSUMETALS	14.6	- 18.9	-15.1
AFRICAN CON	15.4	-30.0	-27.6
ANGLESEY MINING	15.6	-62.3	-80.5
LANDORE	16.2	-30.2	-56.0
PENINSULAR	16.3	-22.6	-48.9
BEZANT	17.2	0.5	-24.7
RED ROCK	17.4	-36.1	-68.8
ALTONA	17.7	-28.2	-50.0
BEOWULF	17.9	-35.1	-65.7
AMUR MINERALS	18.2	-310	-49.5
MARIANA RES	18.5	-18.6	-53.3
KEFIMINERALS	18.8	35.6	-12
TOUCHSTONE	19.7	-37.8	-54.7
WEATHERLY	20.1	-40.8	-50.8
KIBO M IN ING	20.2	-24.2	-28.0
UKCOAL	20.2	-68.0	-82.5
GCM RESOURCES	20.7	-62.9	-59.7
FIRESTONE	23.9	-49.3	-75.5
SOLGOLD	23.9	-49.3	-75.5
ORM ONDE MINING	24.3	-45.3 -36.1	-78.1
GOLDPLAT	25.6	13.1	21.0
BAOBAB RES.	26.5	-30.4	-53.3
STRATEX	26.8	-31.3	-28.1
NORSEMAN	28.5	-34.6	-86.4
LEYSHON RES	29.2	-14.7	-20.5
CALEDONIA MIN	31.7	-9.1	0.0
NCONDEZICOAL	32.1	-50.5	-77.0
HORIZONTE MIN.	33.8	-25.7	-29.9
JUBILEE PLAT.	35.0	-6.7	-16.9
STRATEGIC NAT.	35.3	5.2	32.8
NYOTA MINERALS	35.6	-22.6	-36.2
OROSUR MINING	38.6	3.2	-30.7
SYLVANIA	40.0	-32.9	-46.1
NAMAKWA	40.9	-418	-70.6
RAMBLER	42.7	- 10 . 4	-4.7
BERKELEY	44.0	-1.0	16.7
VATUKOULA	44.3	-37.0	-53.0
OBTALA	44.4	-53.5	-55.2
ANGLO ASIAN	45.7	8.7	-8.0
ZINCOX RES.	47.0	-31.2	-14.6
PARAGON DIAM ND	47.8	-25.4	-23.0
MWANA	49.3	- 10 . 2	2.3
TRANSSIB	50.1	-40.1	-51.3
UM C ENERGY	52.7	91.3	83.3
CONDOR GLD	54.3	48.6	16.8
HUMMINGBIRD	58.3	-31.1	-29.0
BEACON HILL	60.0	-46.8	-50.5
GRIFFIN MINING	64.9	-24.4	-31.4
CHAARAT GOLD	65.8	-14.8	-3.7
ARIAN	68.6	-10	-9.6
M ETALS EXPLORE	70.1	-14.0	-29.2
MINERA	79.9	-25.1	-32.5
FRONTIERMIN	83.7	-29.8	45.1
CENTRAL ASIA	84.8	17	32.4
AUREUS MINING	86.8	-4.2	-5.1
KRYSO RES	88.5	10.8	124.6
SHANTA GOLD	94.8	-15.1	16.2
PETMINORD	98.1	-39.8	-313
Source: Hybridan LLP estime	ates		

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Performance of UK-listed Mining Companies (by market cap) contd.					
Company	Market Cap (£m)	% change - 6 month	% change - 1 Yr		
METMINCO	100.6	-49.3	-62.4		
EMED MINING	108.6	-18.9	8.5		
BELLZONE	109.5	-54.1	-52.3		
GEMFIELDS	109.9	-4.3	58.2		
EASTERN PLAT	118.3	-57.3	-71.8		
COAL OF AFRICA	148.2	-72.3	-69.9		
CLUFF GOLD	150.0	-7.8	-22.9		
NAUTILUS	162.7	-43.4	-61.6		
AVOCET MINING	188.4	-53.0	-64.6		
PATAGONIA	221.2	-23.7	-54.0		
AQUARIUS PLAT.	252.9	-69.7	-78.1		
PAN AFRICAN	258.9	4.4	39.2		
GEM DIAMONDS	271.6	-218	-18.3		
SIRIUS MINERALS	306.3	12	97.7		
ANGLO PACIFIC	311.4	-17.3	-6.2		
ARCHIPELAGO	352.6	-6.2	- 19.5		
SIERRA RUTILE	388.9	19.8	211.6		
HIGHLAND GOLD	4 11.0	-13.7	-34.5		
PETRA DIAMONDS	512.5	-43.2	-16.9		
KIRKLAND LAKE COM	513.9	-14.4	-38.0		
BUMI	526.1	-62.3	-70.5		
MEDUSA MINING	757.5	6.4	-22.7		
NEW WORLD RESOURCES	819.3	-30.0	-43.6		
PETROPAVLOVSK	837.4	-318	-48.1		
CENTAMIN	974.7	12.1	-16.7		
AFRICAN MINING	1008.2	-417	-42.2		
KENMARE RES.	1096.9	-14.3	-11.3		
LONMIN	1309.7	-44.5	-48.7		
HOCHSCHILD	1646.5	0.5	-5.9		
AFRICAN BARR	1929.7	14.2	-21.5		
VEDANTA	3236.3	-23.1	-23.3		
KAZAKHMYS	3977.6	-19.5	-26.5		
EURASIAN	4657.8	-46.9	-45.6		
RANDGOLD RES.	6801.2	14.3	6.7		
YAMANA GOLD	8663.0	16.9	13.1		
ANTOFAGASTA	12895.0	8.5	2.6		
FRESNILLO	13 18 8 . 6	4.1	-0.6		
GLENCORE	25666.0	-9.4	-16.7		
ANGLOAMERICAN	28169.7	-20.4	-17.4		
XSTRATA	31573.3	-9.1	1.9		
BHP BILLITON	42832.8	0.7	2.3		
RIOTINTO	45167.3	-8.3	-9.5		
AVERAGE		-26.6	-30.2		

