Back to the future

The superior risk-return characteristics of the Ausbil essential infrastructure universe

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Key points

- The Ausbil essential infrastructure universe¹ captures the 'essence' of what we know as infrastructure, but in listed form: the essential assets for the basic functioning of a society, such as regulated utilities (electricity, gas and water), regulated or contracted pipelines, toll roads, airports and mobile phone towers.
- Investors seeking to access the true investment characteristics of infrastructure are finding it harder to achieve as unlisted funds and private equity managers increasingly widen the definition of infrastructure for deal flow.
- Conversely, listed infrastructure that once was too loose in its definition of infrastructure has evolved towards stricter definitions based on the essential investment characteristics infrastructure brings to a portfolio.
- Screening down the infrastructure asset class on strict essential infrastructure criteria offers unique risk/return characteristics and diversification benefits.
- Ausbil's essential infrastructure universe offers genuine infrastructure exposure for investors, with the added benefits of liquidity, downside protection, diversification, scaling, and global and sector reach.

Introduction

So what is Ausbil essential infrastructure, and how does it provide such a favourable risk-adjusted return for investors over time? The renowned investor, Howard Marks, is famous for a long series of investment memos penned over decades, each imbued with some wisdom on investing, and a favourite read of many including Warren Buffett. Why is this relevant to infrastructure? Because the first memo Marks ever wrote was titled, The Route to Performance (1990). In it, he elegantly describes the approach of a mid-West pension fund manager, who in contrast to Wall Street investors chasing top decile returns, at the expense of finding themselves too often in the bottom decile of performance, had this to say about his steady approach to performance over time: "We have never had a year below the 47th percentile... or, until 1990, above the 27th percentile. As a result, we are in the fourth percentile for the fourteen year period as a whole."²

This is analogous to true infrastructure investing, where, as we will see, the nature of essential infrastructure assets, strictly defined, captures less of the downside movements in markets, while still capturing most of the upside movements in markets. This effectively delivers what Marks suggested, capturing a compelling long-term compound outperformance by focusing on downside risk and capital protection.

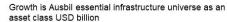
Infrastructure has grown rapidly on a global gap in investment

According to McKinsey Global Institute research³, the world invests some USD 2.5 trillion in infrastructure a year, in sectors such as transportation, power, water and telecommunications. The problem, according to McKinsey, is that the world needs annual investment of around USD 3.3 trillion through to 2030 just to support current projected global economic growth. This represents a total investment requirement of USD 49.1 trillion by 2030, effectively resulting in a cumulative investment gap of USD 12 trillion that needs to be funded just to maintain existing infrastructure, let alone developing new infrastructure.

This underinvestment against a burgeoning and somewhat unstoppable demand for infrastructure, driven by economic growth and pure population growth, has become a significant opportunity in an asset class that is relatively young, and increasingly in focus for institutional and retail investors.

Today, global essential infrastructure assets total some USD 1.4 trillion, to which institutions have allocated around USD 86 billion, and is one of the fastest growing asset classes with a compound annual growth rate of 22%, as illustrated in Figures 1 and 2 respectively.

Figure 1: Growth in the Ausbil essential infrastructure universe as an asset class by market cap and number of companies





Source: Ausbil, Bloomberg. Essential Infrastructure is represented by Ausbil Essential Infrastructure Universe, as of 31 Dec 2018.

 References in this paper to the Ausbil essential infrastructure universe, essential infrastructure, and Ausbil essential infrastructure all refer to the universe of infrastructure stocks defined in Figure 3, not the performance of the Ausbil Global Essential Infrastructure Fund which actively selects stocks from the Ausbil essential infrastructure universe.

- 2. Marks, H. (1990). The Route to Performance. Los Angeles: Oaktree Capital. Retrieved from https://www.oaktreecapital.com/insights/howard-marks-memos.
- 3. McKinsey Global Institute. (2016). Bridging Global Infrastructure Gaps. New York: McKinsey & Company.

Figure 2: Global listed infrastructure assets under management (AUM)





Source: Global Listed Infrastructure Organisation (GLIO), as at 31 Dec 2018, and BofAML estimates for 2018 and 2019.

What is the Ausbil essential infrastructure universe?

Whilst infrastructure assets have existed for thousands of years (such as Ancient Greek ports, Roman aqueducts and roads like the Appian Way, bridges, tollways, Chinese defensive walls, and so on), as a modern investment-grade asset class, infrastructure is relatively young. Australia is credited as developing the modern investmentgrade infrastructure asset class that we know today, in the 1990s, in the form of both unlisted funds and listed infrastructure assets, as well as listed infrastructure companies.⁴

Listed infrastructure assets have been around for a number of decades, but the first current dedicated global infrastructure index, the S&P Global Infrastructure Index, was only launched in 2007. Together with modern infrastructure's relative 'youth', its rapid expansion, as governments worldwide seek to shift the cost and risk-bearing of infrastructure to private investors, means that how we define infrastructure has also been evolving.

