

### CAN YOU IMAGINE LIVING WITHOUT RUNNING WATER OR ELECTRICITY?

For most people this thought is unimaginable! These services are the platform that modern day conveniences rely on. Attempting to do without them would have a massive impact on almost every aspect of daily life.

The difficulty in trying to reduce the consumption of electricity is illustrated every time New Zealand is faced with the prospect of blackouts. As the hydro lakes slowly empty, there are requests to cut demand and advice is given on electricity conservation measures. This is followed by warnings of dire consequences should these measures prove unsuccessful. The impact on demand, however, is minimal. During the worst crisis (in 1992), a combination of cold showers and cuts by major power users such as Comalco struggled to achieve savings, which peaked at a rather modest 15-20%.

Given the difficulty to reduce consumption, it almost goes without saying that tough economic times have a limited impact on the demand for electricity. A good illustration of this was the surge in demand for electricity by New Zealand households last year. It seems that in the midst of one of the most severe global economic crises in decades, New Zealand households did not hesitate to turn on their electric heaters. Power companies reported double-digit growth in the demand for power from residential consumers.

Conservative investors are not only attracted to utilities because of their relatively stable demand – utilities are also faced with limited competition. Most utilities only compete with a handful of other companies providing the same service. This limited competition further reduces the risk of utilities as an investment. One explanation for the limited competition that utilities face is the unique infrastructure they use to deliver water, gas and electricity. These networks are very expensive to build and maintain, making duplication extremely inefficient.

You do not need to be a member of Mensa<sup>1</sup> to see the opportunity for these companies to jack up and exploit

their customers. Normally, customers can simply switch suppliers, use an alternative product or avoid consuming the product. But in this case that is almost impossible and as a result utilities could raise prices with limited impact on demand. This monopoly (or predatory) pricing benefits the company at the cost of its customers. As a result, governments use pricing regulation (or at least the threat of this regulation) to remove the opportunity to exploit customers.

### REGULATION, A GOOD THING?

The thought of regulation brings on a cold sweat to many share market investors. They shudder when they recall the wealth destroyed by New Zealand's biggest company, Telecom, over the past 10 years. Telecom's share price dropped almost \$10 per share to a low of just over \$2.

Perhaps the best summary of the difficulty Telecom found itself in was Teresa Gattung's proclamation at an investor briefing in Sydney:

**“Think about pricing. What has every telco in the world done in the past? It's used confusion as its chief marketing tool. And that's fine.”**

-Teresa Gattung (Telecom CEO - 1999-2007)

Well, maybe not. What a customer relations nightmare! This extraordinary statement summed up the pickle that Telecom found itself in – a growing realisation that it needed to change its approach, combined with a sense of the difficulty it had in achieving a smooth transition. It is relatively safe to argue that public statements like the one above are probably not helpful for a company attempting to placate a frustrated and increasingly angry consumer watchdog. Arguably, Telecom's approach brought about an aggressive response, ie operational separation.

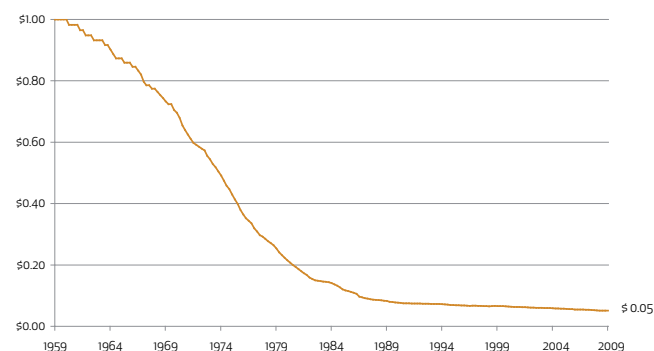
The implications of existing regulation for utilities are very different. Pricing regulation places maximum caps on the price a utility company can charge. Arguably, this removes upside – companies no longer have the opportunity to

(1) Mensa only accepts members that have an IQ score within the top 2% of the population.

exploit consumers. In its place, however, companies have certainty. Once the regulatory framework is set up, the future pricing is relatively easy to predict, especially when compared with an average company.