#### Performance of UK-listed Mining Companies (by market cap) contd.

Source: Hybridan LLP estimates

3. Country Focus – Ireland

#### 3.1 History of Mining in Ireland

The increasing importance of Ireland, literally on the UK's doorstep, in mining terms has been overlooked. Ireland is now a major base metal producer ranking in the top ten globally in the production of zinc and  $11^{th}$  in relation to lead. Northern Ireland already has a small gold producing mine and exploration suggests that Ireland, North and South, could become a significant source of gold as well as being an international base metals province.

Zinc Mine Production	by Country, 2011
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#### Lead Mine Production by Country, 2011

Country	Production (tonnes)	Country	Production (tonnes)
China	3,900,000	China	
Peru	1,400,000	Australia	560,000
Australia	1,400,000	United States	345,000
India	790,000	Peru	240,000
United States	750,000	Mexico	225,000
		India	120,000
Canada	660,000	Russia	115,000
Mexico	630,000	Bolivia	85,000
Kazakhstan	500,000	Canada	75,000
Bolivia	430,000	Sweden	70,000
Ireland	350,000	Ireland	50,000

Source: US Dept of Interior

Ireland is richly endowed with a diversity of mineral deposits, with a mining heritage extending for over 4,000 years. Few records remain of any mining activity prior to the major mining period in the late 18<sup>th</sup> and 19<sup>th</sup> centuries, which was triggered by the Industrial Revolution in Britain. By the end of the 1880s, however, a bleak period of some 70 years was to ensue. Exhaustion of known deposits, falling metal prices and the lack of new discoveries saw the virtual cessation of metal mining in Ireland.

Things began to change when the 1956 Finance Act, which followed the Minerals Development Act of 1940, began to attract a number of Canadian exploration countries to the country. Encouraged by the discovery of economic reserves at the lead-zinc deposit in Lower Carboniferous rocks at Abbeytown (in production from 1950-1962), a surge of exploration focused in this stratigraphical level. Early confirmation of the existence of significant mineralisation came with the discovery of the Ballyvergin copper deposit in 1957, followed by the Tynagh zinc-lead-silver orebody in 1961. It was the discovery at Tynagh that led to the discovery of the world class base metals deposit in Navan which set off an intensive period of base metal exploration, but it was not until the discovery fifteen years later of Galmoy by Conroy Petroleum and Natural Resources, now in production as a major zinc mine, that a revival was sparked in Ireland's base metal industry which continues to this day.

There are currently three major base metal mines operating in Ireland: Navan, Galmoy and Lisheen, discovered down trend from Galmoy, together with a major gypsum mine at Kingscourt. In 2011, production of zinc metal in concentrates was largely unchanged at 341,000 tonnes, while output of lead metal in concentrates increased by 32% to 50,000 tonnes. This is equivalent to around a third of European zinc mine output and 14% of European lead mine output in 2011. These figures equate to 2.6% of world mine production for zinc and 1.2% for lead.

Boliden Tara Mines' underground operation at Navan (Co. Meath) is the largest zinc mine in Europe and 9th largest in the world. Since mining operations commenced in 1977, total production at Navan has amounted to 78.2m tonnes grading 8.2% Zn and 1.9% Pb. In February 2011, Vedanta acquired the Lisheen Mine from Anglo American in a deal which valued Lisheen at US\$308m. Since mining was initiated in 1999, approximately 17.6Mt grading 11.9% Zn and 2.0% Pb has been mined at Lisheen. Mining at Galmoy Mines Ltd., a subsidiary of Lundin Mining Corporation, was originally scheduled to cease in May 2009, but due to positive market factors, and the discovery of a further zinc seam, mining of remnant high grade ore has continued to occur. Since 1997, the mine has produced over 7.3m tonnes of ore at a combined grade of approximately 12.5% zinc and 3% lead. Irish Gypsum Ltd., a subsidiary of French multi-national Saint Gobain, produced approximately 300,000 tonnes of gypsum in 2011. The vast majority of this tonnage was sourced from the opencast operation at Knocknacran, Co. Monaghan, with the remainder coming from the adjacent underground mine at Drummond.

