Investment Survey September 2009 – Momentum Trading

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Section 1 – Investment Returns

Index returns for the quarter and the year to 30 September 2009 were:

Asset Class	Quarter	Year
NZ Shares	13.5%	3.6%
Australian shares in A\$	21.5%	8.3%
Global Shares:		
 local currency 	15.0%	-3.9%
 unhedged 	5.3%	-9.2%
 hedged 	15.2%	-6.2%
Property		
 NZ Property 	17.1%	-0.3%
 Global Property 	30.4%	-23.4%
NZ Bonds		
 Govt Bonds 	1.7%	7.1%
 Corporate A 	2.9%	10.6%
 All Swaps 	0.9%	10.6%
Global Bonds		
 World Govt Bonds 	2.6%	10.6%
 Global Aggregate 	3.7%	12.7%
Cash	0.7%	4.7%
NZ\$ against US\$	11.7%	8.3%
NZ\$ against AUS\$	2.3%	-3.2%

Section 2 – Commentary – Momentum Trading

2.1 Introduction

In this commentary we examine the momentum investor, which is one of the rarer definitions used in the marketplace.

What is price momentum trading? This is a stock picking strategy where stock selection is based on a set of rules around share prices and their movement. In its purest form this simply means buying those stocks that have increased in price and selling those that have decreased.

The basis is that markets are slow to price in new information about a stock. So the stock will continue to rise for some period after the initial movement upward. This may be due to transactional issues where all those wishing to buy the stock on the new information cannot do so immediately or may be due to the nature of assimilation of knowledge which, even in the current age, takes some time to be understood by all interested parties.

Working against momentum trading is the evidence that suggests human beings tend to overreact.

One school of thought runs that market participants will tend to overweight new information compared with prior knowledge.

Thus, the contrarian strategy advocates the opposite of momentum trading; buying into past losers and selling out of stocks that have performed well.

Evidence for momentum trading can be found in Jegadeesh and Titman's *"Returns to Buying Winners and Selling Losers: Implications for Stock Market Efficiency"* (1993) while the contrarian argument is discussed in De Bondt and Thaler's *"Does the Stock Market Overreact?"* (1985) – both published in the Journal of Finance.

2.2 Implications for efficiency

The efficient markets hypothesis gives 3 levels of efficiency in markets.

- Weak Prices incorporate all information from previous price movements.
- **Semi-strong** Prices incorporate all publicly available information.
- **Strong** Prices incorporate all current information, whether public or not.

Each of these definitions has implications for profitable trading strategies. If weak form efficiency holds, all information from previous price movements is known by everyone. Technical analysis will not provide abnormal returns.

Moving up the continuum, if semi-strong form efficiency holds, prices fully reflect all information about the underlying asset and its likely future cashflows. In this case, fundamental analysis will not yield an extra advantage. Fundamental analysis is examination of the financial statements of the company and includes measures such as earnings per share, price-to-book ratio, etc.

If strong form efficiency holds stock prices reflect information yet to be released to the public. In this case, insider trading would have no benefit as the stock price would already reflect the implications from announcements not yet made public.

So, what form of efficiency, if any, holds? There is much debate on this that usually surfaces in times of acute market stress. How can the market be considered anything but irrational through September 2008?

However, we can make several observations;

- The existence of laws prohibiting insider trading would suggest that there is at least a perception that markets are not strong form efficient.
- There is a plethora of managers who actively manage portfolios, making the case that semistrong form efficiency does not always hold.
- Passive management continues to have its supporters. Especially in large diverse markets where many believe it is hard to continually outperform benchmark in excess to active

management fees. This would support semistrong form efficiency.

• Technical strategies exist and some have good track records.

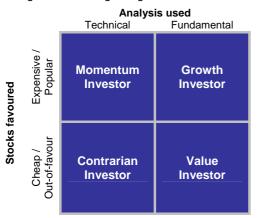
For momentum trading to be successful, markets cannot be even weak form efficient. Here, behavioural finance studies step in suggesting that investors do not always behave rationally and price movements do indeed exhibit patterns. See again any of the work by Richard Thaler, one of the founders of modern behavioural finance theory.

2.3 A brief discussion on growth investing

Growth investors favour stocks that they expect will have higher earnings growth. These investors often buy into stocks that have high prices. Is this momentum investing?

No. The key difference is in the information used to make stock selection decisions. A growth manager will rely on fundamental analysis and their expectations for earnings potential. Technical analysis does not typically feature and these managers will most probably believe that markets are weak-form efficient. (Or at least that they do not have the ability to exploit these inefficiencies.)

However, the analogy between momentum investing and growth investing is clear as both will tend to favour stocks that have recently performed well, although their justification for holding them would differ. Below we show how four schools of thought on investing fit together.



Momentum investors are diametrically opposite to value investors and are likely to hold quite different portfolios of stocks.

2.4 A sure thing?

It is easy to be generally suspicious about an investment strategy that can be simplified into a set of rules regarding stock prices, especially when there exists a contrarian strategy that dictates the exact opposite philosophy and can also show examples of superior performance. (Our understanding is the relative success of each strategy is largely dependent on the length of the holding period of stocks.)

Conviction in this strategy comes down to one's belief in the rationality of the market. No rational market would allow such a strategy to exist over the long term. In his 2001 paper *"Rational Markets: Yes or No? The Affirmative Case"*, Mark Rubinstein,

professor of Applied Investment Analysis at the University of California, remarked;

[P]rofitable trading strategies self-destruct. In practice, their profitability is limited by their tendency to move prices against themselves as they are exploited; eventually, the strategies are discovered by other investors, and the profitability is eliminated through overuse.

That is, if momentum trading was a sure thing, all rational investors would partake in it, bidding away any price advantage.

