

Global Small Cap Equity Asset Class Study - Australian Perspective

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This study presents the case for investing in global small cap equities from an Australian equity investment perspective¹. The first two sections highlight the significant diversification opportunities available from investments in non-Australian Small Cap Equities. The third section details the superior and consistent return opportunities presented by investments in global small cap equities relative to global large/mid cap equities. The next section shows that the return opportunities presented by global small cap equities are available within very comfortable levels of risk relative to global large/mid cap equities. And the final section points out that broad investment in global small cap equities is available at attractive valuations. These points together make a strong case for the inclusion of global small cap equities within an equity investment framework from an Australian perspective.

Significant Diversification Opportunities

Non-Australian small cap equities have provided a superior diversification opportunity set versus Australian small cap equities when compared to Australian large/mid cap equities.

Figure 1 plots the correlation of the MSCI Australia Standard² Index returns with the MSCI Australia Small Cap Index returns and with an average of the non-Australian developed market MSCI Small Cap Country Index returns. The plot shows that – over the period from January 2004 to January 2013 – non-Australian small cap equities have provided a much better diversification opportunity set than have Australian small cap equities.

The correlation of Australian small cap equities to Australian large/mid cap equities averaged 83% over the full time period, increasing from just above 60% to just above 90%. The correlation of non-Australian small cap equities to Australian large/mid cap equities held consistently at around 20% over the full time period, increasing slightly up through 2007 and again in the past year or so³.

Figure 2 shows the variation in diversification across the range of non-Australian small cap equities. Here, the correlation of the MSCI Australia Standard Index returns with an average of the non-Australian developed market MSCI Small Cap Country Index returns is shown in red,

¹ This study is an update of a similar study conducted by Frank Nielsen from MSCI Barra and published in MSCI Barra Research Insights October 2007 and in the November/December issue of the Journal of Indexes (PDF available at <http://www.indexuniverse.com/JOI>). The original study was conducted from a US investment perspective; this study is conducted from an Australian investment perspective. The original study presented price return index series; this study presents gross total return index series. All return series in this study are daily and expressed in Australian dollar terms. All data in this study span the time frame from January 2001 through January 2013.

² The MSCI Standard indexes include all of the securities in the MSCI Large Cap and the MSCI Mid Cap indexes.

³ It should be noted that the correlation of non-Australian large/mid cap equities to Australian large/mid cap equities presents broadly the same level and profile over this period. This indicates that the diversification benefits from an Australian investment perspective have come largely from exposure to market effects from the non-Australian equity markets equally for both large/mid cap and small cap equities.

while the range from the highest to the lowest country correlation is shown in the upper and lower black lines, respectively.

Figure 1: Australian Large/Mid Cap equities versus Australian and non-Australian Small Cap Equities (Rolling 36 Month Correlations - January 2001 through January 2013)