As an asset class, infrastructure has grown rapidly (as illustrated in Figure 2), particularly as a function of the huge asset growth in global pension funds, superannuation funds, sovereign wealth funds and institutions seeking investments with the characteristics offered by infrastructure.

Recently, infrastructure has adopted terms typically associated with private equity (core, core+, core++, value add and opportunistic) to describe different assets on their basic risk and return characteristics. These categories have stuck, regardless of their suitability, and are illustrated in Figure 3.

The lack of widely accepted definitions has been a perennial issue in infrastructure, further compounded by the problem of indices adopting different definition systems for sectors and assets, with some using GICS (MSCI ACWI Infrastructure Index, S&P Global Infrastructure Index and the Dow Jones Brookfield Global Infrastructure Index), and the FTSE using ICB classifications (FTSE Global Core Infrastructure 50/50). This has made it more complicated for investors to source true infrastructure assets for their portfolios.

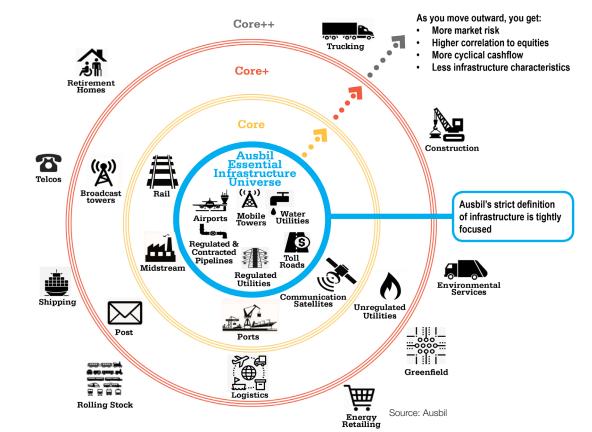


Figure 3: Defining infrastructure: Caveat emptor, buyer beware

4. Inderst, G. (2014). Pension fund investment in infrastructure: Lessons from Australia and Canada. Rotman International Journal of Pension Management, Vol. 7(1) Spring.

Fundamental to defining infrastructure, like most assets, is to understand exactly what investment characteristics you are getting as an investor with a given asset. In other words, are you taking the risk you think you are taking for the type of return you are seeking? In terms of the essential infrastructure universe as defined by Ausbil, what makes it essential, and how does it reward investors? First of all, it starts with how you define essential infrastructure.

As illustrated in Figure 3, the Ausbil essential infrastructure universe is defined by assets within the inner circle of the diagram. Ausbil tightly defines essential infrastructure as a subset of core infrastructure, focusing on infrastructure assets that are strictly long-term contracted / regulated.

The Essential infrastructure universe, under Ausbil's approach, is defined as the assets that are essential for the basic functioning of a society. They are typically regulated or have a track record of very stable cash flows through the economic cycle. In our definition, essential infrastructure typically comprises monopolistic, regulated or long-term contracted assets, predominantly found in regulated utilities (electricity, gas and water), regulated or contracted pipelines, toll roads, airports and mobile phone towers.

Under Ausbil's definition of essential infrastructure, the vast majority of an investment's cash flow must come from infrastructure activity. Essential infrastructure carries minimal greenfield risk, ideally has no immediate competitors (and low bypass risk), has non-cyclical cash flows, and assets typically have negligible or appropriately low demand risk

Moreover, essential infrastructure in the context of this paper is limited to defining assets in developed markets. Assets with essential infrastructure characteristics in emerging markets are considered to carry political and regulatory risk that adds extra uncertainty and other layers of risk that are not deemed appropriate for the definition of essential infrastructure, especially in regard to its defensive characteristics.

Core infrastructure includes the assets Ausbil defines as essential infrastructure, plus the additional assets illustrated in Figure 3, including communications satellites, midstream, ports and rail, because of the shorter contractual structures in some cases, and exposure to market or commodity risk in other cases. There may be some exceptions where such assets might meet the definition of essential infrastructure, but that would require they meet Ausbil's strict regulated / contracted definitions for essential infrastructure.

Moving out along the risk curve, **Core+** infrastructure is defined as

assets that bear some element of market risk and volatility. For instance, infrastructure companies that have more cyclical business models with contract structures that are shorter in duration, and have barriers to entry for competitors, though market competition still exists in a limited fashion. Core+ infrastructure assets typically include sectors such as broadcast towers, logistics, post and unregulated utilities. Core+ infrastructure assets are likely to include material market and demand risk.