Another way of looking at it would be to ask what the fees are paying for. Can the manager identify an inflection point better than any competent analyst given the same set of rules? Possibly, given their technical expertise and access to market data, but once these set-up costs are looked past, there may be little additional added value.

In fundamental analysis, there is more of a degree of comfort. Not everyone has the skill-set to calculate earnings-per-share and even if they did, the degree of time spent collecting the data and doing the analysis lends a more concrete feel. The fees one is paying can be looked at as a wage for performing the analysis.

2.5 MJW view

When building a strategy we look to avoid any style biases. For example, we may combine a growth manager with a value manager. This ensures underperformance due to a particular strategy moving temporarily out of favour is less likely. The graph below shows how the MSCI has gone through phases of favouring Growth or Value stocks.



So in that sense there is the argument for including a technical analysis strategy for diversification.

However, we still require a degree of faith in the strategy being employed. Our view in relation to most investment markets is that weak form efficiency holds for at least most of the time. We believe any opportunities that present themselves from a technical analysis sense would not last long enough to be exploited after taking into account trading costs.

While we agree with technical analysts in that markets will move in cycles, we do not believe you can predict a change in the cycle based purely on the trends to date. We believe underlying fundamentals will drive long-term performance.

Human beings love finding patterns in the natural world. Take star constellations for example. We have to be careful not to transfer this temptation to recognise patterns to the investment world.

Section 3 – Wholesale Sector Fund

Table 3.1 – NZ and Australian Share Funds

		3 Mon	ths	1 Ye	ar	3 Yea	ars	5 Yea	irs	10 Ye	ars	Excess Return	3 Years Tracking Error	Inform	nation Ratio
Manager		% F	Rank	% p.a.F	Rank	% p.a.F	Rank	% p.a. F	Rank	% p.a. F	Rank	% p.a.	% p.a.		Rank
NZ															
GSJBW	NZ Shares	17.6	(1)	19.9	(1)	3.6	(2)	10.5	(1)	n.a		6.1	6.5	0.9	(3)
MAM	NZ Shares	13.7	(4)	14.4	(2)	3.7	(1)	n.a		n.a		6.3	5.4	1.2	(1)
TAM	NZ Shares	16.8	(2)	7.7	(4)	-0.8	(4)	5.7	(2)	10.2	(1)	1.7	2.6	0.7	(4)
TYN	Core Share	14.8	(3)	10.8	(3)	-0.1	(3)	5.6	(3)	9.8	(2)	2.5	2.5	1.0	(2)
Australas	ian														
AB	High Growth	17.2	(1)	13.9	(2)	1.1	(3)	8.1	(2)	n.a		3.6	4.0	0.9	(5)
AMPCI	Active	12.6	(8)	5.1	(7)	0.7	(6)	6.5	(6)	10.0	(3)	3.2	2.5	1.3	(3)
AMPCI	Strategic	13.7	(7)	4.8	(8)	0.9	(5)	8.5	(1)	n.a		3.4	5.5	0.6	(6)
AXAGI	-	15.3	(4)	9.5	(4)	1.5	(2)	n.a		n.a		4.1	3.4	1.2	(4)
BAM		15.5	(3)	10.9	(3)	2.8	(1)	7.9	(3)	12.6	(1)	5.4	2.9	1.9	(1)
GSJBW	Core Equity	16.5	(2)	13.9	(1)	n.a		n.a		n.a		n.a	n.a	n.a	
ING	Aust Share	14.3	(6)	6.3	(6)	-1.0	(7)	6.9	(5)	12.1	(2)	1.6	3.1	0.5	(7)
Mercer	Trans-Tasman	15.2	(5)	8.8	(5)	0.9	(4)	7.3	(4)	n.a		3.5	2.5	1.4	(2)
Average		15.0		9.2		1.0		7.5		11.6		3.5	3.4	1.1	
Non core															
FIS	NZ Growth	15.6		0.4		-6.5		8.8		14.1		-3.9	11.3	-0.3	
GSJBW	Trans-Tasman	19.1		14.4		3.0		11.5		n.a		5.6	8.3	0.7	
ING	ESF	13.9		7.7		-1.8		9.2		n.a		0.7	7.2	0.1	
MAM	Peak	15.6		25.7		n.a		n.a		n.a		n.a	n.a	n.a	
MNT		15.8		12.7		n.a		n.a		n.a		n.a	n.a	n.a	
PIE	Growth	36.8		71.7		n.a		n.a		n.a		n.a	n.a	n.a	
TYN	Aggressive	15.8		21.2		9.6		18.0		n.a		12.2	7.6	1.6	
Indexed															
AMPCI	NZ Eq Passive	13.4		3.7		-2.4		3.4		6.9		0.1	0.3	0.3	
SMS	NZ Top 10	13.8		3.5		-4.5		-0.7		3.6		-2.0	6.7	-0.3	
SMS	NZ Top 50	13.6		-2.4		-6.2		n.a		n.a		-3.6	8.9	-0.4	
SMS	NZ Mid Cap	7.1		-8.5		-6.2		2.6		5.8		-3.7	11.3	-0.3	
SMS	Aus Mid Cap	22.0		-3.5		-1.3		9.0		n.a		1.3	16.5	0.1	
SMS	Aus Top 20	19.0		12.5		6.9		13.8		7.6		9.4	15.8	0.6	
Australia	n														
ING		22.1	(2)	29.2	(1)	n.a		n.a		n.a		n.a	n.a	n.a	
TAM		23.0	(1)	n.a		n.a		n.a		n.a		n.a	n.a	n.a	
Indexes															
NZSX50	(incl IC's)	13.5		3.6		-2.5		3.6		7.3					
ASX200		21.5		8.3		1.7		10.0		9.7					
Cash + 5	5% pa	2.0		9.7		12.3		12.3		11.6					

