Fund Update: 30 June 2016

Magellan Infrastructure Fund (Unhedged)

ARSN: 164 285 830

Fund Facts

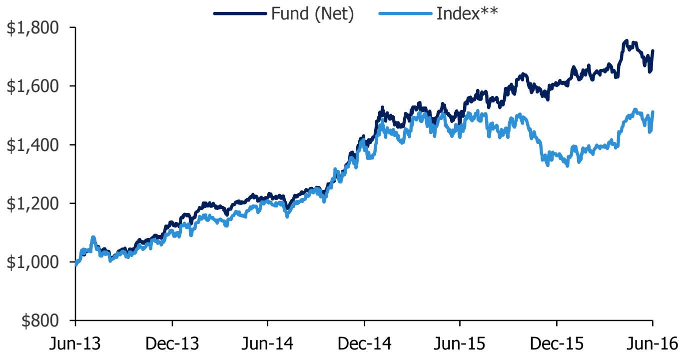
Portfolio Manager	Gerald Stack
Structure	Global Listed Infrastructure Fund (Unhedged)
Inception Date	1 July 2013
Management & Administration Fee[1]	1.05% per annum
Buy/Sell Spread[1]	0.15%/0.15%
Fund Size	AUD $431.9 million
Distribution Frequency	Six Monthly
Performance Fee[1]	10.0% of the excess return of the units of the Fund above the higher of the Index Relative Hurdle (S&P Global Infrastructure Index A$ Unhedged Net Total Return) and the Absolute Return Hurdle (the yield of 10-year Australian Government Bonds). Additionally, the Performance Fees are subject to a high water mark.

[1]All fees are inclusive of the net effect of GST

Fund Features

- Benchmark-unaware exposure to global listed infrastructure
- Conservative definition of core infrastructure
- Relatively concentrated portfolio of typically 20 to 40 investments
- Maximum cash position of 20%
- $10,000 minimum investment amount.

Performance Chart growth of AUD $1,000*



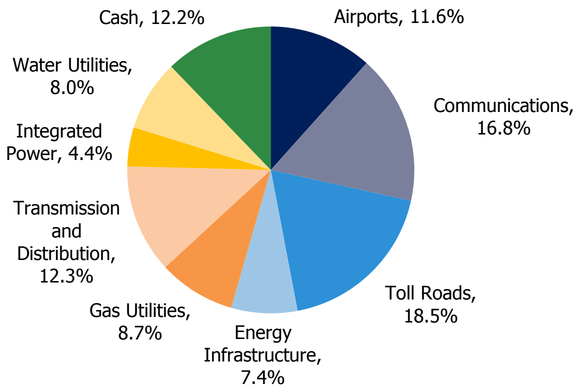
Fund Performance*

	Fund (%)	Index (%)**	Excess (%)
3 Months	4.0	8.1	-4.1
6 Months	7.4	10.9	-3.5
1 Year	17.3	6.1	11.2
3 Years (% p.a.)	19.8	14.8	5.0
Since Inception (% p.a.)	19.8	14.8	5.0

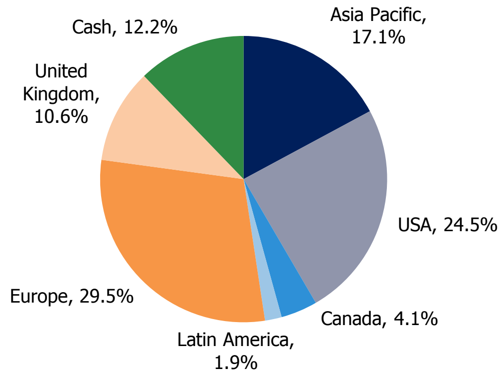
Top 10 Holdings

	Sector	%
Transurban Group	Toll Roads	8.3
Crown Castle International	Communications	6.7
National Grid PLC	Transmission and Distribution	5.7
Atlantia SpA	Toll Roads	5.1
Sempra Energy	Gas Utilities	4.5
Enbridge Inc	Energy Infrastructure	4.1
American Tower Corp	Communications	4.1
United Utilities Group Plc	Water Utilities	4.0
SES S.A.	Communications	3.9
Flughafen Zuerich AG REG	Airports	3.8
	TOTAL:	50.2

Industry Exposure#



Geographical Exposure#



* Calculations are based on exit price with distributions reinvested, after ongoing fees and expenses but excluding individual tax, member fees and entry fees (if applicable). Fund Inception 1 July 2013.
** S&P Global Infrastructure Index A$ Unhedged Net Total Return spliced with UBS Developed Infrastructure and Utilities Net Total Return Index (AUD). Note: as the UBS Developed Infrastructure and Utilities Net Total Return Index (AUD) ceased to be published from 31 March 2015, it was replaced by Magellan on 1 January 2015 with the S&P Global Infrastructure Index A$ Unhedged Net Total Return.
\# The exposures are by domicile of listing.

