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FUNDS LIMITED

Aurora Updates
Efficient Value Strategy Using the Aurora Dividend Income Trust (Managed Fund)

18 September 2013

Executive Summary

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- Aurora's Dividend Income Trust (Managed Fund) is an **efficient** and **low risk** fund that invests in Australian stocks with a **value bias**. Risk management is achieved with both the value signal and the ability to short stocks to control beta risk.

- Franking of dividends is a **reliable** and **simple** 'value' signal. This signal can be used to construct an efficient and stable **'value' bias strategy**.

- A passive portfolio of fully franked stocks has out-performed a passive index strategy over the last decade by approximately **2.7% p.a.** on an after tax basis. Similarly unfranked stocks have underperformed the index by more than 4% p.a. over the same period.

- There are strong theoretical reasons to support this observed phenomena:

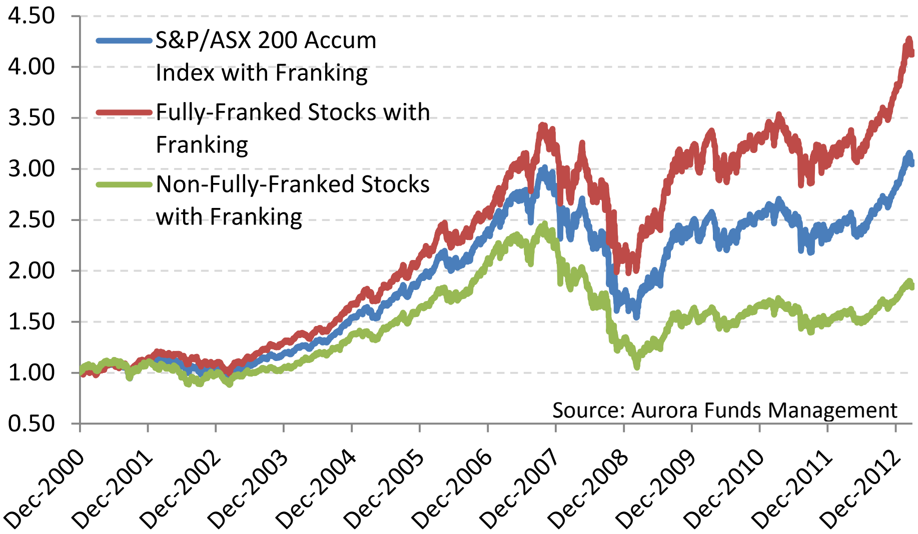
    - **Fully franked stocks should be undervalued** as the marginal stock price setters (market makers, derivative hedgers, overseas investors) can not attribute value to these franking credits.

    - Fully franked stocks demonstrate a 'value' bias. Dividends have long been used as a company **stability indicator**. Franking is an additional signal of the propensity of a company to pay tax and so the **sustainability** and **stability** of the company. Franking is a **unique Australian** phenomenon that is poorly understood by global investors and academics.

Franking as a Signal

Figure 1 below shows the cumulative value of $1 invested at the end of December 2000 in a number of different listed Australian equity strategies. This chart shows a pure passive S&P/ASX 200 strategy (blue line). Note the full value of the franking credits have been included in this analysis. This figure also shows the value of investing in only fully franked stocks (red line) and again on an after tax basis. This figure shows a naïve strategy of only investing in fully franked stocks has outperformed the passive index strategy by 2.7% per annum over the period since December 2000. Also shown is the underperformance of non-fully franked stocks (green line) compared the passive S&P/ASX 200 strategy – 4.4% per annum in the period from December 2000.

Figure 1: Cumulative Value of Equity Investments



Fully franked stocks generally have a higher cash dividend yield than the broad index – approximately 0.5% per annum. Consequently the franking credits of the fully franks stocks is greater with both a) greater dividend yield and b) 100% vs. approximately 80% franking of the broad S&P/ASX 200 index. Additionally franking only accounts for 0.6% of the 2.7% per annum long-term outperformance - – style factor performance accounts for the 2.1% balance.[1]

Academic Support

Since the early 1990s, academics have recognised the long-term outperformance of 'value' stocks.[2] The propensity of companies to pay tax is an added filter for the stability and maturity of companies and a potential signal to avoid 'value traps' – stocks

[1] See Roe S., and Gillespie T., (2013), 'Efficient "Value" Strategy for Australian Equity', *Aurora Updates*, 29 May 2013.
[2] See Fama E.F., K.R. French, (1992), 'The cross-section of expected stock returns', *Journal of Finance*, Vol. 47, No. 2, pp. 427-465.

that appear cheap on naïve value measures such as price earnings, but lack appropriate catalysts for revaluation to fair value.