Even further out along the risk curve is **Core++** infrastructure. defined as assets with a higher associated degree of market risk and volatility in earnings. Core++ includes assets that are fully-marketed and competitive with higher margin volatility. These assets have higher levels of demand risk, and significant user-driven economics, often without holding a monopoly. Core++ infrastructure can include construction, environmental services, greenfield, energy retailing, retirement homes, rolling stock, shipping, telecommunications and trucking sectors. Revenues can contain significant portions of noninfrastructure generated cashflow. Any opportunistic or value add assets in the infrastructure space are generally considered to have a core++ risk profile, at a minimum.

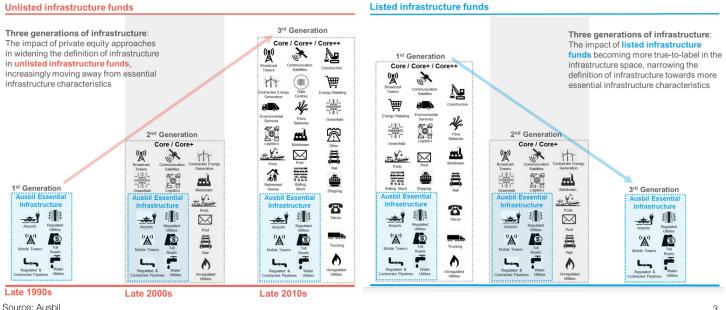
These are the broadly accepted categories of infrastructure, with the inner-most category, the Ausbil essential infrastructure universe (Figure 3) being an Ausbil house definition for infrastructure. However, it must be noted that infrastructure is a non-homogeneous asset class, and there are often regular and large exceptions to the accepted definitions, and some asset types or specific companies within an asset type may traverse the defined boundaries.

Generations of infrastructure

With the expansion and popularity in infrastructure as an institutional investment-grade asset class, along with secularly low interest rates that have supported strong value growth, it helps to understand the different generations of infrastructure definitions to date, both listed and unlisted.

For context, in 2019, there are approximately 600 globally listed companies in the essential, core, core+ and core++ universe as defined in Figure 3. When these companies are screened along different criteria for infrastructure, the result is differing exposures to the asset class represented by different baskets of companies. There are three broad generations in the definition of the infrastructure asset class, as illustrated in Figure 4.

Figure 4: The opposite development paths for infrastructure: Unlisted and listed approaches



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The early first generation **unlisted infrastructure** funds were tightly focused on essential infrastructure assets and core infrastructure. These were often single asset funds and tracked the performance of those infrastructure assets closely.

As allocations to unlisted infrastructure grew through the second generation, new sectors were added, and unlisted funds started to expand to include infrastructure related companies and assets with significant market risk and exposure to levels of competition that are not expected from infrastructure as an asset class.

In the third generation, with secularly low interest rates and business models that can be highly leveraged, private equity has been stretching definitions to build assets under management and drive fee generating deal flow, effectively widening the asset class well beyond essential and core infrastructure. This has significantly increased the risk of the assets well beyond what we define as infrastructure, potentially affecting the overall risk / return characteristics an investor will ultimately get.

In contrast, first generation **listed infrastructure** began with a wide definition of infrastructure, comparable to where private equity is today. Funds were exposed to market and competitor risk, assets were often not unique or monopolistic, and they were correlated significantly with general equities. As infrastructure indices were created in the second generation, definitions for infrastructure were tightened.

In the third generation, to develop exposures that have low correlation to general equities and emulate the true characteristics of infrastructure, Ausbil has become significantly more discriminating in the selection of assets. This has been enabled by the vastly increased size of listed infrastructure as an asset class and the number of global listed infrastructure stocks that are available for investment.

So how does Ausbil's focus on essential infrastructure play out for investors on risk and return against global equities, bonds, and listed infrastructure indices?

The risk-adjusted performance of the Ausbil essential infrastructure universe

The key investment characteristics of classic infrastructure are typically described as being:

- high barriers to entry with monopolistic characteristics,
- earnings growth and stability through the economic cycle, with less volatile cashflows,
- more stable long-term returns,
- naturally hedged for inflation, and
- less correlated to equity markets.

The main investment characteristics essential infrastructure is seen as providing are earnings stability through the cycle (Figure 5), stability in returns compared to that of global equities and bonds (Figure 6), and lower correlation to other asset classes (Figure 7).

The Ausbil essential infrastructure universe has demonstrated much more stable earnings across the cycle than global equities largely because of the contracted, regulated and long-term nature of the assets and companies that meet Ausbil's strict criteria. By definition, essential infrastructure should be less exposed to cyclical returns and demand risk than global equities, and so its earnings (EBITDA) and earnings growth profile should be more stable and predictable, as illustrated in Figure 5.

Moreover, the Ausbil essential infrastructure universe has not had a year where earnings have declined, thus highlighting the defensive characteristics of this definition.