Performance

During the June 2016 quarter, in Australian dollar terms, the Fund returned +4.0% after fees. This was 4.1% below the benchmark return of +8.1%. The one-year return for the Fund was +17.3%. This was 11.2% better than the benchmark return of +6.1%. The Fund outperformed global equities by 16.9% over the year to 30 June 2016 with the MSCI World NTR Index returning +0.4%.The June quarter saw a rebound in stocks that had been heavily sold off in previous quarters. This particularly applied to competitive power companies, stocks in emerging markets and stocks whose earnings are sensitive to the oil price.

Pleasingly, given the Brexit turmoil, the Fund's UK holdings delivered the best regional performance with a weighted average return of +14.7% (in local currency terms). Clearly, the flight to high quality defensive stocks once again worked in our investors' favour. The Fund's US, Canadian and Australian exposures also generated strong positive returns that were offset by poor performance from the Fund's European holdings. Expressed in local currency terms, the Fund's investments in utilities delivered a weighted average return of 9.8% for the quarter, while the non-utility stocks returned 2.1%. The most significant contributors to Fund returns included US tower company, Crown Castle (total shareholder return of 18.4%), UK water utility, United Utilities (+15.2%) and UK electricity transmission company, National Grid (+14.3%).

Performance of the benchmark index (in local currency terms) was positively impacted by its pipelines exposures, which produced an average return of 16.4% for the quarter. Competitive Power companies were also strong with an average return of 8.5%. Examples of companies recovering some of their lost ground over the past year include North American pipeline companies, Targa Resources (up 44.3% in the June quarter but still down 48.4% for the year), The Williams Companies (up 38.5% for the quarter but still down 58.2% for the year) and Veresen (up 28.0% for the quarter but still down 28.2% for the year). Elsewhere, the MLP Index was up 19.7% for the quarter (down 13.1% for the year) while Japanese electricity utilities were down 11.6% for the quarter and 25.0% for the year.

The Fund's returns for the quarter by sector and region are shown in the following graphs:

Outlook & Strategy

The Fund's investment strategy remains consistent with previous periods and is not expected to change over the long term.

The Fund seeks to provide investors with attractive risk-adjusted returns from the infrastructure asset class. It does this by investing in a portfolio of listed infrastructure companies that meet our strict definition of infrastructure at discounts to their assessed intrinsic value. We expect the Fund to provide investors with real returns of approximately 5% to 6% over the longer term.

We believe that infrastructure assets, with requisite earnings reliability and a linkage of earnings to inflation, offer attractive, long-term investment propositions. Furthermore, given the predictable nature of earnings and the structural linkage of those earnings to inflation, investment returns generated by infrastructure assets are different from traditional asset classes and offer investors valuable diversification when included in an investment portfolio. In the current uncertain economic and investment climate, the reliable financial performance of infrastructure investments makes them particularly attractive and an investment in listed infrastructure can be expected to reward patient investors with a three to five-year timeframe.

Topic in Focus – Self Driving Cars & Implications on Toll Roads

Since 2007, our infrastructure portfolios have held material positions in toll road companies. These companies have had exposure to toll roads in Europe, the US, Canada, Latin America and Australia. When valuing these roads, we distinguish between the four different types of roads because of their inherently different traffic growth dynamics, including their sensitivity to economic conditions:

- Urban radial roads;
- Urban orbital roads;
- Urban High Occupancy Toll (HOT) lanes; and
- Inter-urban toll roads.

When valuing these roads, we build financial models that forecast traffic usage through to the end of the contracted concession period. In some cases, this can be more than 50 years. The advent of driverless cars therefore raises questions as to the impact of this rapidly developing technology on toll road traffic volumes.

Rapid advances in technology are set to deliver a transformation from driver-controlled to automated and semi-automated forms of vehicle operation. While the basic technology for driverless cars already exists, the shift to driverless cars will clearly take some time to occur and there are a myriad of social, regulatory and legal issues that need to be addressed before they become ubiquitous. But in the meantime, the technology will develop and will inevitably impact toll road usage.