Table 3.2 – Property

		3 Mon	ths	1 Ye	ar	3 Yea	ars	5 Yea	ars	10 Ye	ars	Excess Return	3 Years Tracking Error	Inform	ation Ratio
Manager		% F	Rank	% p.a.F	Rank	% p.a.F	Rank	% p.a. F	Rank	% p.a.F	Rank	% p.a.	% p.a.		Rank
NZ Listed															
AB	NZ Listed	18.2	(1)	0.7	(1)	-1.2	(1)	7.5	(2)	n.a		0.6	1.7	0.4	(1)
ING	Prop Securities	17.9	(2)	-0.9	(3)	-1.9	(2)	8.7	(1)	11.4	(1)	0.0	2.9	0.0	(2)
MNT	Australasian	16.8	(3)	0.7	(2)	n.a		n.a		n.a		n.a	n.a	n.a	
Average		17.7		0.2		-1.6		8.1		11.4		0.3	2.3	0.2	
NZ Direct															
AMPCI	AIF P	-9.1	(2)	-22.2	(2)	1.5	(2)	8.1	(2)	8.8	(2)	-3.2	11.1	-0.3	(2)
TAM		-2.6	(1)	-9.1	(1)	2.5	(1)	10.8	(1)	11.9	(1)	-2.2	8.0	-0.3	(1)
Average	-	-5.8		-15.6		2.0		9.5		10.3		-2.7	9.6	-0.3	
Global															
AMPCI	GPSF	36.9	(1)	-20.4	(2)	-10.6	(1)	5.3	(1)	n.a		1.9	7.3	0.3	(1)
AXAGI	Global Property	26.2	(4)	-19.6	(1)	n.a		n.a		n.a		n.a	n.a	n.a	
ING	Ex Australia	25.9	(5)	-27.3	(5)	-15.2	(4)	2.2	(2)	n.a		-2.6	5.2	-0.5	(3)
INT	Int'l Prop	26.9	(3)	-24.3	(4)	-12.5	(3)	n.a		n.a		0.1	n.a	n.a	
RUS	Global R.E.	21.4	(6)	-20.5	(3)	-12.1	(2)	n.a		n.a		0.5	7.1	0.1	(2)
TYN		28.2	(2)	-29.0	(6)	-16.2	(5)	-0.5	(3)	n.a		-4.7	4.3	-1.1	(4)
Average		27.5		-23.5		-13.3		2.4		n.a		-0.9	6.0	-0.3	
Indexes															
NZSE Prop		17.1		-0.3		-1.9		6.5		8.7					
UBS Globa	al Property	30.4		-23.4		-12.6		3.2		n.a					

Table 3.3 – Global Share Funds (unhedged)