The benefits of regulation do not end at earnings predictability. To ensure adequate network investment so that new customers are connected and the existing network is properly maintained, pricing regulation has to be reasonable. An example of this is allowing utilities to raise prices at more or less the same rate as inflation. In periods of high inflation, this allows utilities to raise their prices rapidly, which feeds through to robust growth in revenue, earnings and dividends. The importance of this feature is difficult to overstate.

## DECLINING PURCHASING POWER OF \$1 IN NEW ZEALAND



Source: Bloomberg.

The chart above shows the damage done by inflation over time. For example, if you retired at age 60 in 1959, by the time you were 80 years old in 1979, the purchasing power of \$1.00 would have diminished to only \$0.25. The destructive power of inflation has parallels with rust, the silent assassin. Like rust, inflation typically takes time to do damage and, at least initially, this damage can be easily overlooked. In time, however, the consequences can be brutal. In fact, the slow steady erosion that typically occurs is in some ways more dangerous than the rapid erosion during inflationary outbreaks, as the consequences can take time to become obvious.

Consequently, a strong argument can be made that utilities are extremely attractive investments for sensible, conservative savers. Predictable pricing and stable demand should translate into relatively stable profits,

thereby reducing return variability. The addition of built-in inflation protection further strengthens the case for these special companies.

## THAT'S NICE IN THEORY, BUT HOW HAVE THESE COMPANIES PERFORMED?

While it is great to have a strong theoretical argument, empirical evidence backing up the argument is necessary before an investment is made. In this case, the best way to empirically test the theory is to see how these companies have performed in the past. The focus of this testing is to check how utilities have performed in periods of high inflation. If they consistently produced attractive returns in these difficult periods, practice should match theory and a truly compelling argument for investing in these companies can be made.

In the past century, periods of high inflation occurred every decade or two and thus a relatively long sample period is required. The good news is that Dow Jones has calculated a utilities index that starts in 1929. The bad news is that the Dow Jones Utility Average (DJUA) is a capital index, which means that it ignores dividend payments and only measures the capital returns generated by its members. In order to use this index to test the performance of utilities, the dividend yield of the DJUA was estimated and added to its capital returns.

The dividend yield was estimated in a two-step process. First the dividend yield of the Standard & Poor's 500 Index (S&P500) was calculated using Shiller's long-term data series. This dividend yield was then adjusted to estimate the dividend yield of utility companies and not the broader market. When the accuracy of this approach was tested using gross returns calculated by Bloomberg for the period since 1992, the difference was negligible (0.12% pa). This provides comfort that the approach used has an acceptable level of accuracy.

The table that follows shows the performance of utilities in periods of high inflation. In simple terms, this is when inflation or Consumers Price Index growth exceeds 6% over a 12-month period. The performance measurement period commenced at the start of the 12-month period in which inflation reached 6%. It is important to start the

period before inflation has increased to 6% because share markets do not wait for inflation to rise before they start incorporating this news into prices.

Period	Inflation	Utilities
Aug 1940 - Jul 1943	7.8%	14.8% (above inflation)
Jul 1945 - Oct 1948	9.6%	14.5% (above inflation)
Jan 1950 - Nov 1951	6.6%	22.9% (above inflation)
Dec 1968 - Jun 1970	6.1%	-14.6% (below inflation)
Aug 1972 - Jul 1982	8.9%	10.3% (above inflation)
Sep 1989 - Dec 1990	5.6%	5.7% (above inflation)
TOTAL	219.9%	301.1%

Source: Bloomberg.

The most important thing to note from the table above is that utilities had returns that were greater than the rate of inflation in five of the six periods. This is a good 'batting average' especially when compared with cash (a measure of bank deposit returns) or the share market. Cash had greater returns in three cases, while shares only beat inflation twice!

The other important thing to note from this table is that the one time utilities failed to beat inflation, they had negative returns. This reinforces the reality that an investment in utility companies still has share market risk.

## OK, BUT HOW DO WE INVEST IN UTILITIES?

A couple of decisions need to be made, the first of which is location. For utilities, this decision is simple. To gain sufficient diversity, investors need to look offshore for their utility investments as there are very few listed utility companies in New Zealand.

The second decision is the investment approach to be adopted, ie active or passive. Both have their pros and cons – an active approach should enhance performance, but a passive approach allows greater control. The best approach depends on the asset class, the number of quality active management options and the importance of control.