The Ausbil essential infrastructure universe has also demonstrated a more stable long-term yield premium compared to global equities despite less cyclicality in the asset class, as illustrated in Figure 6 (LHS).

The Ausbil essential infrastructure universe has also maintained a spread over the US 10-year bond yield for more than a decade as the income from infrastructure has remained relatively more stable as shown in Figure 6 (RHS), despite the impressive rise in infrastructure share prices.

Stable dividend income is a core part of infrastructure investing. Ausbil's approach in defining the essential infrastructure universe includes identifying those companies that can provide stable dividend income over the long term.

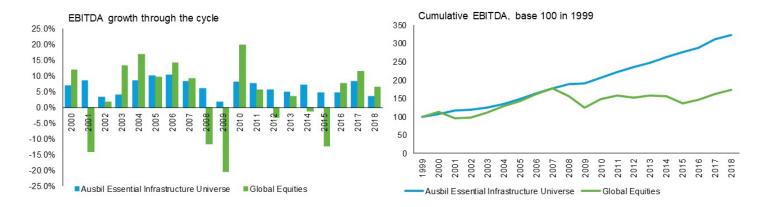


Figure 5: Ausbil essential infrastructure universe: Earnings stability and growth across the cycle

Source: Ausbil, Bloomberg, Citi Global. Essential Infrastructure is represented by Ausbil Essential Infrastructure Universe, as of 31 Dec 2018, Global Equities represented by MSCI World Index.

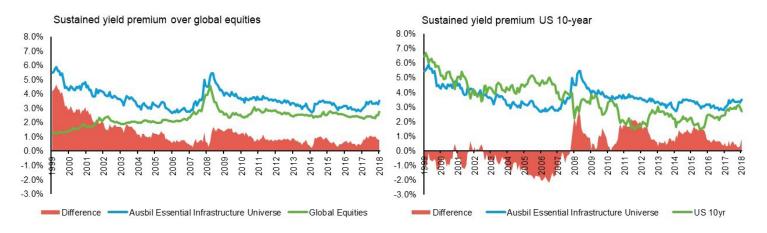


Figure 6: Ausbil essential infrastructure universe: Sustained yield premium relative to global equities and bonds

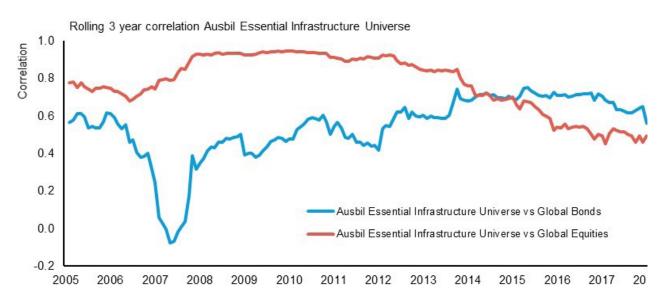
Source: Ausbil, Bloomberg, Citi Global. Essential Infrastructure is represented by Ausbil Essential Infrastructure Universe, as at 31 Dec 2018, and Global Equities represented by MSCI World Index.

Finally, essential infrastructure demonstrates a key attribute critical for effective diversification and asset allocation, by having a lower correlation to other asset classes such as equities and bonds. Figure 7 illustrates the rolling 3-year correlation⁵ of the Ausbil essential infrastructure universe total returns to the total returns of global bonds and equities, as experienced over more than 20 years. From the chart, which includes the massive 'black-swan' spike in bond yields experienced during the Financial Crisis⁶, global bonds have shown a consistently lower correlation to essential infrastructure, ranging

between 0.4 and 0.8 (outside of the Financial Crisis and its impact on the rolling 3-year correlations). The same applies for global equities, with correlation to essential infrastructure falling to around 0.5 from atypical Financial Crisis highs of around 0.9.

Critical to an understanding of the performance of the Ausbil essential infrastructure universe is a simple understanding of how it performs in up and down markets. Figure 8 illustrates how the Ausbil essential infrastructure universe performs in up and down markets compared to global equities.

Figure 7: Essential infrastructure: Exhibits lower correlation to bonds and equities



Source: Ausbil, Bloomberg from 31 December 2002 to 31 December 2018. Global Equities represented by MSCI World Index. Global Bonds represented by Bloomberg Barclays Global Aggregate Bond Index. All data is Total Return, USD.