		3 Mor	nths	1 Ye	ear	3 Ye	ars	5 Yea	ars	10 Yea	ars	Excess Return	3 Years Tracking Error	Inform	nation Ratio
Manager		%	Rank	% p.a.	Rank	% p.a.	Rank	% p.a.	Rank	% p.a. F	ank	% p.a.	% p.a.		Rank
Core		,	turnt	,0 p.a.	. carine	70 p.a.	tariit	70 p.a.i	tariit	/0 p.u.i.		70 p.a.	, o p.a.		- torre
AB	Style Blend	7.1	(2)	-12.9	(14)	-12.3	(14)	0.4	(11)	n.a		-5.2	4.7	-1.1	(13)
AMPCI	FDF Core	6.4	(7)	-9.1	(10)	-8.5	(11)	2.5	(8)	n.a		-1.5	3.6	-0.4	(9)
AXAGI	Global Eq	6.2	(9)	-5.0	(5)	-5.6	(5)	n.a	(-)	n.a		1.4	5.6	0.3	(5)
BNP	Global Eq	6.5	(5)	-4.4	(3)	-3.5	(2)	5.9	(1)	2.5	(1)	3.5	4.3	0.8	(2)
ING	Int'l Eq	6.7	(3)	-4.1	(2)	-4.7	(3)	4.6	(3)	-2.5	(7)	2.3	2.8	0.8	(1)
INT	Int'l Shares	7.1	(1)	-7.9	(8)	-8.3	(10)	2.1	(9)	-2.1	(5)	-1.2	2.9	-0.4	(10)
Jana	Core Global	5.4	(13)	-12.4	(13)	-10.4	(13)	n.a	(0)	n.a	(0)	-3.4	4.7	-0.7	(11)
Mercer	Global Shares	5.7	(11)	-9.4	(11)	-7.9	(9)	2.9	(7)	n.a		-0.8	2.9	-0.3	(8)
MLC	NCIT	5.8	(10)	-7.5	(7)	-7.0	(8)	3.0	(6)	-1.1	(4)	0.0	4.0	0.0	(7)
RUS	ISF	6.6	(4)	-10.1	(12)	-8.6	(12)	1.9	(10)	n.a	(.)	-1.5	1.9	-0.8	(12)
RUS	GOF	6.5	(6)	-4.5	(4)	-5.4	(4)	n.a	(10)	n.a		1.6	n.a	n.a	()
TAM	International	5.5	(12)	-5.3	(6)	-5.8	(6)	3.9	(4)	0.3	(3)	1.3	8.7	0.1	(6)
TYN	Capital Int'l	5.0	(14)	-8.7	(9)	-6.0	(7)	3.4	(5)	-2.1	(6)	1.0	2.8	0.4	(4)
TYN	Multi-manager	2.9	(15)	n.a	(0)	n.a	(,,	n.a	(0)	n.a	(0)	n.a	n.a	n.a	(.)
WEL	Opportunities	6.2	(8)	-1.2	(1)	-2.6	(1)	5.7	(2)	1.5	(2)	4.4	5.5	0.8	(3)
Average	opportaintioo	6.0	(0)	-7.3	<u></u>	-6.9	<u>.</u>	3.3	(_)	-0.5		0.1	4.2	0.0	(0)
Value		0.0		1.0		0.0		0.0		0.0		0.1		0.0	
AB	Value	8.9	(3)	-11.1	(5)	-12.2	(6)	1.2	(5)	1.4	(3)	-5.2	5.9	-0.9	(6)
DFA	Value	10.8	(1)	-9.4	(4)	-8.3	(5)	3.6	(3)	2.6	(2)	-1.3	7.6	-0.2	(4)
GMO	Equity Trust	4.9	(5)	-11.5	(4)	-7.8	(3)	2.5	(3)	0.9	(4)	-0.8	2.0	-0.4	(5)
TAM	Marathon	10.0	(2)	-2.5	(0)	-3.6	(2)	5.8	(1)	4.8	(1)	3.5	5.0	0.7	(2)
TEM	Marathon	8.5	(4)	-3.4	(2)	-5.9	(2)	4.3	(2)	n.a	(1)	1.2	5.9	0.2	(2)
WEL	Value	3.7	(6)	-6.0	(2)	-3.3	(1)	n.a	(_)	n.a		3.8	3.2	1.2	(1)
Average	Value	7.8	(0)	-7.3	(0)	-6.8		3.5		2.4		0.2	4.9	0.1	(')
Growth		7.0		7.0		0.0		0.0		2.4		0.2	-1.0	0.1	
AB	Research	4.4	(3)	-15.6	(3)	-12.5	(3)	-0.7	(2)	-0.5	(1)	-5.4	18.1	-0.3	(3)
BNP	Growth	6.1	(1)	-1.7	(1)	-2.8	(1)	5.6	(1)	n.a	(1)	4.2	3.2	1.3	(1)
WEL	Growth	5.2	(2)	-11.9	(2)	-9.0	(2)	-0.7	(3)	-0.7	(2)	-2.0	8.6	-0.2	(1)
Average	Clowin	5.3	(~)	-9.7	(~)	-8.1	(~)	1.4	(0)	-0.6	(2)	-1.1	10.0	0.2	(2)
Indexed		0.0		5.7		0.1		1.7		-0.0		- 1.1	10.0	0.0	
	WiNZ	3.6		-10.7		-7.2		1.9		-3.2		-0.1	1.8	-0.1	
VAN	VVII NZ	4.6		-10.2		-7.6		2.2		-2.3		-0.6	0.5	-1.1	
Other		4.0		-10.2		-7.0		2.2		-2.0		-0.0	0.5	-1.1	
AMPCI	Extended	6.9		-0.3		-3.4		7.3		n.a		-7.5	14.6	-0.5	
AMPCI	S Responsible	10.4		-0.3		-5.7		4.1		n.a		1.3	8.4	-0.5	
Jana	High Alpha	8.2		-5.6		-7.5		n.a		n.a		-0.4	6.8	-0.1	
LMI	Emerging	9.7		-5.0		3.7		15.7		9.9		-0.4	4.7	-0.1	
NZAM	Multi-Manager	-1.2		-0.1		-0.2		7.5		7.6		-0.3 6.8	14.1	0.5	
TYN	SRI	4.2		-4.8		-0.2 n.a		n.a		n.a		0.8 n.a	n.a	0.5 n.a	
Indexes	0.4	7.4		· · ··0		n.d		n.d		11.a		n.d	11.a	n.d	
MSCI 0% h	hanha	5.3		-9.2		-7.0		2.7		-2.0					
MSCI 0% 1		5.5 15.2		-9.2		-7.0		5.0		-2.0					
	rging 0% hedged	7.9		-0.2		-4.0		5.0 15.9		2.0 8.0					
	ging 070 neugeu	1.5		1.2		4. 1		10.0		0.0					

Note:

The results above are on an unhedged basis. In some instances hedging the currency is integral to the management of the fund and the client will not experience the results shown above. One such manager is NZAM.

Table 3.4 – Other Funds

			3 Months	1 Year	3 Years	5 Years	3 Years
Manager		Hedging %	%	% p.a.	% p.a.	% p.a.	Volatility
ING	Topaz	100.0	5.8	11.6	7.2	8.8	n.a
ING	Topaz +	100.0	10.6	17.5	6.7	9.8	n.a
ING	Onyx	100.0	4.0	7.7	6.8	7.7	n.a
MAM	Aggressive	n.a	9.3	21.9	n.a	n.a	n.a
MGH		0.0	-1.6	0.0	-1.0	5.8	n.a
Mercer		0.0	0.6	4.0	5.0	n.a	n.a
NZAM/MAM	Balanced	n.a	4.8	13.2	n.a	n.a	n.a
TAM	Commodity	70.0	-0.1	-22.9	-3.8	1.3	n.a
TYN	JPMAAM	100.0	6.1	-3.0	5.0	8.5	n.a
TYN	Options	n.a	10.4	3.0	12.1	15.1	n.a
WEL	Commodity	0.0	-4.4	-17.1	n.a	n.a	n.a
Average			4.1	3.3	4.7	8.1	n.a
Index							
HFR FoF Hed	dged NZD		4.9	1.7	3.8	7.1	