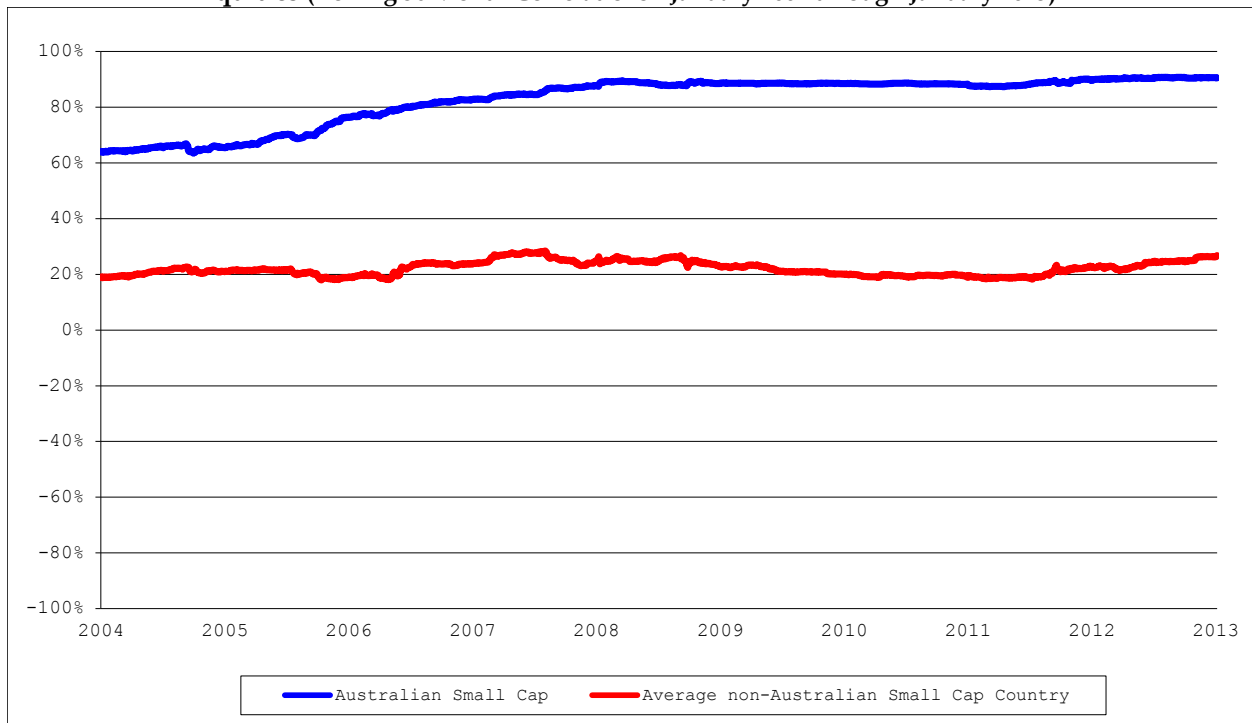
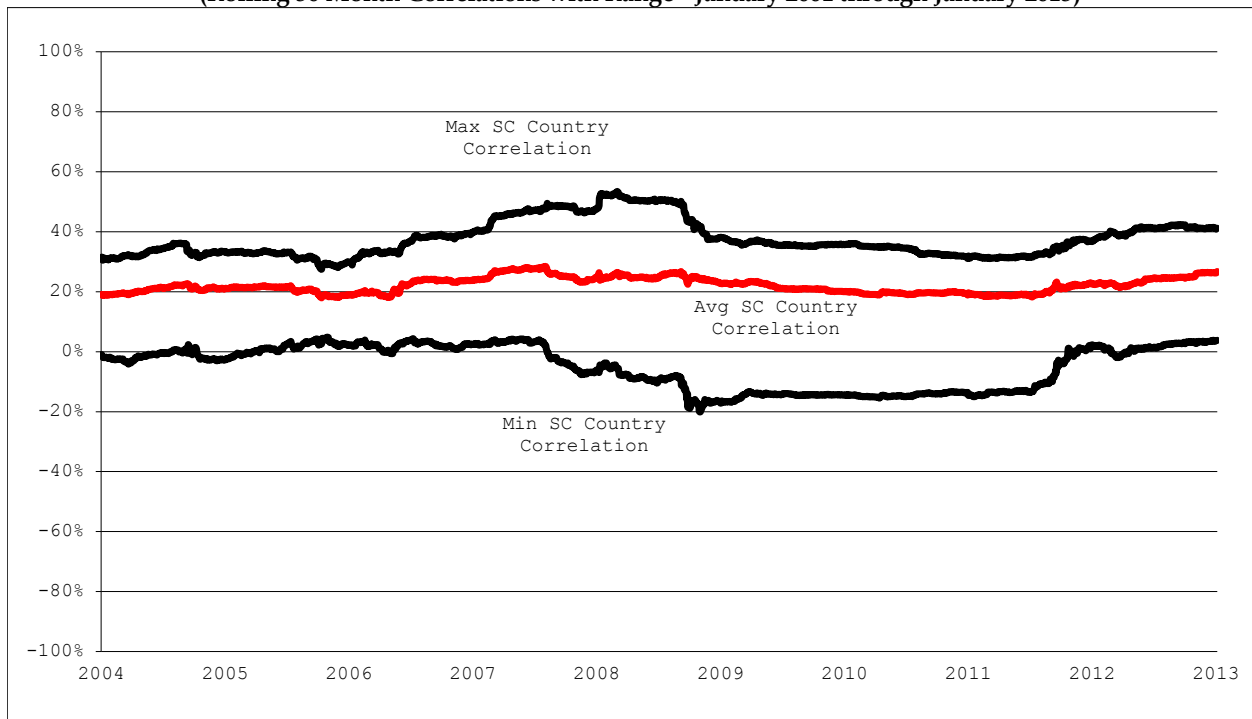


Figure 2: Australian Large/Mid Cap equities versus non-Australian Small Cap Equities (Rolling 36 Month Correlations with Range - January 2001 through January 2013)



It can be seen from Figure 2 that while the average correlation remained constant at about 20% throughout the analysis period, the range of correlations has broadened over the analysis period including providing negative correlation opportunities. This means that the breadth of diversification opportunities within non-Australian small cap equities has increased in recent years.

Diversifying Economic Sector Exposure

The Australian equity market is heavily exposed to companies in the Financial and Material sectors, especially when compared to the broad global equity markets. Investments in equity markets outside of Australia provide diversifying exposure from an economic sector perspective – specifically to the Information Technology, Consumer Discretionary and Health Care sectors to which the Australian equity market is relatively under-exposed. Table 1 shows the GICS sector breakdown of the large and small segments of the Australian equity market – represented by the S&P/ASX 200 and Small Ordinaries, respectively – compared to the GICS sector breakdown of the MSCI World, MSCI World Small Cap and MSCI Emerging Markets indexes.

Table 1: Sector Exposures Comparisons for Australian and non-Australian Equity Markets

	S&P/ASX 200	S&P/ASX SMALL ORDINARIES	MSCI World	MSCI World Small Cap	MSCI Emerging Markets
Consumer Discretionary	3.4%	14.7%	11.2%	15.5%	7.6%
Consumer Staples	8.9%	1.6%	10.7%	4.0%	8.8%
Energy	6.8%	7.9%	10.4%	6.5%	12.5%
Financials	41.7%	11.2%	20.6%	22.0%	27.3%
Health Care	4.3%	4.2%	10.5%	8.5%	1.2%
Industrials	6.4%	21.4%	11.0%	17.9%	6.4%
Information Technology	0.7%	4.0%	11.6%	12.1%	13.5%
Materials	21.2%	28.6%	6.8%	9.3%	11.5%
Telecomm Services	4.8%	3.5%	3.8%	1.0%	7.6%
Utilities	1.8%	2.9%	3.4%	3.2%	3.4%

Superior and Consistent Return Opportunities

Globally, small cap equities have provided a superior return opportunity relative to large/mid cap equities.