- 5. Correlation ranges from between -1 (meaning each move in opposite directions together by exactly the same amount in negative correlation), and 1 (meaning each move perfectly in synchronisation by the same amounts in the same direction), and where zero indicates no correlation at all, negative or positive. Correlation only shows sensitivity of one to the other, but does not show causality.
- 6. National Bureau of Economic Research. (n/d). US Business Cycle Expansions and Contractions. Retrieved from https://www.nber.org/cycles.html

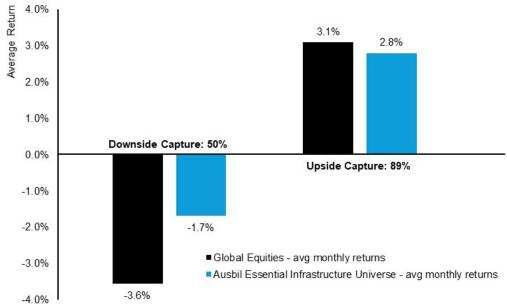


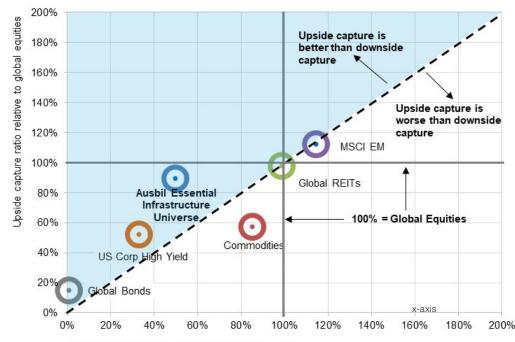
Figure 8: Ausbil essential infrastructure universe: Capture of up and down market movements

Ausbil Essential Infrastructure Universe Market Capture

Source: Ausbil, Bloomberg from 31 December 2005 to 31 December 2018. Capture ratios vs MSCI World Index. Total Return, USD.

We can see from Figure 8, that in the period since 2005, the listed Ausbil essential infrastructure universe (based on Ausbil's tight definition of essential infrastructure) has captured just 50% of the full average monthly falls experienced by global equities in down months: otherwise known as downside capture. By contrast, the Ausbil essential infrastructure universe has captured around 89% of the rises experienced by global equities in up months: in short, upside capture. Effectively, essential infrastructure demonstrates asymmetric returns skewed to the upside, meaning that it loses far less in falling markets than it is able to capture in rising markets. In other words, its return distribution is skewed to the upside.

Figure 9: Ausbil essential infrastructure universe compared to other asset classes: Capture of up and down movements in global equities (MSCI World Index)



Downside capture ratio relative to global equities

Source: Ausbil, Bloomberg from 31 December 2005 to 31 December 2018. Capture ratios vs MSCI World Index, Commodities represented by SPGSCI Index, Global REITs represented by RUGL Index, MSCI EM represented by MSCI EM, US Corp High Yield represented by Bloomberg Barclays US Corporate High Yield. Global Bonds represented by Bloomberg Barclays Global Aggregate Bond Index. All data is Total Return, USD.

v-axis

Figure 9 plots the Ausbil essential infrastructure universe against other asset classes for the upside capture of returns when the market is in positive returns, and the downside capture when the market is in negative returns. Listed essential infrastructure captures most of the returns when the market is up (y-axis). Only global REITs, MSCI global equities (representing the market at the intersection of the x and y axes in Figure 9) and MSCI emerging markets equities capture more of the upside.

However, when the market is down (x-axis), essential infrastructure captures only around 50% of the downside movement of global markets, whereas commodities (over 80% of down movement), global REITs (almost 100% of down movement) and MSCI emerging market equities (around 115% of down movement) capture much more of the down movements in global equities.

Importantly, listed essential infrastructure's market capture dynamics are consistent over time. Figure 10 illustrates the persistence of both the upside and downside capture by essential infrastructure of global equity returns since 2009. It shows consistent capture of most of the market upside, together with a consistent capture of around only 50% of the market downside.

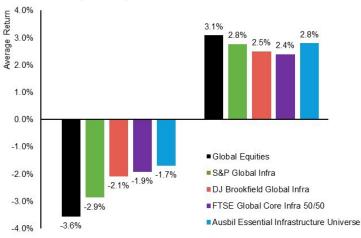
The performance of different types of listed infrastructure

In Figure 4, we illustrated the three generations of listed infrastructure. The infrastructure indices most followed today appeared in the second generation of listed infrastructure (the S&P Global Infrastructure, Dow Jones Brookfield and FTSE indices).

Ausbil's listed essential infrastructure universe is the first 'third generation' approach to listed infrastructure, and reflects the original first generation of unlisted infrastructure shown in Figure 4, in terms of fundamental investment characteristics. This approach recognises the deficiency of the indices in replicating the true investment characteristics of infrastructure, and adopts a benchmark unaware absolute return approach. The Ausbil essential infrastructure universe can be compared to the other indices on relative performance, on risk and return, and on the upside and downside capture of market returns, as illustrated in Figure 11.