Table 3.5 – New Zealand Bonds

		3 Mon	ths	1 Ye	ar	3 Yea	ars	5 Yea	ars	10 Ye	ars	Excess Return	3 Years Tracking Error	Inform	nation Ratio
Manager		% F	Rank	% p.a.F	Rank	% p.a. F	Rank	% p.a.F	Rank	% p.a.F	Rank	% p.a.	% p.a.		Rank
AB	Fixed Income	3.3	(1)	10.5	(2)	8.0	(3)	7.4	(3)	n.a		1.1	1.6	0.7	(3)
AMPCI	AIF F	2.5	(5)	12.3	(1)	9.4	(1)	8.2	(1)	7.8	(1)	2.5	1.9	1.3	(1)
AXAGI		2.8	(3)	7.4	(4)	6.4	(5)	n.a		n.a		-0.5	3.4	-0.2	(4)
ING	NZ Fixed Plus	1.9	(6)	2.2	(7)	4.8	(6)	6.3	(5)	6.9	(4)	-2.2	3.1	-0.7	(6)
ING	NZ Govt Bonds	1.5	(7)	7.0	(5)	n.a		n.a		n.a		n.a	n.a	n.a	
TAM		2.5	(4)	9.5	(3)	8.2	(2)	7.6	(2)	7.3	(3)	1.3	1.1	1.2	(2)
TYN		3.0	(2)	6.9	(6)	6.5	(4)	6.8	(4)	7.3	(2)	-0.4	2.0	-0.2	(5)
Average		2.5		8.0		7.2		7.3		7.3		0.3	2.2	0.4	
Indexes															
NZ Govt	Stock	1.7		7.1		6.9		6.7		6.8					
NZ All Sv	vaps	0.9		10.6		n.a		n.a		n.a					

Table 3.6 – Global Bonds (hedged)

		3 Mor	nths	1 Ye	ear	3 Yea	ars	5 Yea	ars	10 Ye	ars	Excess Return	3 Years Tracking Error	Inform	nation Ratio
Manager		%	Rank	% p.a.l	Rank	% p.a.F	Rank	% p.a. F	Rank	% p.a. F	Rank	% p.a.	% p.a.		Rank
AB	Global+ (Simltd)	7.8	(2)	14.8	(3)	8.2	(5)	8.3	(4)	n.a		-1.1	5.3	-0.2	(3)
AMPCI	AIF Q	8.1	(1)	15.6	(1)	6.4	(8)	6.9	(7)	7.6	(5)	-3.0	6.1	-0.5	(7)
AMPCI	AIF HQ	2.1	(10)	13.4	(4)	n.a		n.a		n.a		n.a	n.a	n.a	
AXAGI		5.0	(5)	12.6	(5)	8.1	(6)	n.a		n.a		-1.3	3.6	-0.4	(4)
BLK	Global Div	3.8	(7)	12.2	(6)	n.a		n.a		n.a		n.a	n.a	n.a	
DFA		3.2	(8)	8.9	(10)	8.3	(4)	7.9	(5)	n.a		-1.1	3.0	-0.4	(5)
ING	Int'l Fixed Int.	2.7	(9)	11.2	(8)	9.9	(1)	9.6	(1)	8.8	(2)	0.5	1.9	0.3	(1)
RUS	Global Bond	6.4	(4)	15.5	(2)	8.9	(2)	8.9	(2)	9.0	(1)	-0.5	4.8	-0.1	(2)
TAM	PIMCO	7.3	(3)	11.3	(7)	6.7	(7)	7.3	(6)	8.5	(4)	-2.6	5.1	-0.5	(8)
TYN	FFTW	4.6	(6)	11.0	(9)	8.5	(3)	8.4	(3)	8.5	(3)	-0.9	2.2	-0.4	(6)
Average		5.1		12.7		8.1		8.2		8.5		-1.2	4.0	-0.3	
A\$ Hedge	d														
INT		6.7		5.7		n.a		n.a		n.a		n.a	n.a	n.a	
Mercer		4.0		11.1		7.4		7.3		7.7		-5.1	6.3	-0.8	
WEL		4.5		13.5		8.6		7.4		n.a		2.8	17.2	0.2	
Index															
	Global Agg.	3.7		12.7		9.3		8.7		8.9					
Citigroup	WGBI	2.6		10.6		9.4		8.9		8.8					

Table 3.7 – Cash

		3 Mon	ths	1 Ye	ar	3 Yea	ars	5 Yea	ars	10 Ye	ars	Excess Return	3 Years Tracking Error	Inform	nation Ratio
Manager		% F	Rank	% p.a.F	Rank	% p.a. F	Rank	% p.a.F	Rank	% p.a.F	Rank	% p.a.	% p.a.		Rank
AB	NZ Cash	1.1	(4)	5.3	(6)	7.3	(7)	7.3	(7)	n.a		0.0	0.3	0.2	(7)
AMPCI	AIF Cash	1.0	(5)	5.7	(3)	7.7	(4)	7.6	(4)	6.8	(3)	0.5	0.2	2.1	(1)
AMPCI	Enhanced Yield	2.7	(1)	5.9	(2)	7.8	(3)	7.9	(2)	n.a		0.5	1.5	0.3	(6)
AXAGI		1.4	(2)	5.3	(5)	7.2	(8)	n.a		n.a		-0.1	0.6	-0.1	(8)
ING	Cash Plus	1.2	(3)	5.0	(8)	7.8	(2)	8.2	(1)	7.2	(1)	0.5	0.3	2.0	(3)
Mercer	NZ Money Mkt	0.9	(7)	5.6	(4)	7.6	(5)	7.5	(5)	n.a		0.3	0.2	1.7	(5)
TAM	·	0.8	(8)	5.2	(7)	7.5	(6)	7.5	(6)	6.7	(4)	0.2	0.1	2.0	(2)
TYN		1.0	(6)	6.1	(1)	8.0	(1)	7.8	(3)	7.1	(2)	0.7	0.4	1.9	(4)
Average		1.3		5.5		7.6		7.7		6.9		0.3	0.5	1.3	
Index 90 Day E	Bank Bill	0.7		4.7		7.3		7.3		6.6					

Notes:

- 1. Excess return is defined as gross return less benchmark return, i.e. value added.
- 2. Tracking error is the standard deviation of value added. The index applied may not in all cases be the benchmark adopted by the manager for the fund.
- 3. Information Ratio is value added divided by tracking error, i.e. risk adjusted performance.
- 4. The numbers shown are in some cases gross equivalents of the net returns achieved by the manager. Accordingly, for a gross investor the returns realised may be different to those shown above.
- 5. Relative out performance may be due to the nature of the fund rather than to superior performance.
- 6. The index share funds are benchmarked against the standard share index and not against their own index.
- 7. AB simulated returns were constructed by combining the actual returns with a simulated monthly hedge rate based on the index.