Table 2 shows historical risk and return characteristics for several time periods over the full analysis period for various regions and countries and highlights the differences between the risk and return profiles of small cap equities and of large/mid cap equities.

Table 2: Developed World Equity Market Risk and Return Characteristics
Countries

	Australia		Austria		Belgium		Canada		Denmark		Finland	
	L/M	SC	L/M	SC	L/M	SC	L/M	SC	L/M	SC	L/M	SC
Return												
3 Year	6.6%	4.3%	-5.6%	1.3%	4.6%	3.6%	3.1%	5.2%	10.3%	3.0%	-7.2%	-4.3%
5 Year	1.9%	-1.9%	-15.6%	2.9%	-7.8%	-1.2%	-1.2%	1.2%	2.5%	-5.6%	-14.6%	-2.6%
Total	8.1%	8.8%	1.7%	10.3%	-1.3%	4.6%	3.1%	6.8%	5.8%	6.5%	-8.6%	7.8%
Risk												
3 Year	16.0%	18.0%	25.9%	18.5%	19.4%	18.4%	14.9%	16.7%	18.7%	20.0%	25.0%	25.8%
5 Year	21.8%	22.0%	33.0%	21.8%	25.6%	19.9%	24.8%	23.5%	22.1%	22.5%	28.5%	25.7%
Total	17.4%	17.1%	25.0%	18.6%	22.3%	17.0%	20.9%	19.6%	19.5%	19.4%	32.4%	20.5%

	France		Germany		Greece		Hong Kong		Ireland		Italy	
	L/M	SC	L/M	SC	L/M	SC	L/M	SC	L/M	SC	L/M	SC
Return												
3 Year	-1.0%	7.1%	5.4%	6.7%	-38.2%	-28.0%	8.6%	5.8%	-2.3%	5.0%	-8.4%	-8.8%
5 Year	-4.8%	1.4%	-3.0%	2.7%	-36.2%	-30.5%	1.2%	0.6%	-22.0%	-0.5%	-12.6%	-11.6%
Total	-2.3%	2.6%	-0.4%	2.9%	-14.4%	-10.0%	2.5%	4.7%	-9.4%	9.2%	-4.9%	-2.5%
Risk												
3 Year	23.0%	20.1%	21.7%	20.0%	44.9%	45.5%	16.9%	18.7%	26.7%	22.1%	28.3%	23.4%
5 Year	24.7%	21.1%	24.2%	23.1%	42.2%	39.9%	23.1%	23.0%	36.0%	29.3%	28.3%	22.8%
Total	22.7%	19.0%	24.0%	20.1%	31.3%	29.8%	21.5%	21.5%	27.7%	23.5%	22.9%	18.9%

	Japan		Netherlands		New Zealand		Norway		Portugal		Singapore	
	L/M	SC	L/M	SC	L/M	SC	L/M	SC	L/M	SC	L/M	SC
Return												
3 Year	-2.3%	1.4%	1.4%	-3.4%	14.7%	9.3%	6.1%	2.9%	-8.4%	-10.8%	6.5%	9.2%
5 Year	-5.5%	-1.3%	-3.1%	-3.3%	1.7%	1.4%	-0.9%	1.8%	-11.8%	-7.3%	3.6%	5.1%
Total	-4.5%	-1.1%	-1.9%	1.5%	7.9%	10.4%	6.7%	4.9%	-3.3%	0.3%	4.0%	11.0%
Risk												
3 Year	19.7%	19.9%	19.2%	19.5%	14.8%	11.3%	22.5%	26.5%	22.9%	23.9%	14.1%	12.4%
5 Year	25.3%	24.2%	23.0%	21.8%	19.1%	14.3%	32.2%	30.5%	22.8%	23.4%	20.7%	18.5%
Total	23.3%	23.0%	22.4%	19.4%	16.7%	13.8%	26.4%	27.0%	19.1%	20.7%	20.2%	18.0%

	Spain		Sweden		Switzerland		United States		United Kingdom	
	L/M	SC	L/M	SC	L/M	SC	L/M	SC	L/M	SC
Return										
3 Year	-8.9%	-10.0%	10.1%	9.5%	7.2%	4.3%	8.3%	11.3%	4.4%	9.9%
5 Year	-7.9%	-13.4%	4.5%	3.3%	2.4%	0.6%	0.9%	5.0%	-2.4%	1.8%
Total	0.9%	4.2%	2.2%	9.6%	1.3%	4.5%	-2.1%	3.1%	-1.1%	3.5%
Risk										
3 Year	30.6%	21.5%	24.7%	21.8%	14.1%	15.6%	16.5%	21.2%	15.0%	15.8%
5 Year	29.7%	21.4%	30.3%	26.1%	17.6%	17.4%	26.0%	30.4%	20.7%	19.9%
Total	24.8%	17.8%	28.0%	22.4%	18.0%	16.0%	22.7%	25.9%	19.3%	17.1%

	World		EAFE		Europe		Pacific	
	L/M	SC	L/M	SC	L/M	SC	L/M	SC
Return								
3 Year	5.1%	8.1%	1.9%	4.0%	2.4%	4.9%	1.2%	3.1%
5 Year	-1.1%	2.6%	-3.4%	-0.6%	-3.5%	-0.4%	-2.8%	-0.6%
Total	-1.6%	3.5%	-1.3%	3.2%	-1.1%	4.3%	-1.5%	2.0%
Risk								
3 Year	12.1%	14.5%	12.0%	11.3%	17.3%	16.7%	14.7%	14.9%
5 Year	17.6%	20.0%	14.9%	13.7%	20.5%	18.8%	20.0%	19.0%
Total	16.4%	16.8%	14.9%	12.9%	19.1%	15.8%	19.0%	17.9%

Return: annualized cumulative return. Green cells indicate size segment outperforming in period.

