Commentary from Maple-Brown Abbott Listed Global Infrastructure

Some information on the type of interest rate sensitivity analyses conducted across all sectors of the GLI market.

We conduct interest rate sensitivity analysis on all stocks in the portfolio in our valuation models. This is for both interest rate increases and decreases. In addition, we perform sensitivity analysis by running scenarios at a portfolio level for both upward and downward movement in the yield curve (as well as for inflation expectations). This analysis is conducted using Bloomberg PORT and is reviewed by the Investment Committee monthly. It is highly customisable and we look at various permutations including standalone sensitivities as well as vs. relevant indices (inc. GLI Focus List, FTSE Global Infra Index and Global Equities).

Some commentary around the discount rate used for their DDM models which portray a more conservative approach to valuing companies.

Macroeconomic variables utilised in our valuation models are determined by our proprietary Global Macroeconomic Advisory Committee, which helps ensures that our macroeconomic assumptions are as timely, consistent and accurate as possible. The Committee consists of two external economics experts, Mr Andrew Kenningham (Capital Economics) and Mr Gerard Minack (Minack Advisors), along with internal representative.

Our current assumptions imply that there is a mild upwards bias in interest rates when compared to spot rates, although there remain strong reasons why rates will likely settle at lower than historical mid-cycle levels

Interest rate assumptions:

1. Our interest rate assumptions utilised in our valuation models generally assume an increase in interest rates over the medium term; this will impact both the discount rate and refinancing rates.
2. Our discount rates use the greater of our traditional CAPM derived Equity Discount Rates (EDR) and the MBA GLI hurdle rate (CPI+5.5%+Sovereign Risk Premium). As a result, the rate ensures that we aren't discounting dividends/cashflows at a rate that would imply a return below our long term investment objective. In addition, due to point (1), our discount rates are more conservative than would be implied by equity discount rates that use current spot bond yields as we assume a normalisation in the yield curve over the medium term.
3. Our assumed refinancing rates are derived from a combination of spot rates, Sovereign Risk Premium, long term inflation and GDP rates.

Some commentary around the expected continued rise in US rates and bond yields and how the fund is positioned to tackle this potential issue.

We expect global growth to continue at a reasonable pace into 2017. Inflation will also increase modestly from current low levels, particularly due to the annualised effect of energy price increases but also better performing economies.

We continue to assume that long interest rates normalise over the next 5 years, but for good reasons they will be lower than previous cycles (e.g. demographics, lower potential growth, timid inflation expectations, financial repression). In the US, which is the largest country exposure in the portfolio at approximately 36%, we assume the 10 year bond yield normalises to ~4.3% over the long term. This is still ~1.9% higher than it is today.

The recent rise in global long rates is a response to moderating fiscal repression, improving business confidence and short-term growth/inflation upgrades; however our long term rate assumptions and discount rates have not changed materially over the last 2-3 years. Hence, we have been expecting bond yields to rise for some time, and this progressive normalisation already factored into our valuations. However, due to increased share prices, we have reduced our exposure over the last year to regulated utilities globally, and especially US utilities, and greater exposure to assets that benefit from growth (concession assets such as airports and tollroads).

What is the expected yield to be of the fund for 2017/2018? Is it expected to go up? If so, could you please explain why and how? (a couple of company examples would be very useful here)

The forward portfolio yield based on the dividend income from underlying investments is approximately 4% pre-fees. Earnings/results from our companies have continued to be solid and we continue to expect this yield to grow at 5-7% p.a. through 2020.

This growth is mostly driven by two key factors – inflation and capital expenditure. Most infrastructure assets have some level of inflation pass-through which is ultimately passed on through earnings and dividends. So there is a natural upward bias on dividends from infrastructure assets from inflation.

Capex is another major driver. Significant investment in infrastructure required in most developed and developing markets globally and there are plentiful organic growth opportunities for listed infrastructure companies. Our process favours rate base investments, new pipelines and existing toll network road expansions as opposed to significant greenfield investment.

On our estimates, our Focus List of GLI companies have combined US$160bn in 2017, almost exclusively investing in their own existing assets or expanding their networks. Assuming half of this were to be equity-funded, it would imply growth in equity values of ~5% of the market cap of the Focus List.

A few examples:

- Regulated utilities have their capex added to their rate base. As their rate base grows, so too do their earnings (which are based on a return on capital or return on equity) and subsequently potential dividends.
    - An example in our portfolio is the US utility CMS Corp is guiding to spend US$17bn on incremental rate base capex over the 2016-2025 period, which we expect to translate into 7% EPS CAGR. Most of this capex is gas mains and supply replacement capex as well as general maintenance, rather than new generation facilities. This rate base capex will be accretive dividends, which are directly linked to earnings.
- Concessions assets such as toll roads that invest in expansions (e.g. new lanes or additional connecting roads) can typically be seen to receive concession extensions or tariff increases. These are negotiated outcome between concessionaires and the relevant concession authority.
    - An example in our portfolio is Transurban, which is building the NorthConnex project, the result of an unsolicited proposal put to the NSW Government. This $3bn project will connect the M1 and M2 Motorways, and will be partly funded by a negotiated agreement that would see tolls aligned with the current M2 tolls and linked to inflation, a contribution from both the NSW and Federal Governments and an extension of the concession on the M7 tollroad also owned by Transurban for an additional 11 years. We expect this to be accretive to distributions when the road opens for traffic in 2019.
- Contracted assets such as pipelines that invest in expansions (new pipelines, spurs or compression facilities to increase capacity) can look to enter into new long term contracts for that capacity. Depending on the jurisdiction, there are many alternatives to the structure of these contracts, which can be regulated, operate under a cost-pass through or a perhaps negotiated outcome with shippers. In some assets, we see contracts lengths of up to 20 years for new capital expenditure.
    - An example in our portfolio is Boardwalk Pipeline Partners' Coastal Bend Header Project which is an expansion capex of an existing pipeline system in Southeast Texas connecting the new Freeport LNG terminal to gas supply. The pipeline expansion, under a 20 year contract, will be immediately accretive to distribution growth when it opens in 2018.