Figure 11: Market capture: Performance against different infrastructure indices

Market capture compared across listed infrastructure

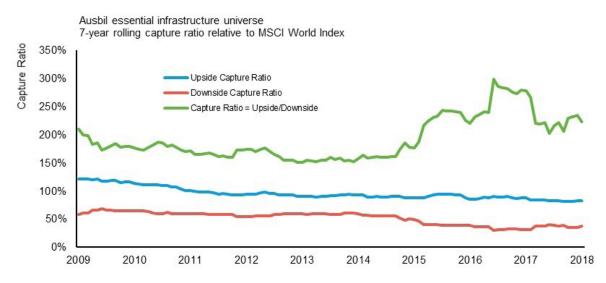


Source: Ausbil, Bloomberg from 31 December 2005 to 31 December 2018. Global Equities as MSCI World Index, DJ Brookfield represented by DJBGIT Index, S&P Global Infrastructure represented by SPGTIND Index, FTSE Global Core Infra 50/50 represented by FGCIICUT Index, Total Return, USD.

First, regarding market capture. Figure 11 illustrates absolute upside and downside movements, this time for global equities relative to the three main listed infrastructure indices and Ausbil's essential infrastructure universe, using monthly data for the period from December 2005 to December 2018.

On downside capture, the Ausbil essential infrastructure universe outperforms the listed infrastructure indices (which fall between 1.9% and 2.9% on average), falling only by an average of 1.7% in down months compared to an average fall in global equities of 3.6%.

Figure 10: Consistency: Essential infrastructure's capture of up and down markets over time



Source: Ausbil, Bloomberg from 31 December 2002 to 31 December 2018. Capture ratios vs MSCI World Index. Total Return, USD.

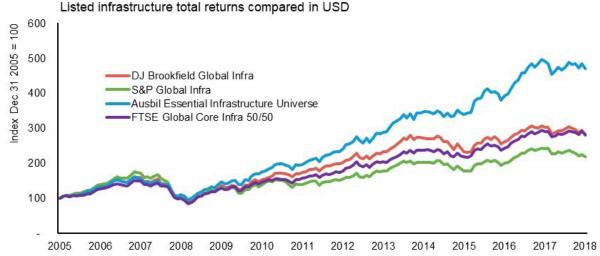


Figure 12: Performance: Essential infrastructure has outperformed all major infrastructure indices

Source: Ausbil, Bloomberg from 31 December 2005 to 31 December 2018. DJ Brookfield represented by DJBGIT Index, S&P Global Infra represented by SPGTIND Index, FTSE Global Core Infra 50/50 represented by FGCIICUT Index, Total Return, USD.

On upside capture, Ausbil's essential infrastructure universe outperforms as well, capturing an average of 2.8% in up months, compared to the global equities average up month of 3.1%, and more favourably than the listed infrastructure indices (which capture between 2.4% and 2.8% of market upside).

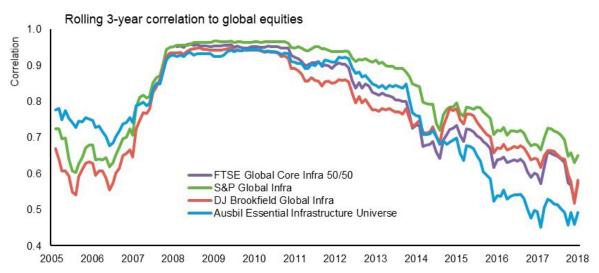
The compound effect over time of this market capture outperformance by Ausbil's essential infrastructure universe makes this clean, tight definition of infrastructure more compelling than more broadly defined index approaches, as illustrated in Figure 12. This is a strong endorsement of Ausbil's strict criteria for defining essential infrastructure, and Ausbil's benchmark unaware approach to infrastructure investing.

In Figure 12, it can be seen that the edge listed essential infrastructure has over the more broadly defined infrastructure indices through superior upside/downside capture, results in a boost to total returns over other approaches that translates into long-term compound outperformance. Basing the time period in December 2005, the Ausbil essential infrastructure universe has compounded to over 450% of the return achieved by the S&P index as at December 2018, and exceeded the DJ Brookfield Global Infrastructure and FTSE indices by around 65%.

The superior return performance of the Ausbil essential infrastructure universe against the more broadly defined infrastructure indices has also translated in its correlation to global equities, delivering a superior (lowest) correlation performance in the recent three years, as illustrated in Figure 13. This highlights that a tighter definition of essential infrastructure companies has brought the most diversification benefits to an overall portfolio.

Going back to Howard Marks and the mid-West pension fund manager we introduced at the start of this paper, the key to superior longterm performance is in consistently maintaining an edge, rather than trying to 'shoot the lights out', and in so doing, taking on too much risk. As Marks surmises about achieving long-term outperformance, "if you can avoid the losers (and losing years), the winners will take care of themselves."² The key to essential infrastructure's long-term outperformance against other infrastructure (Figure 12) and other asset classes (Figure 14) is just that, essential infrastructure's ability to limit downside losses in negative or 'loser' periods, yet achieve most of the positive return presented in up-market periods.