Risk: annualized standard deviation of return. Green cells indicate size segment with lower risk within period.

Total period results: January 2001 through January 2013. 3 Year and 5 Year results: periods ending January 2013.

Table 3 highlights the frequency at which global small cap equities have outperformed global large/mid cap equities. The table indicates the percentage of quarters over the analysis period for which small cap equities outperformed large/mid cap equities for various regions and countries.

Table 3: Frequency of Small Cap versus Large/Mid Cap Outperformance: Percentage of Quarters January 2001 through January 2013 when Small Cap Outperforms

World	EAFE	Europe	Pacific		
71%	60%	58%	63%		
Australia	Austria	Belgium	Canada	Denmark	Finland
46%	52%	60%	50%	60%	63%
France	Germany	Greece	Hong Kong	Ireland	Italy
58%	58%	59%	52%	60%	60%
Japan	Netherlands	New Zealand	Norway	Portugal	Singapore
58%	54%	56%	50%	54%	65%
Spain	Sweden	Switzerland	United Kingdom	United States	
50%	63%	60%	60%	56%	

Table 4: Consistency of Small Cap versus Large/Mid Cap Outperformance: Number and Percentage of Markets where Small Cap Outperforms in the Quarter

	Q1		Q2		Q3		Q4	
	#	%	#	%	#	%	#	%
2001	18/22	82%	13/22	59%	12/22	55%	14/22	64%
2002	18/23	78%	17/23	74%	14/23	61%	9/23	39%
2003	12/23	52%	18/23	78%	19/23	83%	10/23	43%
2004	13/23	57%	9/23	39%	10/23	43%	18/23	78%
2005	18/23	78%	11/23	48%	18/23	78%	9/23	39%
2006	19/23	83%	8/23	35%	4/23	17%	16/23	70%
2007	18/23	78%	9/23	39%	4/23	17%	9/23	39%
2008	16/23	70%	10/23	43%	8/23	35%	10/23	43%
2009	15/23	65%	20/23	87%	19/23	83%	12/23	52%
2010	18/23	78%	13/23	57%	15/23	65%	19/23	83%
2011	9/23	39%	9/23	39%	7/23	30%	8/23	35%
2012	15/23	65%	9/23	39%	13/23	57%	13/23	57%

Table 4 highlights the consistency of global small cap outperformance relative to global large/mid cap equities. The table indicates the number and percentage of markets for which small cap equities outperformed large/mid cap equities for each quarter in the analysis period.

One can see from the results in Table 2 that over the full analysis period – January 2001 through January 2013 – small cap equities have provided a superior return opportunity in a very wide base: in every country except for Norway, small cap equities have outperformed large/mid cap equities (indicated by the “Return” cells highlighted in green) for the total analysis period. From Table 3, one can see that the wide base of outperformance is supported on a shorter term basis as well: measured quarterly over the full period of this analysis, small cap equities have outperformed large/mid cap equities on average 57% of quarters within a given country. The range of outperformance for small cap equities versus large/mid cap equities is from a low of 46% of quarters – for Australia – to a high of 65% of quarters – for Singapore.

The same outperformance characteristics can be seen summed up in the world and regional comparisons as well. Over the full analysis period, small cap equities have outperformed large/mid cap equities in each of the composite levels shown in Table 2. For the combined World, small cap equities outperformed large/mid cap equities in 71% of the quarters over the analysis period.

The country level results show that the relative performance of small cap equities to large/mid cap equities can vary over time as well. From Table 4, one can see that, on average, within each quarter over the analysis period, small cap equities outperformed large/mid cap equities in 57% of the markets. However, this varies from a low of outperformance in only 4 of the 23 markets (17%) in the Q3 2006 and Q3 2007 to a high of outperformance in 20 of the 23 markets (87%) in the Q2 2009. These coordinated periods of under and outperformance of small cap equities over large/mid cap equities can be clearly seen at the composite level in figures 3 and 4. In these graphs and charts – showing the performance of MSCI Standard and Small Cap Indexes for the World region – you can see some extended period where small cap equities have outperformed from 2001 through 2005 and from 2009 through 2010, and an extended period of underperformance from 2006 through 2008.