Almost all academic research on the topic of dividends and tax concentrates on overseas markets, and so does not address the unique Australian[3] topic of dividend franking as an additional signal. A rare piece of work on the characteristics of Australian companies and the franking signal notes '[d]ividend paying firms are larger, more profitable and have less growth options that nondividend paying firms. … [A] highly significant relation between the decision to pay regular dividends and the proportion of shareholders' equity that is earned rather than contributed.'[4] Other studies note a higher level of franking is associated with 'more mature firms', 'significantly less persistent losses', and 'reductions in market mispricing of earnings persistence'.[5]

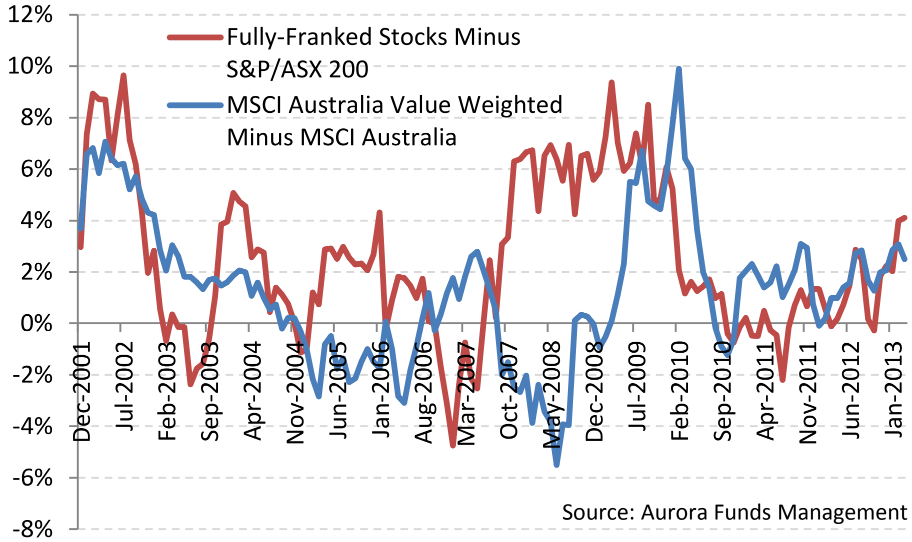
Another avenue of academic research has been the relationship between franking credits and the valuation of stocks in the market. In the Australian market, marginal price setters of equities (foreign investors, derivative hedgers, short sellers, before tax domestic investors) attribute no value to franking credits. These marginal investors are generally not entitled to the franking credits as they do not meet either the holding period or delta rules. Alternatively, foreign investors and tax exempt investors generally can attribute no value to the franking credits. Hence from a market supply and demand perspective, franking of dividend payments should be undervalued.

Fund Construction, Performance and Risk Profile

Back tests of the strategy have shown strong and stable outperformance of fully franked stocks over the period since December 2000. Figure 2 below shows the annual alpha from the fully franked strategy against the S&P/ASX 200 (red line). This figure demonstrates the strategy delivers few and modest periods of underperformance more than offset by periods of strong and sustained outperformance. Also shown on this chart is the alpha from a common value metric (blue line) showing empirically the broad alignment between the two strategies with the exception of the turbulent period over the global financial crisis 2007-2010 when the fully franked strategy outperformed.

[3] Australia and New Zealand are the only two OECD countries to operate dividend imputation systems. The United Kingdom abandoned its dividend imputation scheme in 1999, Germany in 2001, Singapore in 2003, Finland in 2005, Norway in 2006 and Malaysia in 2008.
[4] Coulton J., and C. Ruddock, (2011), 'Corporate payout policy in Australia and a test of the life cycle theory', *Accounting and Finance*, Vol. 51, pp381–407.
[5] Coulton J., C. Ruddock and S. Taylor, (2012), 'The Informativeness of Dividends and Franking Credits', Available at SSRN: http://ssrn.com/abstract=1982249

Figure 2: Annual Alpha from Fully Franked Strategy vs. Value Strategy



The Aurora Dividend Income Trust (Managed Fund) also short sells a portfolio of unfranked stocks to further access the value premium associated with franking. This short portfolio is managed to be 50% of the size of the long fully franked stocks – effectively the total portfolio will have only 50% exposure to the equity market. This additional short portfolio has given the fund an ability to manage risks in periods of significant drawdowns (Figure 3) as well as through time (Figure 4).