Based on our analysis, we expect the development of driverless cars to provide a boost to toll road traffic and earnings over the next 10-20 years. However, beyond that period the impact on usage of toll roads is difficult to predict and may even be negative. We explain our thinking in the following discussion.

Autonomous Vehicles

Cars are currently being produced that have Autonomous Vehicle (AV) capability. This means they have the capability to allow the driver to relinquish complete control over the vehicle in certain circumstances and are smart enough to know when conditions do not allow that to occur, e.g. when lane markings are confusing or non-existent.

AVs are not driverless cars. Driving an AV allows the driver to hand over control of the vehicle but requires the driver to be ready to take back control of the car when needed. The vehicle will automatically keep a safe distance between itself and surrounding vehicles and, if needed, can change lanes. It will do all those functions more safely than a human – indeed road safety authorities are supportive of the adoption of AV technology because of the expected safety benefits.

So while the driver will still need to be behind the wheel and attentive to what is happening, the driving experience will generally be more relaxed, less stressful and safer than in non-AV vehicles.

While there are a raft of legal and regulatory issues that need to be solved before driverless cars become a reality, there are complex social/ethical issues that are even more important in the use of this technology. This is perhaps best illustrated when an AV is being used in a suburban street environment. In that situation, it is entirely possible that the vehicle would have to make a decision between running over a person that has moved into the path of the car or swerving into the path of a vehicle coming in the opposite direction, potentially putting the lives of the occupants of the AV at risk. Such "life and death" questions will take some sorting out!

In the context of such difficult issues, it is not surprising that the current thinking among road safety authorities is that AV usage is likely to be restricted only to motorways for some years to come. This is because:

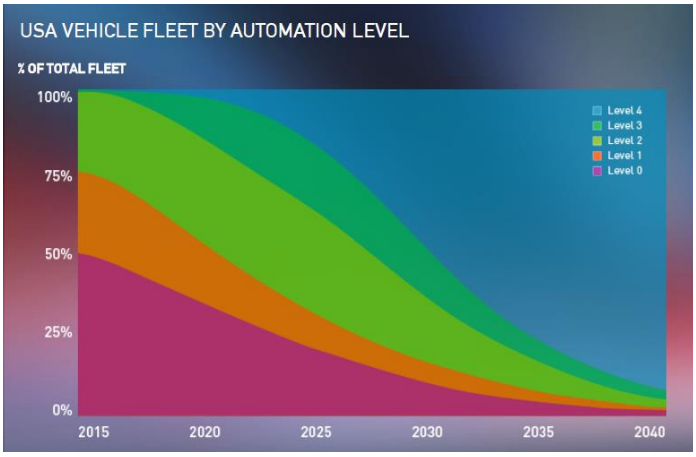
- Generally motorways have better and more consistent road markings and signage; and very importantly
- There is only very limited scope for an AV to be faced with situations that are difficult to predict in advance, e.g. a person running in front of the vehicle.

The Future

So in the shorter term, we believe that the tolled motorways are likely to benefit from AV technology because it will enhance the attractiveness to using the toll road over the free, non-motorway alternatives. Initially, that benefit will be marginal because relatively few cars will have AV capability. But over the next decade and beyond as AV technology is rolled out in more and more cars, it is likely to be material. As the following diagram illustrates, a recent University of Minnesota study forecast that within 15 years almost 60% of the USA vehicle fleet would have either complete or limited self-driving capability, rising to 90% by 2040[1].

Their forecasts are shown in the following graph which uses vehicle automation levels as defined by the National Highway Traffic Safety Administration of the USA being:

- Level 4 – Complete self-driving automation
- Level 3 – Limited self-driving automation (an AV)
- Level 2 – Combined function automation
- Level 1 – Function specific automation
- Level 0 – no automation



Source: University of Minnesota, Levinson, The End of Traffic and the Future of Transport Funding (Aug 2015).

So, we do not see AV technology as being a disruptive technology that could have a negative impact on traffic growth on the toll roads in the next decade. Quite the opposite – while ever its use is limited to motorway conditions, the toll roads are expected to be net beneficiaries.

