Commodities

Standard Bank

Precious metals as an asset class

April 2011

What qualifies as an asset class?

Broadly speaking, an asset class is simply a grouping of assets that possess similar characteristics. Defining asset classes is a key input in the investment decision-making process, and can ultimately affect the performance, in terms of return and risk, of an investment portfolio. Before embarking on any strategic asset allocation exercise, it is important to understand how the investable universe can be most favourably divided in order to reap the benefits of portfolio optimisation.

In order to make a case for defining any particular asset or group of assets as an asset class, it is necessary to elaborate on the definition of an asset class and present some criteria which might be applied in our determination. The following are the most commonly used conditions in defining asset classes:

- **Assets within an asset class should be homogenous.** They should be subject to the same laws and regulations, and perform similarly under varying market conditions.
- **Asset classes should be constructed in such a way so as to reap the benefits of diversification.** Returns and risk profiles of asset classes should *not* behave similarly under a given set of market conditions. This characteristic is best described and analysed through the use of statistical correlation. Expected correlations among assets classes should *not* be extremely high. A conventional rule-of-thumb is that correlations among assets classes should *not* exceed 0.95, with negative correlations being the most desirable.
- **There should be no overlap between asset classes.** A particular asset should be uniquely assigned to only one asset class. This is to realise the diversification benefits mentioned in the previous point.
- **The market of an asset class should have the ability to absorb a significant proportion of an investor's portfolio.** The asset class should possess sufficient liquidity to allow significant investment without prompting a marked move in asset class prices. Large-scale participation in an asset class should also be possible without incurring high transaction costs.
- **Asset classes should provide an opportunity for generating positive returns.** It should be possible to significantly enhance the performance of a portfolio through actively taking positions in the asset class, based on the investor's strategy and particular market view.

What makes commodities an asset class?

Traditional asset classes have included local equities, fixed income, property and cash equivalents. Positions in commodity markets were largely restricted to hedging of physical demand or producer exposures (with the notable exception of gold). However, for a long time now investors have viewed commodities as a distinct asset class, with the possibility of generating excess portfolio returns by actively taking positions in commodities.

A primary motivation for the increased interest in commodities has been the distinct advantages they offer over the markets of traditional asset classes:

- **Commodity markets trade globally.** This offers a distinct advantage in terms of liquidity, as investors can take up or unwind positions at most times, enhancing the optimality of their trades. This also enhances the speed at which information can be priced, within commodity markets.
- **Commodity markets generally move in the opposite direction to fixed income securities and equities**. This gives commodities a distinct advantage in providing diversification benefits within investment

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- **Commodity markets are thought to offer protection against inflation**. While it has been shown that commodities are far from a perfect hedge against inflation, the inflation protection they provide is superior to that of the other conventional asset classes.

Do precious metals qualify as an asset class?

After discussing the emergence of commodities, in general, as an asset class, we turn our attention to a group of precious metals (gold, silver, platinum and palladium) in particular. Using the criterion expressed in the first section, we can come to the conclusion that **this group of precious metals may be defined as an asset class** (see Table 1).

Gold, silver, platinum and palladium are largely traded on the New York Mercantile Exchange (COMEX division of NYMEX) and the Tokyo Commodities Exchange (TOCOM), and thus are subject to similar regulations regarding standardisation and trading practices. In addition, as we will see, the risk return profile of these metals is fairly similar. Hence, the first asset class criterion of ***homogeneity*** is met. ***Mutual exclusivity*** is assured since the precious metals considered are not classified under any of the other traditional asset classes.

Table 1: Asset class criteria

Criterion	Precious Metals
Homogeneity within asset class	√
Mutually exclusive	√
Diversifying	√
Liquidity	√
Non-zero positive returns	√

Source: Global Markets Research

In terms of opportunity for ***diversification***, we look to the correlations of this precious metals group (an equal weighting of gold, silver, platinum and palladium) with other conventional asset classes (see explanation of data used in next section).