Some additional comments on some infrastructure assets/sectors with detailed examples looking at interest rate sensitivities:

<u>Utilities</u>

Regulated utilities can generally pass movements in interest rates through their cost structures (and so the impact of increases in rates is ultimately borne by customers). This is pretty universally the case for the cost of debt; but also the Allowed ROE is normally linked in some way to bond yields. The impact on valuations from movements in rates is therefore dependent on (a) the mechanism used in each regulatory jurisdiction and (b) company specific factors.

Considering first (a), specific aspects of the regulatory construct to consider are:

1. Real or Nominal Returns: regulated assets in countries / regions like the UK, Australia, Italy, Portugal and Latin America are regulated using real rates of return. This means that each year the rate base is escalated by the actual inflation that occurred – so changes in interest rates that are a result of inflation changes are perfectly (and promptly) passed through, whilst changes in real rates only occur at each regulatory reset. However in countries like the US, Canada and Hong Kong the regulation is based on nominal returns; and so changes to returns as a result of movements in both inflation expectations and real rates only occur at each regulatory reset.
2. How long are the Regulatory Periods: the longer the regulatory period the larger the potential impact on valuations from movements in interest rates (as the longer the wait until the Allowed Returns can be reset)
3. How are Allowed ROEs set: in some countries (such as Australia) the regulator has utilised the current bond yields at each regulatory reset to calculate the Allowed ROE – and so if bond yields were to rise say 1% then the Allowed ROE would rise by the same amount at the next rate reset. Jurisdictions such as the UK use a similar process, except that they utilise a historical average for bond yields – and so say a 1% rise in bond yields will progressively move into rates (but there is an element of lag / delay). In the US the system is different in that the Allowed ROE does not adjust to the same magnitude as movements in bond yields – and the adjustments are far less formulaic than in other jurisdictions.

Considering then (b), the most material company specific factors include:

1. Each regulatory asset will generally have its own regulatory cycle, and so the time remaining until the next regulatory reset becomes important when considering the impact on valuations of changes in interest rates; and
2. One needs to also consider the capital structure of each company. For example if a company has utilised longer-dated debt than the regulator assumes then in most regulatory jurisdictions this will increase its sensitivity to interest rate movements (but this is not the case in the US, where the regulators typically use each company's actual debt structure).

So considering the above factors, an Australian regulated utility that has a relatively short period until their next regulatory resets (such as Spark Infrastructure or Ausnet) will have a lower sensitivity to movements in interest rates. A US utility with a long period until its next rate reset – say for example Dominion's VEPCO asset – will have one of the larger interest rate sensitivities.

Tollroads

In almost all cases the tollroads that we invest in have their tolls linked to actual inflation rates. So to the extent that interest rates rise due to increasing inflation there is a very strong offset.

Tollroads do though have a sensitivity to movements in real rates. The extent of this sensitivity depends on several factors:

- The remaining duration of the road: the longer the duration the greater the sensitivity
- The debt profile: the longer the duration of fixed rate debt the lesser the sensitivity
- The nature of the tollroad: urban roads have a greater proportion of commuters, which tend to be less economically sensitive. Intercity roads tend to be more linked to GDP, as they have a greater proportion of trucking and also discretionary travel. On this basis the intercity roads offer better protection from rising real rates, as there is an offset as a result of the likely accompanying improving GDP (which results in increased trucking and holiday travel).

Within our portfolio Transurban is a portfolio of urban roads whilst Atlantia is primarily intercity – and so Atlantia would have a slightly better position in a rising real rate environment.

Airports

Airports have some protections from inflation increases (generally quite strong within a 5 year period, but less so beyond that) – based on typical escalators within their aeronautical and retail agreements – however these are not as robust as say in tollroads (where the escalators extend until the end of the concession).

Airports typically have stronger protections against real rate increases, as air traffic has historically demonstrated a stronger correlation to GDP. For this reason if we were concerned about a likely increase in real rates then airports would be an area that we would look to increase our exposure.

Pipelines

Pipelines can be contracted or regulated, or a hybrid of the two, and so the interest rate sensitivities vary. Some general comments would be:

- In the US oil pipelines are regulated under a real rate of return whilst gas pipelines are under a nominal rate or return. For this reason oil pipelines have good inflation protection but gas pipelines do not.
- Assets that are subject to long-term take or pay contracts behave similarly to long-dated fixed rate bonds, and so are sensitive to interest rate movements. Offsets can be if there is an inflation escalator on the contract (typically not), or if improving economic activity could provide increasing volumes etc.
- The pipelines also have an element of commodity price sensitivity (indirectly), which can also act as an offset to interest rate movements (ie. an increasing rate environment may be in conjunction – or as a result of – increasing commodity prices).