Figure 3: Cumulative Value of the 100% Long / 50% Short Portfolio

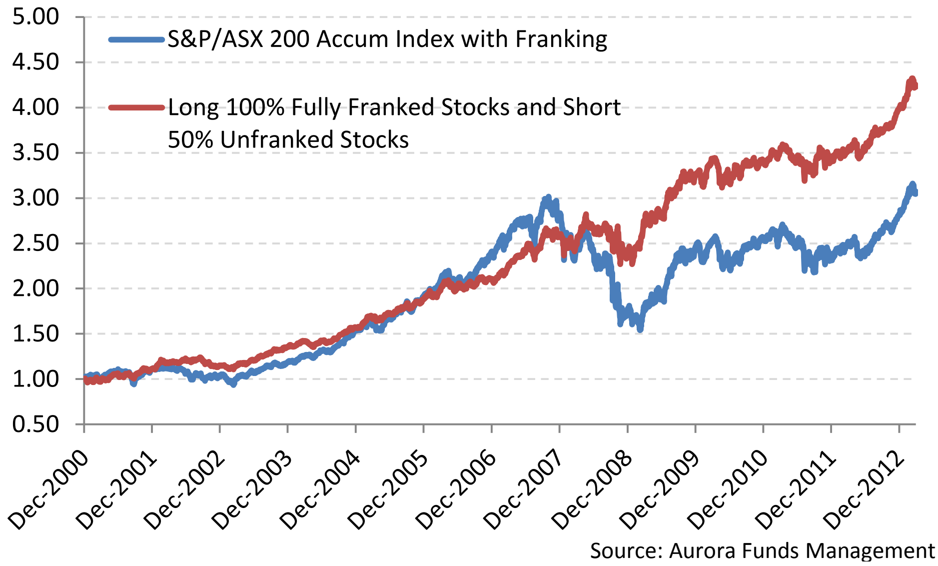
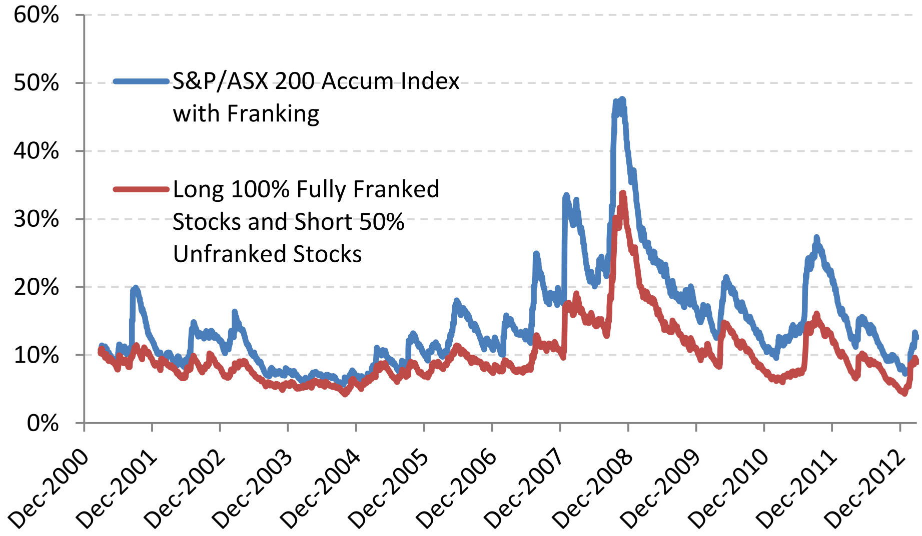


Figure 4: Overall Investment Risk of the 100% Long / 50% Short Portfolio



Source: Aurora Funds Management

Fund Construction, Performance and Risk Profile

Whilst the above analysis uses long term simulated returns, the Table 1 below shows the outperformance of the actual Aurora Dividend Income Trust (Managed Fund) compared to the benchmark of 50% equity and 50% cash investments. This additional of 3-4% per annum over the period 2011-12 is due to further enhancements in the management of the actual fund – predominantly Aurora's analysis of dividend franking and projection of future franking and additional enhancements in implementing the dividend/franking strategy.

Table 1: Calendar Year Returns for the Aurora Dividend Income Trust (Managed Fund)

	Benchmark 50% Equity 50% Cash	**Long 100% FF Short 50% NonFF**	**Dividend Income Trust (before fees)**	**Dividend Income Trust (after fees)**
2011	-2.21%	0.40%	2.03%	0.73%
2012	12.63%	17.33%	18.54%	16.64%

Source: Aurora Funds Management

Note: Past performance is no indication of future performance.

Note

The Aurora Dividend Income Trust (Managed Fund) (ARSN 151 947 732, APIR Code AFM0010AU) has been issued by Aurora Funds Management Limited.

Disclaimer

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