Table 2: Correlations across asset classes (June 2004 to June 2010)

	Fixed income	Equity	Cash	Property	Precious Metals
Fixed income	1.00	-0.08	-0.08	0.59	-0.62
Equity	-0.08	1.00	-0.92	0.68	0.49
Cash	-0.08	-0.92	1.00	-0.72	-0.45
Property	0.59	0.68	-0.72	1.00	-0.11
Precious Metals	-0.62	0.49	-0.45	-0.11	0.74

Sources: Global Markets Research, Bloomberg, JSE, I-Net

As is evident from Table 2, including precious metals in a portfolio should offer significant diversification benefits. **Precious metals are poorly correlated with all asset classes** — the strongest correlation with equity is only 0.49 (this is most likely due to the dominant position commodities command in the SA economy) . All other asset class returns are negatively correlated with precious metals, with the fixed income and cash classes displaying a fairly strong negative correlation. This indicates that most portfolios, regardless of their allocation amongst the traditional asset classes, could achieve an improvement in risk and return characteristics through the inclusion of precious metals. In short, the correlation of precious metals with the other asset classes is considerably below the 0.95 threshold that would disqualify it from being defined as a separate asset class.

As will be discussed further in the next section, even a naïve approach to investing in precious metals can yield ***positive returns***. A simple buy-and-hold strategy (of an equally weighted position) over the investment period considered would have generated an average return of 19.27% y/y. This might not seem excessive, but **given the high volatility of commodities, the opportunity exists for investors to considerably improve on this average return through an active management of their positions**.

Table 3: Nominal value of average daily open interest (2009) (US$ millions)

	COMEX	TOCOM	Total
Gold	47,622.40	2,886.51	50,508.91
Silver	7,925.26	12.64	7,937.90
Platinum	1,500.74	690.68	2,191.42
Palladium	463.14	20.20	483.34

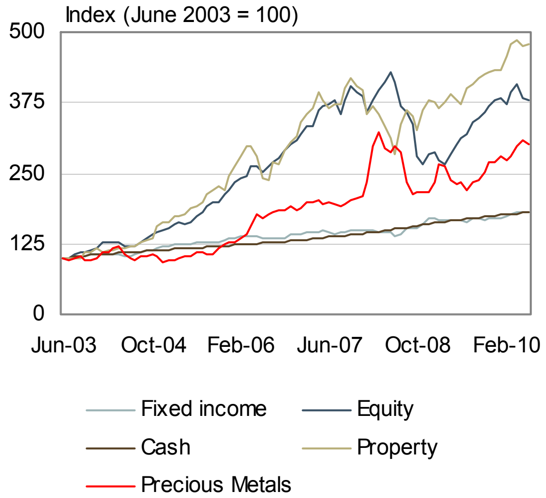
Sources: Global Markets Research, Bloomberg

Note: Calculated using 2009 average for London PM fix

In terms of ***liquidity***, the markets for precious metals differ considerably (see Table 3). However, **all the markets for precious metals compare favourably to other financial markets in terms of liquidity**. The liquidity of each market (i.e. gold, silver, platinum and palladium) is more than sufficient to absorb most investments **without markedly affecting prices**. Also the depth of these markets ensures that **most trades can be processed without inhibitive transactions costs**.

Precious metals vs. other SA asset classes?

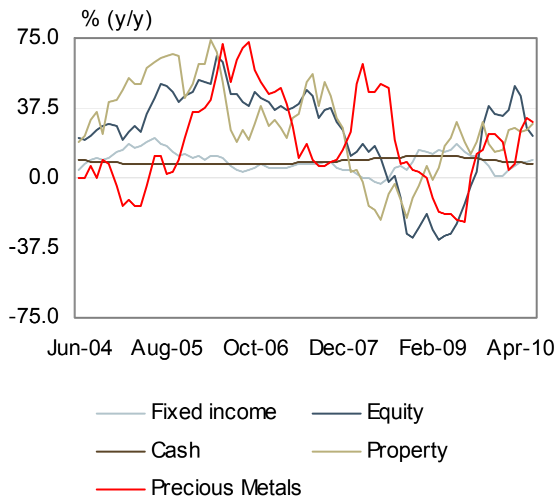
Figure 1: South African asset class performance