Section 4 – Wholesale Diversified Funds

Table 4.1 – Balanced Funds

					Gross R	eturns					Asset Al	location	Currency
	3 Mo	nths	1 Ye	ear	3 Ye	ears	5 Ye	ars	10 Y	ears	Growth	Income	Exposure
Manager	%	Rank	% p.a.	Rank	% p.a.	Rank	% p.a.	Rank	% p.a.	Rank	%	%	%
AMPCI	6.6	(7)	1.5	(6)	2.6	(1)	7.4	(3)	5.7	(4)	68.0	32.0	20.0
ASB	9.2	(4)	n.a		n.a		n.a		n.a		n.a	n.a	n.a
AXAGI	9.7	(3)	5.8	(1)	1.5	(4)	7.6	(1)	7.6	(1)	69.8	30.2	26.3
ING	9.8	(2)	2.4	(4)	0.9	(5)	6.7	(5)	5.6	(5)	68.6	31.4	18.7
Mercer	11.2	(1)	4.2	(2)	0.7	(6)	6.2	(6)	n.a		66.0	34.0	16.8
TAM	6.8	(6)	3.6	(3)	2.3	(2)	7.5	(2)	6.9	(2)	56.1	43.9	22.3
TYN	8.4	(5)	2.3	(5)	2.0	(3)	7.1	(4)	5.8	(3)	60.2	39.8	22.1
Average	8.8		3.3		1.7		7.1		6.3		64.8	35.2	21.0

Table 4.2 – Conservative Funds

					Gross R	eturns					Asset Al	location
	3 Mo	nths	1 Ye	ear	3 Ye	ears	5 Ye	ears	10 Y	ears	Growth	Income
Manager	%	Rank	% p.a.	Rank	% p.a.	Rank	% p.a.	Rank	% p.a.	Rank	%	%
AMPCI	3.5	(4)	6.5	(2)	6.8	(1)	8.2	(1)	6.8	(1)	30.8	69.2
ASB	7.1	(2)	n.a		n.a		n.a		n.a		39.6	60.3
AXAGI	7.8	(1)	6.7	(1)	2.7	(2)	7.0	(2)	6.3	(2)	48.3	51.7
TAM	5.6	(3)	5.8	(3)	n.a		n.a		n.a		33.6	66.4
Average	6.0		6.3		4.8		7.6		6.6		38.1	61.9

Table 4.2 – Growth Funds

					Gross R	eturns					Asset Al	location
	3 Mo	nths	1 Ye	ear	3 Ye	ears	5 Ye	ears	10 Y	ears	Growth	Income
Manager	%	Rank	% p.a.	Rank	% p.a.	Rank	% p.a.	Rank	% p.a.	Rank	%	%
AMPCI	9.5	(4)	-4.9	(3)	-1.7	(2)	6.2	(2)	3.8	(2)	95.5	4.5
ASB	11.1	(2)	n.a		n.a		n.a		n.a		79.3	20.7
AXAGI	11.8	(1)	5.7	(1)	0.2	(1)	7.4	(1)	5.5	(1)	84.0	16.0
TAM	9.9	(3)	1.1	(2)	n.a		n.a		n.a		75.7	24.3
Average	10.5		0.6		-0.8		6.8		4.6		83.6	16.4

Section 5 – Additional information

(Funds under management relate to the total organisation)

	Acronym	FUM \$m		Acronym	FUM \$m
AllianceBernstein	AB	n.a	Milford Asset Management	MAM	360.0
AXA Global Investors	AXAGI	4,081.0	MLC	MLC	n.a
ASB Group Investments	ASB	n.a	MGH Asset Management Ltd	MGH	n.a
AMP Capital Investors	AMPCI	11,289.0	Mercer	Mercer	1,835.3
Brook Asset Management	BAM	986.0	Mint Asset Management	MNT	71.0
BlackRock Investment Management	BLK	n.a	New Zealand Assets Management	NZAM	694.0
BNP Paribas Inv Management	BNP	n.a	Russell Investment Group	RUS	n.a
Dimensional Fund Advisors	DFA	n.a	Pie Funds	PIE	6.0
Fisher Funds Management	FIS	732.9	SmartShares	SMS	308.5
GMO	GMO	n.a	Tower Asset Management	TAM	3,703.2
ING	ING	6,753.6	Tower Commodities	TCO	n.a
Intech	INT	n.a	Templeton	TEM	n.a
Jana	Jana	n.a	Tyndall Investment Management	TYN	3,582.9
Goldman Sachs JBWere	GSJBW	n.a	Vanguard Investments Australia	VAN	n.a
Legg Mason, Inc.	LMI		Wellington Management Company	WEL	n.a

ABOUT MELVILLE JESSUP WEAVER

Melville Jessup Weaver is a New Zealand firm of consulting actuaries. The areas in which we provide advice include superannuation, employee benefits, administration, retirement consulting, life insurance, general insurance, health insurance, accident insurance, asset consulting and information technology. The firm is an alliance partner of Towers Perrin, a global professional services firm that helps organisations around the world optimise performance through effective people, risk and financial management. Towers Perrin has offices in 25 countries and the business covers HR services, Reinsurance and Tillinghast.