**Figure 3: MSCI World Standard and Small Cap Indexes:
Growth of A\$1.00 invested - January 2001 through January 2013**

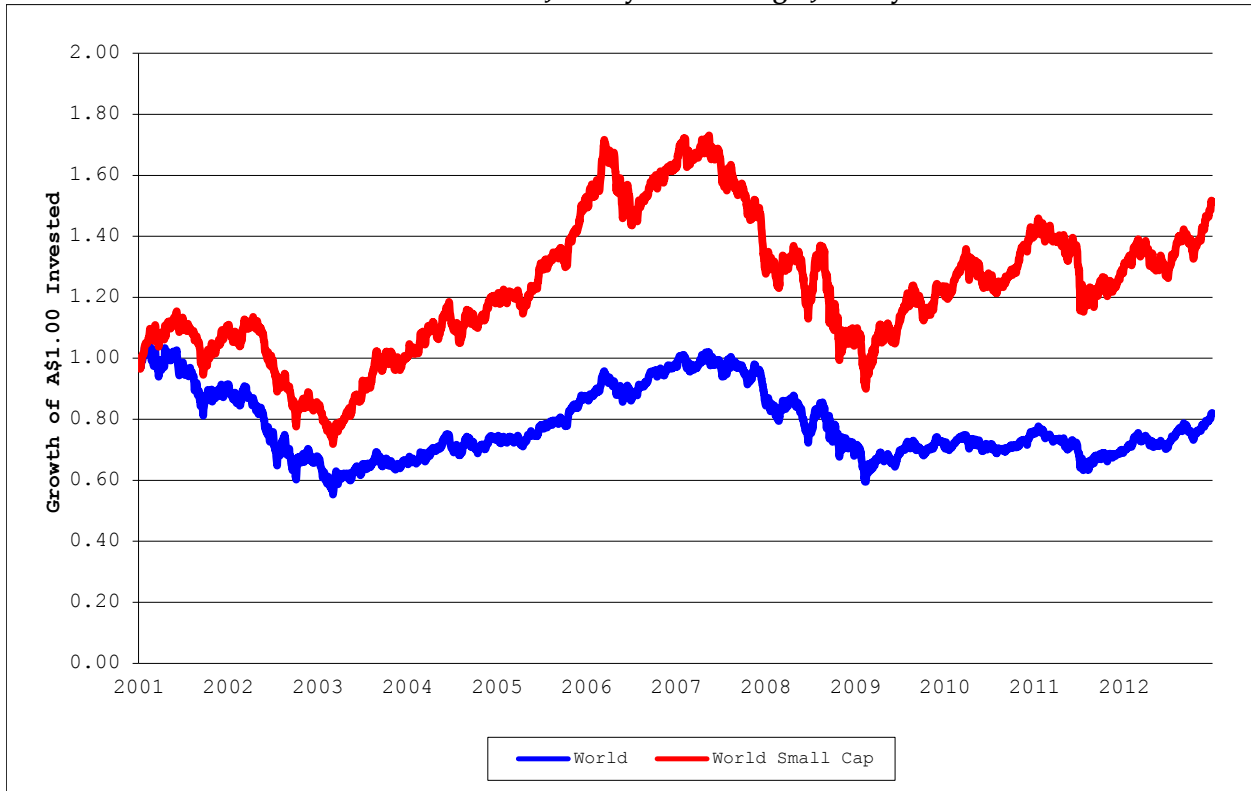
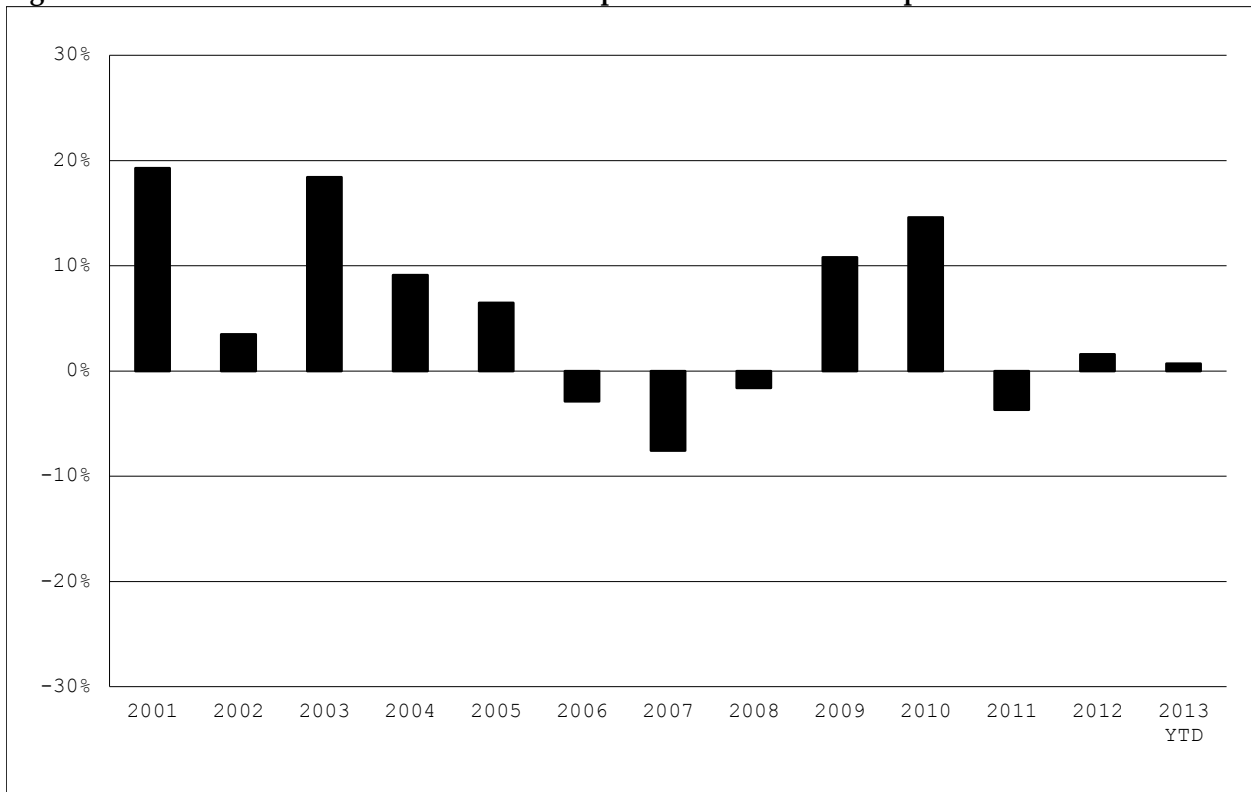


Figure 4: MSCI World: Calendar Year Outperformance of Small Cap versus Standard Indexes



Comfortable Levels of Risk

The risk profiles of global small cap equities – as measured by variation in returns – do not tend to exceed the risk profiles of global large/mid cap equities. In fact, over the full analysis period, the risk level of small cap equities within all but three developed markets has been lower than the risk level of large cap equities.