Sources: Bloomberg, JSE, I-Net

We compared the performance of precious metals, in ZAR terms, to SA's other conventional asset classes — *local equity, fixed income, cash equivalents* and *property*. These asset classes are represented by the *JSE All Share total return index, the ALBI total return index, the 12-month Stefi* and the *SA Listed Property total return index* respectively. Our analysis considers investments in spot (and not futures) gold, silver, platinum and palladium, as well as an equally weighted holding of all four of these metals. All positions were ZAR-denominated. That is, similar to purchasing equities or fixed income securities in rand, one would purchase these metals at a rand price.

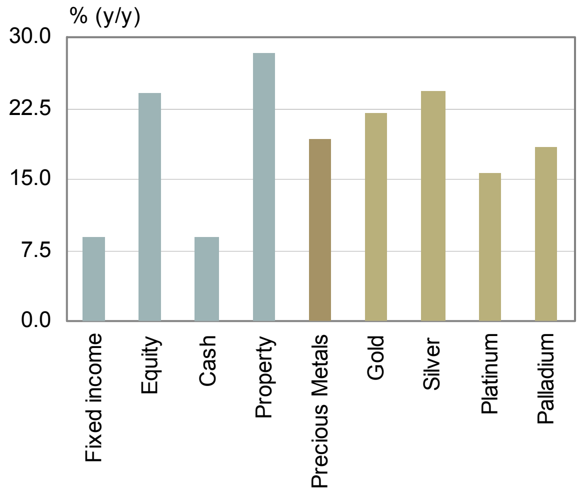
Figure 2: South African asset class performance



Sources: Global Markets Research, Bloomberg, JSE, I-Net

A returns analysis (Figures 1 and 2) highlights the diversification benefits of precious metals. The returns on precious metals are, for the most part, counter-cyclical to those of fixed income and property. That is to say, precious metal returns increase when those of local fixed income and property decrease, making it an effective diversification tool in a portfolio.

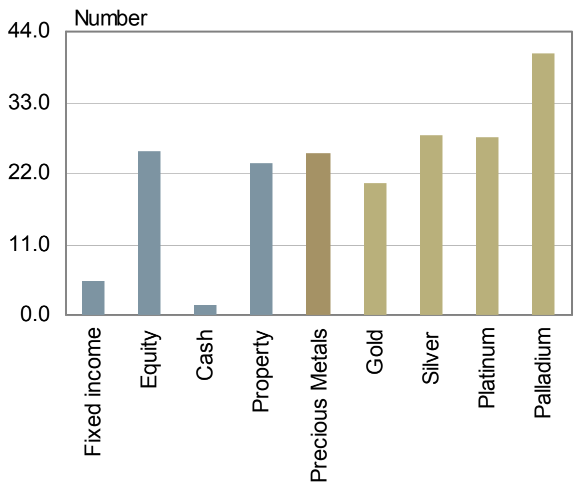
Figure 3: Average returns



Sources: Global Markets Research, Bloomberg, JSE, I-Net

Over our sample period (Figure 3) precious metals have underperformed local equity and property. It did, however, significantly outperform cash and bonds. This implies that **when employing a buy and hold strategy with precious metals, i.e. not actively managing the investment, the average return on precious metals ranks third** among the asset classes. Given the differences in returns among the various component of the precious metals group, it is easy to see that an alternative weighting (perhaps biased towards gold and silver) could improve on these returns.