Asset consulting services:

- Establish investment objectives.
- Determine long-term investment strategies.
- Determine the optimum investment manager configuration.
- Provide quantitative and qualitative analysis of investment performance.
- Asset/Liability modelling.
- Performance monitoring against investment objectives and competitors.
- Manager selection exercises utilising Towers Perrin's expertise.

Section 6 - KiwiSaver Diversified Funds

6.1 – Introduction

Since its launch in July 2007, KiwiSaver schemes have grown such that they now hold assets of over \$4 billion. Looking to the future the performance achieved by these KiwiSaver funds will be the benchmark against which other funds performance is judged. Accordingly we now include the results for a selection of the main KiwiSaver providers. There is just 2 years performance at this moment and we will continue to show the results for the Wholesale funds in Section 4 for the immediate future.

6.2 - KiwiSaver Diversified Funds Investment Results

6.2.1 – Aggressive Funds

				Gross Returns									
		Growth Assets	3 Mon	iths	1 Yea	ar	2 Yea	ars	Inceptio	on			
Provider	Fund Name	%	% p.a.	Rank	%	Rank	% p.a.	Rank	% p.a. F	Rank			
AMP KiwiSaver	AMP Aggressive Fund	90.0	7.7	(5)	-9.6	(6)	-11.7	(6)	-11.7	(6)			
AXA KiwiSaver	Growth Fund	85.0	12.4	(1)	4.4	(1)	-9.1	(4)	-9.1	(4)			
ASB KiwiSaver	Growth Fund	80.0	11.0	(3)	-1.8	(4)	-8.7	(3)	-8.7	(3)			
SIL KiwiSaver	Growth Fund	80.0	11.8	(2)	1.6	(2)	-6.6	(1)	-6.6	(1)			
TOWER KiwiPlan	Growth Fund	77.5	10.0	(4)	0.3	(3)	-8.2	(2)	-8.2	(2)			
AMP KiwiSaver	AMP Growth Fund	77.0	6.8	(6)	-7.3	(5)	-9.1	(5)	-9.1	(5)			
Average		81.6	10.0		-2.1		-8.9		-8.9				

6.2.2 – Balanced Funds

			Gross Returns									
		Growth Assets	3 Mor	iths	1 Ye	ar	2 Yea	ars	Inceptio	on		
Provider	Fund Name	%	% p.a.	Rank	%	Rank	% p.a.	Rank	% p.a. F	Rank		
SIL KiwiSaver	Balanced Growth Fund	65.0	10.1	(1)	3.0	(2)	-3.5	(5)	-3.5	(5)		
AMP KiwiSaver	ING Balanced Fund	62.0	8.6	(4)	-2.0	(9)	-3.3	(4)	-3.3	(4)		
AMP KiwiSaver	AMP Balanced Fund	60.0	5.6	(8)	-1.7	(8)	-4.0	(6)	-4.0	(6)		
ASB KiwiSaver	Balanced Fund	60.0	9.2	(3)	0.6	(4)	-4.7	(8)	-4.7	(8)		
AXA KiwiSaver	Balanced Fund	60.0	10.0	(2)	7.0	(1)	-4.4	(7)	-4.4	(7)		
AMP KiwiSaver	Tower Balanced Fund	55.0	7.8	(6)	0.5	(5)	-2.1	(2)	-2.1	(2)		
Tower KiwiPlan	Balanced Fund	55.0	6.9	(7)	2.6	(3)	-1.4	(1)	-1.4	(1)		
AMP KiwiSaver	Tyndall Balanced Fund	53.0	8.3	(5)	-1.1	(7)	-5.0	(9)	-5.0	(9)		
AMP KiwiSaver	AMP Mod. Balanced	51.0	5.0	(9)	-1.0	(6)	-2.5	(3)	-2.5	(3)		
Average		57.9	7.9		0.9		-3.5		-3.5			

6.2.3 – Moderate Funds

						Gross Re	turns			
		Growth Assets	3 Mor	nths	1 Ye	ar	2 Yea	ars	Inceptio	on
Provider	Fund Name	%	% p.a.	Rank	%	Rank	% p.a.	Rank	% p.a. I	Rank
SIL KiwiSaver	Balanced Fund	50.0	8.3	(1)	4.2	(2)	-0.4	(3)	-0.4	(3)
ASB KiwiSaver	Moderate Fund	40.0	7.0	(2)	3.1	(3)	-0.4	(4)	-0.4	(4)
AMP KiwiSaver	AMP Moderate Fund	38.0	4.0	(4)	1.1	(4)	0.2	(2)	0.2	(2)
SIL KiwiSaver	Cons. Balanced Fund	35.0	6.5	(3)	5.0	(1)	2.1	(1)	2.1	(1)
Average		40.8	6.5		3.4		0.4		0.4	

6.2.4 - Conservative Funds

					(Gross Re	turns			
		Growth Assets	3 Mon	ths	1 Ye	ar	2 Yea	ars	Incepti	on
Provider	Fund Name	%	% p.a.	Rank	%	Rank	% p.a.	Rank	% p.a. I	Rank
Tower KiwiPlan	Conservative Fund	30.0	5.7	(2)	4.8	(6)	2.1	(7)	2.1	(7)
AMP KiwiSaver	AMP Cons. Fund	25.0	3.1	(7)	5.5	(5)	4.3	(2)	4.3	(2)
AXA KiwiSaver	Conservative Fund	25.0	6.0	(1)	8.4	(1)	n.a		n.a	
AMP KiwiSaver	AMP Default Fund	20.0	2.5	(8)	2.9	(8)	3.1	(5)	3.1	(5)
ASB KiwiSaver	Conservative Fund	20.0	3.8	(5)	6.1	(4)	3.9	(4)	3.9	(4)
AXA KiwiSaver	Income Plus Fund	20.0	5.3	(3)	8.1	(2)	2.5	(6)	2.5	(6)
Tower KiwiPlan	Default Fund	20.0	3.4	(6)	4.6	(7)	3.9	(3)	3.9	(3)
SIL KiwiSaver	Conservative Fund	20.0	4.6	(4)	6.2	(3)	5.1	(1)	5.1	(1)
Average		22.5	4.3		5.8		3.6		3.6	