One can see from Table 2 that – not only have small cap equities provided a superior return opportunity – they have also done this, by and large, without an increase in risk. In fact, in each country except for Norway, Portugal and the United States, for the full time period, the annualized standard deviation of returns has been lower for small cap equities than for large/mid cap equities. However, risk profiles vary broadly across countries. Looking at calendar year standard deviations, countries like Belgium, Finland, France, Greece, Ireland, New Zealand, Sweden and Switzerland almost always have the variability of small cap equity returns lower than or equal to the variability of large/mid cap equity returns. On the other hand, countries like Portugal and the United States almost always have the variability of small cap equity returns exceeding the variability of large/mid cap equities returns.

The case of the United States is important when we look at the risk profile at the broader – global and international – level. This is because the United States represents more than 50% of the investible opportunity set for small cap equities when taken in a global context. This impact can be seen when we look at the World risk profile in Table 2 where the annualized standard deviation of returns are greater for each time period for small cap equities than for large/mid cap equities even though within most individual markets the risk profile for small cap equities is lower than the risk profile for large/mid cap equities.

Attractive Valuations

Global small cap equities are currently about as cheap as they have been in the past 20 years. Figure 7 plots the historic Price to Book Values of global small cap equities from December 1989 through January 2013⁴. Figure 7 shows that the average Price to Book Value for global small cap equities over the full period shown has been 1.9 and that the 1 and 2 standard deviation range has been from 1.6 to 2.3 and from 1.2 to 2.6, respectively. The current Price to Book Value for global small cap equities is 1.7 – putting it just above the lower 1 standard deviation historic range of 1.6. In only 18% of the quarters over the past 23 years were global small cap equities cheaper than they are today when measured by Price to Book Values.

We use Price to Book Values to demonstrate long term valuation for global equities because it is a fairly stable long term measurement and because book value is more portable than other valuation metrics – earnings and cash earnings, for example – across different countries and sectors. However even on other valuation metrics, global small cap equities are attractively – or at least reasonably – valued at the current time. The Price to Cash Flow ratio for global small

⁴ For this section, we switch data series from the MSCI equity indexes to the S&P BMI equity indexes. This is simply because our contracts with the data vendors allow us a significantly longer monthly time series of index characteristic data (e.g., the valuation ratios) with the S&P indexes than with the MSCI indexes. The S&P broad market indexes are similar in construction to the MSCI broad market indexes with the exception that S&P includes Korea in their developed market classification.

cap equities at the end of January 2013 was 10.9, just at the long term one standard deviation average. The Price to Earnings ratio for global small cap equities at the end of January 2013 was 32.5, between the long term average 20.9 and one standard deviation range 63.0. The Price to Forecast Earnings ratio for global small cap equities at the end of January 2013 was 20.1, just above the long term average 19.7. And, the Dividend Yield for global small cap equities at the end of January 2013 was 1.8, a bit below the long term average at 2.1.

Figure 7: S&P Developed World Small Cap Index: Price to Book Value with Historic Range