Figure 4: Standard deviation of returns



Sources: Global Markets Research, Bloomberg, JSE, I-Net

Figure 4 shows the volatility across the asset classes. Based on standard deviations, **precious metals are riskier than the fixed income and cash equivalents, as one would expect, yet are comparably in terms of risk with**

local equity and property. Again, there are considerable differences among the precious metals considered when it comes to risk. Thus, an investor could tailor a combination of metals that is best suited to their tolerance for risk and potentially optimises their portfolio's risk/return profile.

Table 4: Correlations across asset classes

(June 2004 to June 2010)

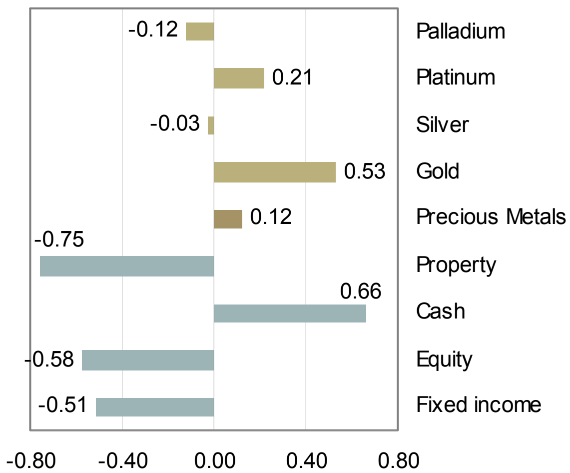
	Gold	Silver	Platinum	Palladium	Precious Metals
Fixed income	-0.44	-0.45	-0.72	-0.55	-0.62
Equity	-0.08	0.50	0.48	0.62	0.49
Cash	0.03	-0.50	-0.38	-0.55	-0.45
Property	-0.40	0.01	-0.18	0.04	-0.11

Sources: Global Markets Research, Bloomberg, JSE, I-Net

Even in terms of correlations with the other asset classes, the precious metals differ amongst themselves (see Table 4 overleaf). So while, **the diversification benefits of including gold, silver, platinum and palladium in a portfolio are undeniable**, it is advisable for each investor to consider their allocation among the various precious metals within the context of their existing portfolio distribution.

Figure 5: Correlations with consumer inflation

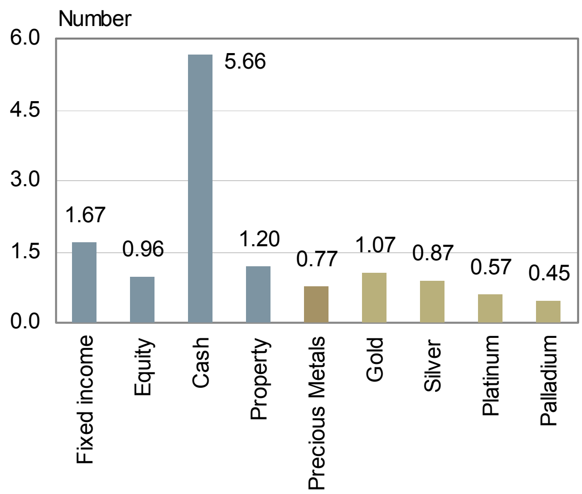
(June 2004 to June 2010)



Sources: Global Markets Research, Bloomberg, JSE, I-Net

Investing in commodities is also associated with hedging against inflation. While the extent to which this can be achieved is limited, correlations with SA consumer inflation (Figure 5) reveal that among the conventional asset classes, precious metals offer the greatest opportunity for doing so. Other than cash, precious metals are the only asset class to display a positive correlation with inflation. As evident in our previous metrics, this correlation also varies among the precious metals. An investor who is particularly concerned about hedging against inflation, might tilt their allocation towards gold and platinum.

Figure 6: Sharpe ratios



Sources: Global Markets Research, Bloomberg, JSE, I-Net

Looking from a Sharpe ratio perspective (Figure 6), the precious metals group underperforms all the asset classes. This implies that an **investment in precious metal outside of a portfolio may not reap as many benefits as if used within a balanced portfolio**. However, it is worth noting that gold compares favourably against equities in terms of reward for risk.

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