In this case, passive is the best approach as control is important. The potential for an active manager to skew

the portfolio towards unregulated utilities, utilities with energy 'upside' or utilities with operations in emerging markets, is unattractive. An approach that allows control over the types of utilities in the strategy will allow the attractive characteristics of companies in this sector to be accentuated.

The use of a passive approach does not necessitate blindly following an off-the-shelf utilities index (in a similar fashion to most passive index funds). If these indices can be enhanced using systematic screens, then a customised 'smart index' can be created. In this case, the low-risk, inflation-beating qualities of utilities can be emphasised using a couple of screens. More specifically, screens can be used to remove some of the unregulated utilities and those with excessive leverage or earnings volatility.

Another simple enhancement that can further reduce risk is equal weighting. The alternative, weighting by market capitalisation, has the limitation that large companies will have large weights, which can cause concentration issues. In other words, a significant part of the exposure is made up of a few utilities. There is also little sense in having a large allocation to those utilities that have risen the most.

## IS THERE A CASE FOR DYNAMIC RISK MANAGEMENT?

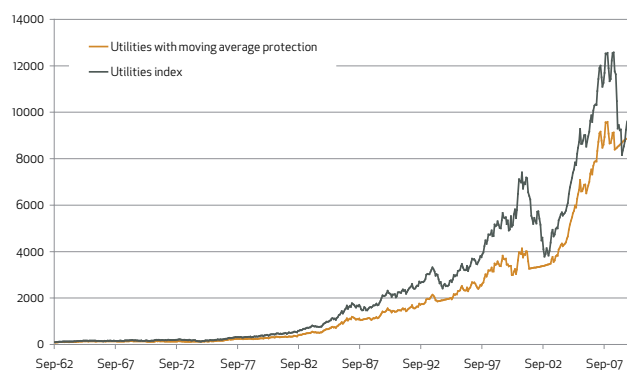
Utilities themselves have a relatively low level of risk as they sell essential services in markets with limited competition and frequently have regulated prices. However, the schizophrenic share market on which they trade can dramatically alter the pattern of returns for investors by making utility share prices rise and fall, irrespective of stability of earnings.

To minimise the risk that share market sentiment causes the strategy to fail to meet its objectives, an active overlay is required. This overlay is designed to remove the worst of the variability in returns caused by the share market. This is achieved by selling the utility holdings when the market is trending down and risk aversion has taken hold.

The chart that follows illustrates the efficacy of this strategy. The case for the use of a protection strategy can be best made using the two most recent bouts of market

volatility, 2000-2003 and 2007-2009. On both occasions risk aversion dominated as companies with relatively stable earnings and growth were sold off along side companies with less certain futures.

## UTILITIES STRATEGY



Source: Bloomberg.

## AGING INFRASTRUCTURE PROVIDES UPSIDE

The minor inconvenience of waking up to a cold shower in 1992 was put into perspective when Auckland CBD lost all power. In a nightmare scenario reminiscent of a third world nation, New Zealand's largest city went without power for five weeks while a new transmission cable was strung up beside the railway lines into the city center.

The Auckland Blackout in 1998 provides an excellent example of the risk of relying on overstretched infrastructure. This is a risk that governments around the world face, ie the risk that a piece of overworked, aging transmission infrastructure fails and causes a massive disruption. Setting aside the risk of potential disaster,

investments in the infrastructure that transmits electricity can reduce the total cost of electricity through efficiency gains.

Almost perversely this presents an opportunity for the companies that own the electricity transmission infrastructure. Regulators are forced to set up incentives to encourage the companies that own these assets to accelerate their capital expenditure programs. A common way to incentivise these companies to ramp up their investment programs is to allow greater returns on new infrastructure spending. In other words, these companies have the opportunity to squeeze additional returns above their normal regulated returns.

## SUMMARY OF THE CASE FOR UTILITIES

Utilities are a compelling investment opportunity for sensible, conservative investors. First, they have relatively stable earnings because they benefit from predictable pricing and steady demand. Second, they have built-in inflation protection due to their ability to raise prices quickly in periods of high inflation. This allows rapid earnings and dividend growth. The investment appeal of this sector can be improved by carefully designing an investment strategy that includes a capital protection strategy that reduces drawdowns when fear grips the market.

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