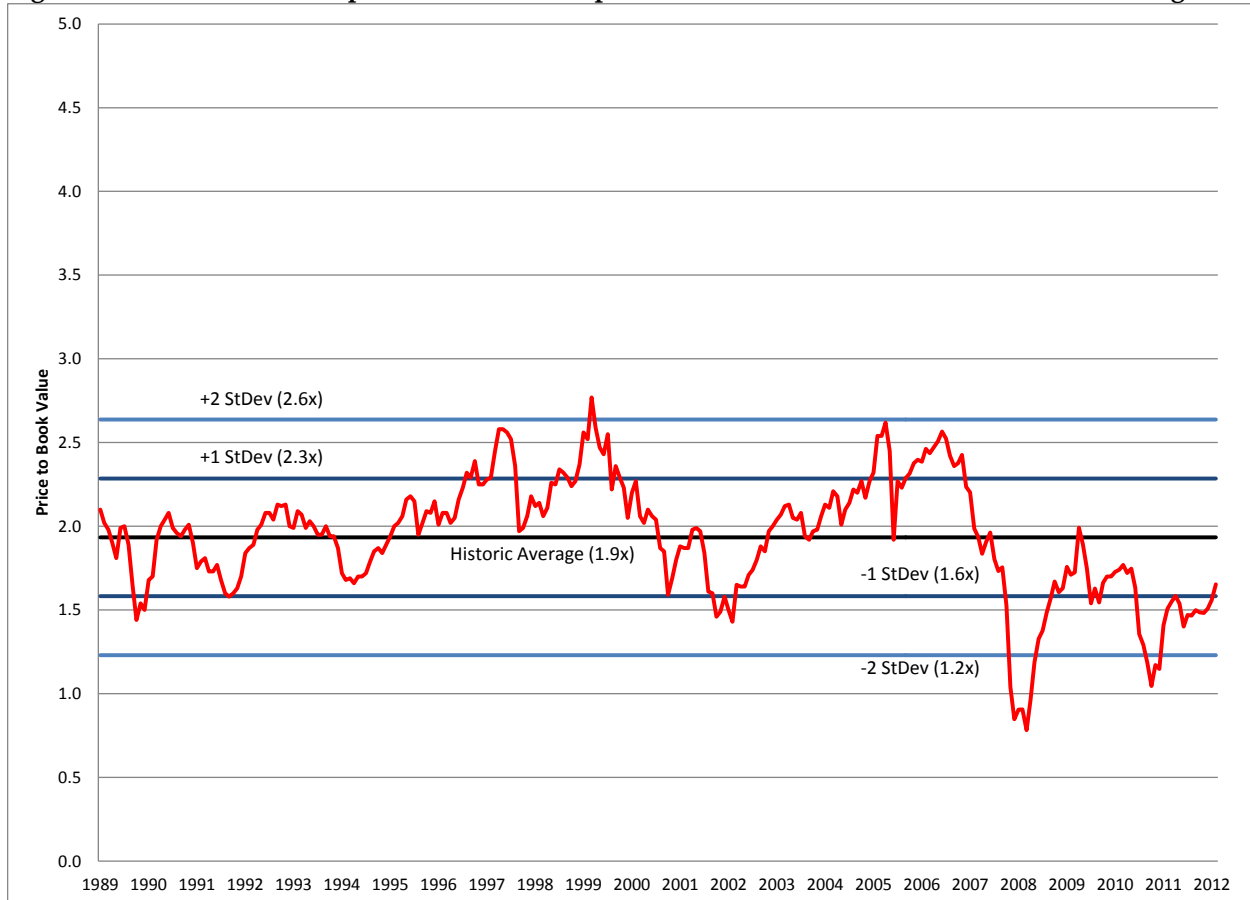


Figure 8 plots the Price to Book Values for global large/mid cap equities. Global large/mid cap equities are just as cheap relative to their history as are global small cap equities, just above the a 1 standard deviation historic band.

One can see from comparing the two graphs in Figures 7 and 8 that global small cap equities have always traded at a Price to Book Value discount relative to global large/mid cap equities. Figure 9 plots the average calendar year spread between global small cap equities Price to Book Values and global large/mid cap equities. Here one can see that global small cap equities trade at a current year $-0.22x$ Price to Book Value discount to global large/mid cap equities a bit above the historic average discount of $-0.56x$.

Figure 8: S&P Developed World LargeMid Cap Index: Price to Book Value with Historic Range