6.3 – KiwiSaver Diversified Funds Asset Allocation

6.3.1 – Aggressive Funds

		NZ	Global	NZ	Global	Alt	Growth	NZ	Global	Cash	Income
Provider	Fund Name	Shares	Shares	Property	Property	Assets	Assets	Bonds	Bonds		Assets
AMP KiwiSaver	AMP Aggressive Fund	20.5	59.5	15.6	0.0	0.0	95.6	0.0	2.0	2.4	4.4
AXA KiwiSaver	Growth Fund	23.4	56.4	2.0	5.7	2.5	90.1	6.0	1.5	2.5	9.9
ASB KiwiSaver	Growth Fund	24.7	44.4	0.0	9.8	0.0	78.9	11.7	5.7	3.7	21.1
SIL KiwiSaver	Growth Fund	26.1	45.4	7.6	6.0	0.0	85.1	8.3	6.0	0.7	14.9
TOWER KiwiPlan	Growth Fund	21.8	49.1	4.8	0.0	0.0	75.7	8.5	6.2	9.6	24.3
AMP KiwiSaver	AMP Growth Fund	17.7	51.4	13.6	0.0	0.0	82.7	3.1	7.5	6.7	17.3
Average		22.4	51.0	7.3	3.6	0.4	84.7	6.3	4.8	4.3	15.3

6.3.2 - Balanced Funds

		NZ	Global	NZ	Global	Alt	Growth	NZ	Global	Cash	Income
Provider	Fund Name	Shares	Shares	Property	Property	Assets	Assets	Bonds	Bonds		Assets
SIL KiwiSaver	Balanced Growth	15.7	41.2	11.4	0.0	0.0	68.3	11.4	19.0	1.3	31.7
AMP KiwiSaver	ING Balanced Fund	18.5	36.5	11.6	0.0	2.1	68.7	17.2	12.1	2.1	31.4
AMP KiwiSaver	AMP Balanced Fund	21.1	37.5	6.3	5.0	0.0	69.9	16.2	11.0	2.9	30.1
ASB KiwiSaver	Balanced Fund	19.8	29.6	0.0	9.8	0.0	59.2	18.5	15.3	7.1	40.8
AXA KiwiSaver	Balanced Fund	15.9	42.0	2.0	2.6	2.5	65.1	28.5	3.9	2.5	34.9
AMP KiwiSaver	Tower Balanced Fund	13.6	31.9	10.7	0.0	0.0	56.2	20.4	10.2	13.3	43.9
Tower KiwiPlan	Balanced Fund	13.5	31.9	10.7	0.0	0.0	56.1	20.4	10.2	13.3	43.9
AMP KiwiSaver	Tyndall Balanced	12.0	35.1	9.7	0.0	0.0	56.8	9.4	18.5	15.3	43.2
Average		16.3	35.7	7.8	2.2	0.6	62.5	17.7	12.5	7.2	37.5

6.3.3 - Moderate Funds

		NZ	Global	NZ	Global	Alt	Growth	NZ	Global	Cash	Income
Provider	Fund Name	Shares	Shares	Property	Property	Assets	Assets	Bonds	Bonds		Assets
SIL KiwiSaver	Balanced Fund	16.0	29.3	5.0	3.8	0.0	54.0	24.2	13.9	7.9	46.0
ASB KiwiSaver	Moderate Fund	13.9	16.8	0.0	8.9	0.0	39.5	26.3	20.0	14.1	60.5
AMP KiwiSaver	AMP Moderate Fund	9.2	26.9	7.8	0.0	0.0	43.9	12.5	24.0	19.6	56.1
SIL KiwiSaver	Cons. Balanced Fund	11.0	21.6	3.6	3.0	0.0	39.3	30.0	17.8	13.0	60.7
Average		12.5	23.7	4.1	3.9	0.0	44.2	23.2	18.9	13.7	55.8

6.3.4 - Conservative Funds

		NZ	Global	NZ	Global	Alt	Growth	NZ	Global	Cash	Income
Provider	Fund Name	Shares	Shares	Property	Property	Assets	Assets	Bonds	Bonds		Assets
Tower KiwiPlan	Conservative Fund	10.5	17.3	5.8	0.0	0.0	33.6	24.0	18.6	23.8	66.4
AMP KiwiSaver	AMP Cons. Fund	6.4	18.8	5.8	0.0	0.0	31.0	15.6	29.5	23.9	69.0
AXA KiwiSaver	Conservative Fund	5.3	14.0	3.9	0.0	0.0	23.2	3.9	6.5	66.4	76.8
AMP KiwiSaver	AMP Default Fund	8.9	10.9	0.0	0.0	0.0	19.8	29.3	23.9	27.0	80.2
ASB KiwiSaver	Conservative Fund	6.0	14.0	0.0	1.8	0.0	21.9	35.2	14.1	28.8	78.1
AXA KiwiSaver	Income Plus Fund	4.8	12.0	3.9	0.0	0.0	20.6	14.2	9.4	55.7	79.3
Tower KiwiPlan	Default Fund	7.0	12.1	1.9	1.5	0.0	22.6	36.8	20.6	20.0	77.4
SIL KiwiSaver	Conservative Fund	10.5	17.3	5.8	0.0	0.0	33.6	24.0	18.6	23.8	66.4
Average		7.0	14.2	3.0	0.5	0.0	24.7	22.7	17.5	35.1	75.3

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