The increasing usage of AV technology on motorways will also benefit toll roads in two other important ways:

- It will reduce traffic congestion on the toll roads because some congestion is caused by the poor behaviour of human drivers when changing lanes, breaking or accelerating. It will also reduce the number and severity of accidents – frequently a cause of severe congestion on the toll roads; and
- It will increase the capacity of the toll road, particularly in peak periods. Toll roads currently can handle around 2,200 vehicles per lane per hour. A recent study by the University of California[2] concluded that full penetration of AV could see this capacity double. This is because vehicles will be able to travel much closer together at much higher speeds in much thinner lanes than is currently the case. A different study by Tientrakool et al[2] found that a 50% presence of AVs in the traffic mix can increase highway capacity by 80%. While these studies may prove to be optimistic, there is no doubt that the increase in capacity will be meaningful particularly for urban toll roads which are already capacity constrained during peak periods. This capacity benefit can be phased in over time by the creation of AV only lanes on the toll roads

Longer term, we expect that this improvement in capacity will also be experienced by the free roads running parallel to the toll road thereby reducing congestion on the free alternative and removing the incentive for drivers to use the toll road. So when AV technology is allowed to be used on non-motorways, there is likely to be a negative impact on toll road usage, at least until the free alternative roads become congested again.

Driverless Cars

The ultimate form of AV is a driverless car. Such a vehicle would be configured completely differently from today's vehicles. It would have no steering wheel or other controls and seats would be configured to best suit the needs of the occupants at the time. Driverless cars:

- Would allow the occupant to use the travel time productively or enjoy a greater range of entertainment experiences including video/TV/computers;
- Would allow greater interaction between occupants;
- Would provide enhanced mobility to those in our society currently incapable of driving a car, e.g. the old, infirm and young would be able to use the car without assistance.

Driverless cars will increase the capacity of both toll roads and their free alternatives as automotive networked intelligence results in optimising traffic flow, less accidents, and automatic rerouting. Ultimately roads may not even need traffic signals, lane markings or speed limits. The fact that a driverless car trip will be an opportunity to be entertained will also reduce the utility of the time saved by using a toll road, i.e. drivers will be less inclined to spend $5 or $10 on the toll road to save say 15 minutes. Alone these developments are negative for toll roads given that usage of a toll road is almost entirely dependent on the actual or perceived time and reliability benefits of using the toll road.

However, driverless cars will also increase the demand for trips by reducing frictions to taking trips, introducing empty trips, and taking share from other modes.

A study by Princeton University[4] forecasts that vehicle miles driven is likely to increase by between 5% and 20% when AVs reach 50% market penetration and when fleet penetration of driverless and AV cars reaches 95%, vehicle miles driven is expected to increase by 35%. The same study forecasts that this will be around 2040, well within the forecast period of toll roads in our investment universe.

The era of driverless cars is also likely to be associated with much lower levels of car ownership. It will simply be more economic to participate in some form of sharing arrangement that allows much greater utilisation of vehicles than to have a privately owned vehicle remaining idle. Again this is likely to lead to an increase in vehicle miles driven as it will decrease average trip costs.

Another study by academics at the University of Southern Florida showed that empty trips alone would increase total miles driven by at least 10%. These trips would arise because shared cars would drop off a passenger and drive empty to pick up the next occupant.

As an aside, it would appear that the clear losers of driverless cars would be the owners of parking stations and those making a living driving vehicles (at present, there are about 3.5m truck drivers in the US, forming the largest job category in 29 states.

We believe there is significant potential for disruptive technologies to materially impact a range of industries. We know with certainty that none of the above quoted studies will be absolutely correct. We expect AV and driverless cars will generally be positive for the earnings of toll roads, and particularly urban toll roads, over the next 10 to 20 years but we have not changed any of our traffic forecasts to reflect this until we have greater certainty about how, and more importantly, when these developments will take place.

The long-term impact on toll roads will depend on the balance of the positive impact of the additional trips created by driverless cars and the negative impact of the additional capacity that is created on the free roads by the growth of driverless cars.

[1] University of Minnesota, "The End of Traffic and the Future of Transport Funding", Aug 2015

[2] Shaldover et al, "Impacts of Co-operative Adaptive Cruise Control on Freeway Traffic Flow", University of California, 2012.

[3] Tientrakool, Patcharinee, Ho, Ya-Chi, and Maxemchuk, Nicolas M., 2011, "Highway Capacity Benefits from Using Vehicle-to-Vehicle Communication and Sensors for Collision Avoidance," Vehicular Technology Conference (VTC Fall) 2011 IEEE.

[4] Bierstedt et. Al., "Effects of Next-Generation Vehicles on Travel Demand and Highway Capacity", Princeton University, 2014