As for exploration activity in Ireland, a total of 41 exploration companies hold a total of 586 Prospecting Licences (PLs). A further 35 PL applications are currently being processed. Since 1st November 2011, 111 licences have been issued, including 52 to the following new entrants to the Irish exploration scene; Merrex Gold Inc (thirty licences), Hendrick Resources (Ireland) Ltd. (eleven licences), Strategic Materials Pty Ltd (six licences), Omagh Minerals Ltd (four licences) and Canex JV (one licence).

Zinc and lead remain the principal commodities of exploration interest in Ireland. In the past six months however, there has been increased interest in other mineral commodities, particularly gold, silver, tungsten and rare earth elements (REEs). Other commodities that are currently being sought in Ireland include: PGEs, copper, molybdenum, lithium, caesium, diamond, gem minerals, barite, calcite, fluorite, coal and fireclay.

#### 3.2 Cost of doing business in Ireland

For any industry in general, Ireland remains a good place to do business in terms of availability of skills and infrastructure, and stability in corporate taxation and other fiscal policies, and is very competitive in worldwide terms being ranked 9<sup>th</sup> in attractiveness by the prestigious Fraser Institute.

For mining companies, the corporation tax at 25% is twice that of the general level, but this has been stable which ensures that they can invest without worrying about sudden changes in fiscal policies. There has been no attempt by the Irish government to impose additional taxes and royalties to exploit rising profits in recent years. There is minimal intervention from the government on wages like in several African countries. The Irish Government does not demand a stake holding and has publicly made clear that the mining industry has the full support of the Government.

In fact, existing producing mines have limited lives (e.g. Galmoy and Lisheen are scheduled to follow over next two years), underlining the need to continue to promote exploration and at least maintain employment levels. Currently approximately one quarter of Ireland's land area is under about 500 active exploration licences. Mines inevitably involve the complex interaction of property and extraction rights and a key target for the government is to consolidate and modernise mining legislation stretching back over 70 years in a new Minerals Act.

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## **Gold Review**

### 3.3 Irish Gold Mining Companies

There is, however, more to Ireland than just zinc and lead. Several gold deposits have been identified and exploration continues, with one mine in production since late 2000 at Cavanacaw in Northern Ireland, which is owned by Galantas Gold Corp.

#### **Gold occurences in Ireland**

Bohaun Carnew Cavanacaw, N. Ireland Clontibret Cregganbaun Curraghinalt, N. Ireland Gold Mines River Inishturk Kildare Kilgeever Kilmacoo Lecanvey

The gold deposit at Cavanacaw is hosted in steeply-dipping quartz veins and shear zones in Dalradian metasediments. The gold infills microfractures or forms discrete grains within lead, copper and iron sulphides. An indicated resource of 270,900 tonnes grading 7.94g/t Au and inferred resource of 490,000t/Au grading 8.59g/t Au has been estimated.

Gold was also discovered at the Curraghinalt in Co. Tyrone and an intensive drilling programme has yielded positive results with substantial resources being reported.

The other major gold company in Ireland is Conroy Gold and Natural Resources plc which has discovered a thirty mile gold trend running from Co. Armagh in Northern Ireland across Counties Monaghan and Cavan in the Republic of Ireland. A number of gold targets have been identified along trend and on 20 per cent of one of these, Clontibret in Co. Monaghan, scoping studies by Tetra Tech Wardrop have been positive on both technical and financial grounds indicating a deposit of 600,000 oz of Au (indicated resource of 260,000 oz gold and inferred resource of over 340,000 oz Gold), a suggested mine life of 11 years and an estimated production of 50,000 oz gold per annum for the first five years of the mine life. Further exploration for gold by Conroy and others is going on elsewhere in Ireland.

We believe Conroy is significantly undervalued compared with comparable gold exploration companies, many of which are located in countries where production and costs are subject to political and economic uncertainties.

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### Valuation of mining companies with only gold reserve

Company	Country	Enterprise Value (£ m)	Gold resource (m oz)	EV/ounce of resource (£)
Ortac resources	Slovakia	6.1	1.4	4.5
Bullabulling	Western Australia	19.4	3.2	6.1
Conroy Diamonds and Gold	Ireland	4.0	0.6	6.6
Kryso	Tajikistan	86.9	5.0	17.3
Shanta Gold	Tanzania	88.3	2.6	33.7
Galantas	Northern Ireland	8.8	0.2	37.6
Red Rock Resources	Kenya & Greenland	26.8	0.6	41.6
Goldplat	Kenya, Burkina Faso and Ghana	22.4	0.3	65.6
EMED	Cyrus, Turkey, Slovakia & Spain	125.0	1.1	118.3

Source: Fidessa, Company reports, Hybridan LLP estimates

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