Figure 13: Correlation: Essential infrastructure compared to broader infrastructure indices



Source: Ausbil, Bloomberg from 31 December 2002 to 31 December 2018. Note: FTSE 50/50 from 31 Dec 2005. Correlation vs MSCI World Index, DJ Brookfield represented by DJBGIT Index, S&P Global Infra represented by SPGTIND Index, FTSE Global Core Infra 50/50 represented by FGCIICUT Index, Total Return, USD.

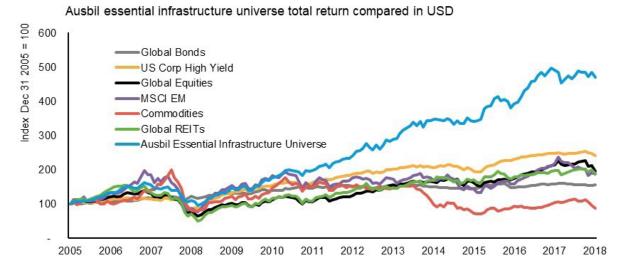


Figure 14: Essential infrastructure: Limiting downside the key to long-term outperformance

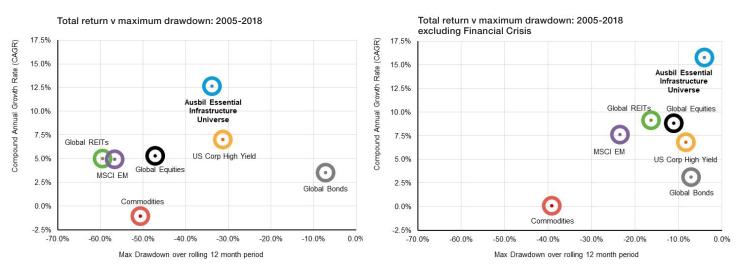
Source: Ausbil, Bloomberg from 31 December 2005 to 31 December 2018. Global Equities as MSCI World Index, Commodities represented by SPGSCI Index, Global REITs represented by RUGL Index, MSCI EM represented by MSCI EM, US Corp High Yield represented by Bloomberg Barclays US Corporate High Yield. Global Bonds represented by Bloomberg Barclays Global Aggregate Bond Index. All data is Total Return, USD.

Even when isolating the impact of extreme events, such as the Financial Crisis, to determine if the return and risk characteristics hold for essential infrastructure, Figure 15 illustrates that the Ausbil essential infrastructure universe retains its superior risk and return characteristic (with the exception of bonds on the risk side during the Financial Crisis), under relatively typical market conditions. The chart shows that Ausbil's essential infrastructure universe has exhibited the lowest maximum drawdown over rolling 12-month periods, but delivered the highest CAGR in total returns. This again demonstrates

the asymmetric upside an improved and tighter approach to defining essential infrastructure offers.

Finally, in taking a total risk-adjusted return approach to comparing the Ausbil essential infrastructure universe to global equities, bonds and more broadly defined listed infrastructure indices, Figure 16 compares the Sortino Ratio⁷ over 5 and 10-year periods, the higher, the better (meaning a better return for a given level of downside risk, or a superior downside risk performance in achieving the same return).

Figure 15: Essential infrastructure: Minimising downside with and excluding the Financial Crisis (total return against drawdown)



Source: Ausbil, Bloomberg from 31 December 2005 to 31 December 2018. Global Equities as MSCI World Index, Commodities represented by SPGSCI Index, Global REITs represented by RUGL Index, MSCI EM represented by MSCI EM, US Corp High Yield represented by Bloomberg Barclays US Corporate High Yield. Global Bonds represented by Bloomberg Barclays Global Aggregate Bond Index. All data is Total Return, USD.

7. The Sortino Ratio is simply an adaptation of the Sharpe Ratio, both designed to measure risk-adjusted return as the difference between an asset class return and the return available at the risk free rate, and dividing it by the variation (standard deviation) of these return differences. For the Sharpe Ratio, the standard deviation is taken for positive and negative deviations from the average. The Sortino Ratio simply looks at the variation in the negative deviations on the basis that large positive variations are not an issue, just negative returns.