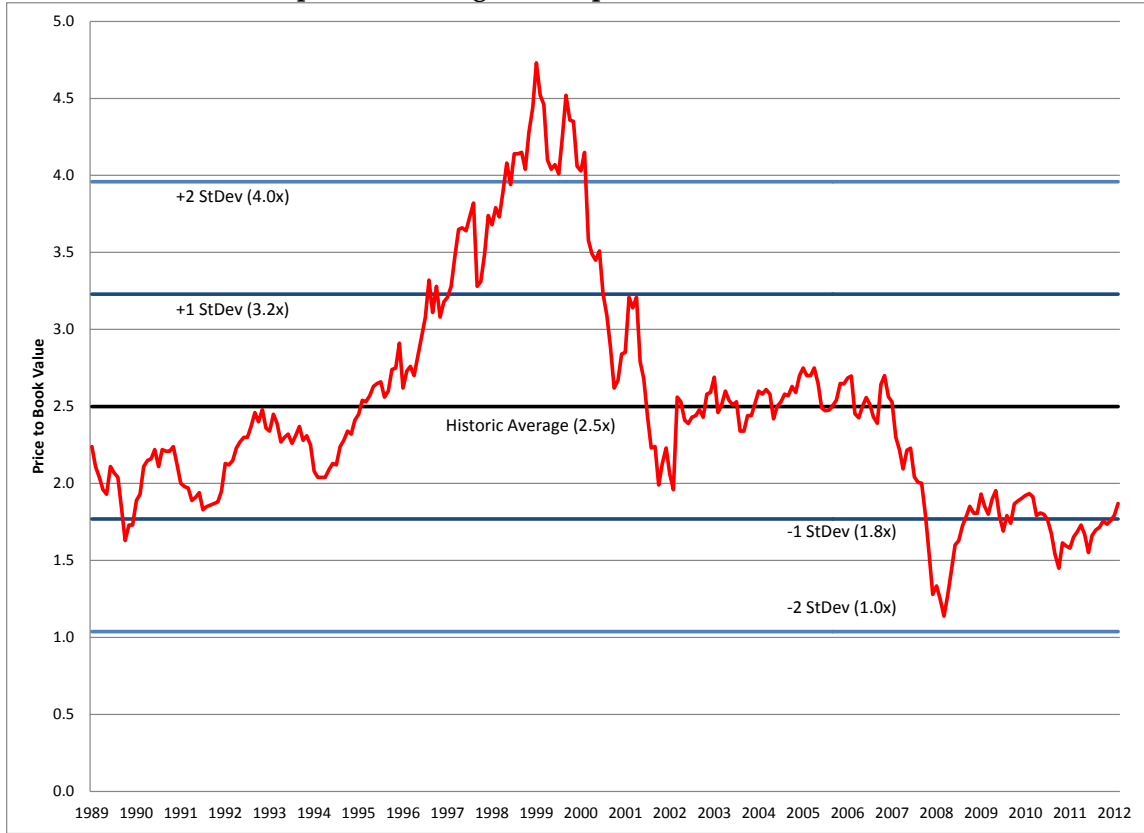
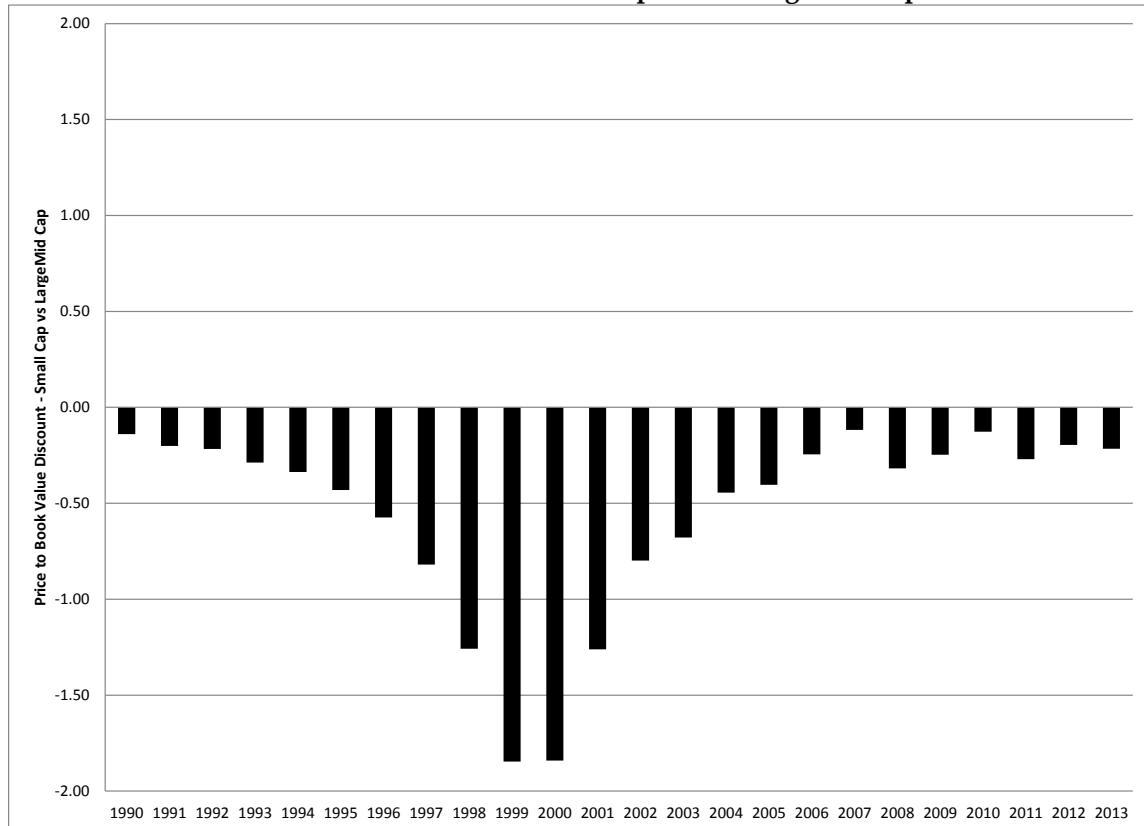


Figure 9: Price to Book Value Discount: Small Cap versus LargeMid Cap



The Investment Case for Global Small Cap Equities

Non-Australian small cap equities have provided a superior diversification opportunity set versus Australian small cap equities when compared to Australian large/mid cap equities. In recent years, the potential diversification opportunities from non-Australian small cap equities have broadened. The diversification benefits are manifest in lower correlations with non-Australian small cap equities markets and in exposure to a broader set of economic sectors relative to the Australian equity market – specifically to the Information Technology, Consumer Discretionary and Health Care sectors to which the Australian equity market is relatively under-exposed.

Globally, small cap equities have provided a superior return opportunity relative to large/mid cap equities. In 22 of the 23 developed markets, small cap equities have outperformed large cap equities on an annualized basis over the full analysis period. Within individual markets, small cap equities have outperformed large/mid cap equities on average 57% of the quarters over the analysis period. At the combined MSCI World level, small cap equities have outperformed large/mid cap equities in 71% of quarters.

While small cap equities have provided a superior return opportunity relative to large/mid cap equities, the risk profiles of small cap equities do not tend to exceed the risk profiles of large/mid cap equities. One important exception to this is within the United States equity market where annual standard deviations for small cap equities consistently exceed those for large/mid cap equities. Nonetheless, at the broad, global level risk adjusted returns for small cap equities consistently exceed those for large/mid cap equities.

Risk and return profiles for small cap equities are broadly different than the risk and return profiles for large/mid cap equities. The difference can vary from market to market over time. The variations can also coordinate broadly across geographies manifesting in a global capitalization effect.

Global small cap equities are currently about as cheap as they have been in the past 23 years. In only 18% of the quarters over the past 23 years has the aggregate Price to Book Value for global small cap equities been lower than it is currently. Other valuation metrics – Price to Cash Earnings, Price to Trailing and Forecast Earnings and Dividend Yield – also indicate that global small cap equities are valued attractively – or at least reasonably – at the current time. Global small cap equities have consistently traded at a Price to Book Value discount relative to global large/mid cap equities and this discount is currently at -0.22x.

All of these points demonstrate that global small cap equities present a fertile ground for active managers to provide superior risk adjusted returns within a diversifying framework from an Australian equity investment perspective.