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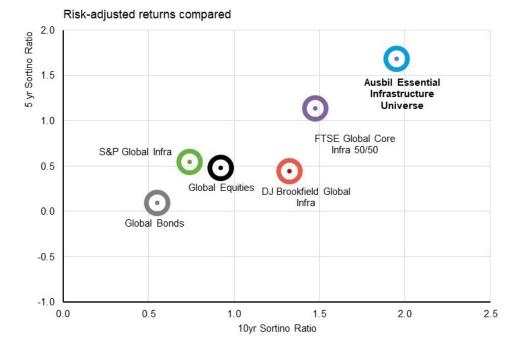


Figure 16: Essential infrastructure risk-adjusted returns compared based on downside risk

Source: Ausbil, Bloomberg from 31 December 2005 to 31 December 2018. Global Equities as MSCI World Index, Global Bonds as Bloomberg Barclays Global Aggregate Bond Index. DJ Brookfield represented by DJBGIT Index, S&P Global Infra represented by SPGTIND Index, FTSE Global Core Infra 50/50 represented by FGCIICUT Index, US risk free rates as 90 day Treasury Bills Total Return, USD.

As illustrated, the superior Sortino Ratio for the Ausbil essential infrastructure universe over other asset classes and broader definitions of infrastructure represented by the indices holds over the 5-year and 10-year periods in the sample. Over the long term, essential infrastructure has delivered the best risk-adjusted performance of the asset classes compared.

The Sortino Ratio is highest over both the shorter term (5-years) as well as the longer term (10-years) thereby demonstrating the persistence of the infrastructure characteristics that an essential infrastructure approach brings.

Conclusion

In conclusion, the main point to make on infrastructure investing is, caveat emptor, buyer beware. Not all infrastructure is the same. Definitions of unlisted infrastructure are being continuously stretched as the asset class grows and higher allocations are made. As a result, definitions crawl out along the risk curve and increasingly include assets that are not, by definition, essential or even core infrastructure. As we have seen, this has significant consequences on the risk and return characteristics of a portfolio.

It is crucial that investors seeking the true investment benefits of the

infrastructure asset class look to essential infrastructure to replicate these benefits. By having a very tight definition, only those companies and assets that are able to demonstrate true infrastructure investment characteristics are included.

From this foundation springs the overall characteristics of a basket of essential infrastructure stocks, such as lower downside capture, lower maximum drawdown, persistent high risk-adjusted returns and diversification benefits.

The Ausbil approach seeks to take infrastructure back to its origins with a philosophy focused on delivering the investment characteristics that attracted investors to the first unlisted infrastructure funds in the 1990s. In going 'back to the future', we believe that this combination of essential infrastructure characteristics and liquidity is what many investors are seeking from the asset class.

Investors seeking more risk and a greater diversity of exposure to market and demand risk, can move out the risk curve from essential and core infrastructure towards including core+, core++, and even value add and opportunistic assets. But this is only a benefit if this decision is intentional and the increased risk is understood. However, be warned: distortions in defining the asset class are unlikely to deliver the true infrastructure characteristics that Ausbil's essential infrastructure universe delivers.

About us



Tim Humphreys, Head of Global Listed Infrastructure. Tim has over 23 years of financial experience, 20 years covering infrastructure stocks, with 13 years focused on global listed infrastructure. Prior to Ausbil, Tim worked at Rothschild, Insight, RARE Infrastructure, AMP Brookfield and AMP Capital. Tim holds a Bachelor of Engineering (Civil and Structural Engineering).



Jonathan Reyes, Co-Head of Global Listed Infrastructure. Jonathan has over 18 years of financial experience, 12 years focused on global listed infrastructure. Jonathan has worked 6 years in New York and 12 years in Sydney. Prior to Ausbil, Jonathan worked at Bear Stearns, RARE Infrastructure, AMP Brookfield and AMP Capital. Jonathan holds a Bachelor of General Studies (Economics).



Natasha Thomas, Portfolio Manager - Energy and Communications. Natasha has over 18 years of financial experience, 12 years focused on global listed infrastructure. Natasha has worked 6 years in New York and 12 years in Sydney. Prior to Ausbil, Natasha held the position of Associate Director at Macquarie / Senior Analyst for the Macquarie Global Listed Infrastructure Team. Natasha holds a Bachelor of Commerce (Finance and Accounting), and is a CA.



Paul Johnston, Portfolio Manager - Utilities. Paul has over 21 years of financial experience, 13 years covering infrastructure stocks. Prior to Ausbil, Paul worked at Vodafone, Powercor, Victorian Government, Commonwealth Bank of Australia and RBC Capital Markets. Paul holds a Bachelor of Economics (Honours).

About Ausbil Investment Management

Ausbil Investment Management (Ausbil) is a leading Australian based investment manager. Established in April 1997, Ausbil's core business is the management of Australian and global equities for major superannuation funds, institutional investors, master trust and retail clients. Ausbil manage over \$11.8* billion (as at 31 May 2019). in active Australian and global equity investments. Ausbil is owned by its employees and New York Life Investments (NYLIM), a wholly-owned subsidiary of New York Life Insurance Company. NYLIM has more than US\$561* billion in assets under management. NYLIM has a number of boutique affiliates including MacKay Shields, Candriam Investors Group, Private Advisors and GoldPoint Partners.

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