% Simplicity | Research

Introduction

Simplicity Research provides research and insights into investment and social issues impacting New Zealanders.

Our first project tests whether calculators provided by KiwiSaver managers on their marketing websites provide the public with a reasonable long-term forecast of their KiwiSaver balance at age 65.

Currently, KiwiSaver managers can use their own assumptions to forecast a KiwiSaver member's future wealth, or engage external experts or industry websites for assumptions.

The Financial Markets Authority (**"FMA"**) and KiwiSaver manager supervisors (**"Supervisors"**) are responsible for monitoring the content and accuracy of the information appearing on KiwiSaver manager websites. Their benchmark for acceptance of assumptions as reasonable is that they are not misleading.

This paper examines whether the current assumptions are reasonable, or potentially misleading.

Inputs

For this survey, the control data assumptions were:

- a new member who was 20 years old;
- earned $40,000 per annum before tax;
- had no previous balance;
- contributed the minimum 3% employee contribution; and
- received the minimum 3% employer contribution.

In total 16 managers were surveyed, as was the KiwiSaver retirement calculator on Sorted's website (*www.sorted.org.nz*). Sorted's website was used as an independent source for the projections.

Three out of the 16 managers (AON, Booster & Superlife) referred members directly to the sorted.org.nz calculator rather than provide their own calculators.

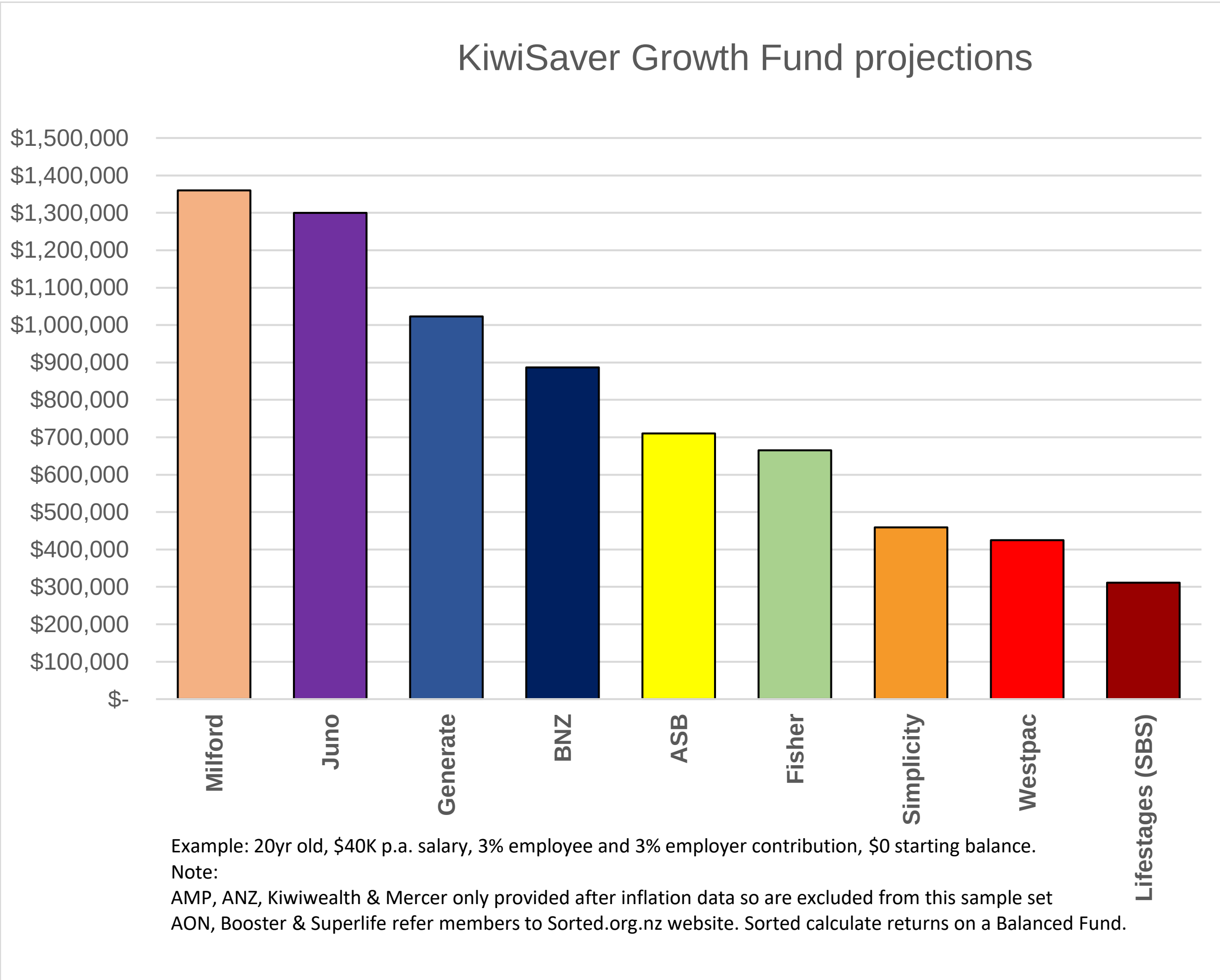
Appendix 1 includes the raw data and all assumptions which have been sourced from the fund manager websites.

Outcomes

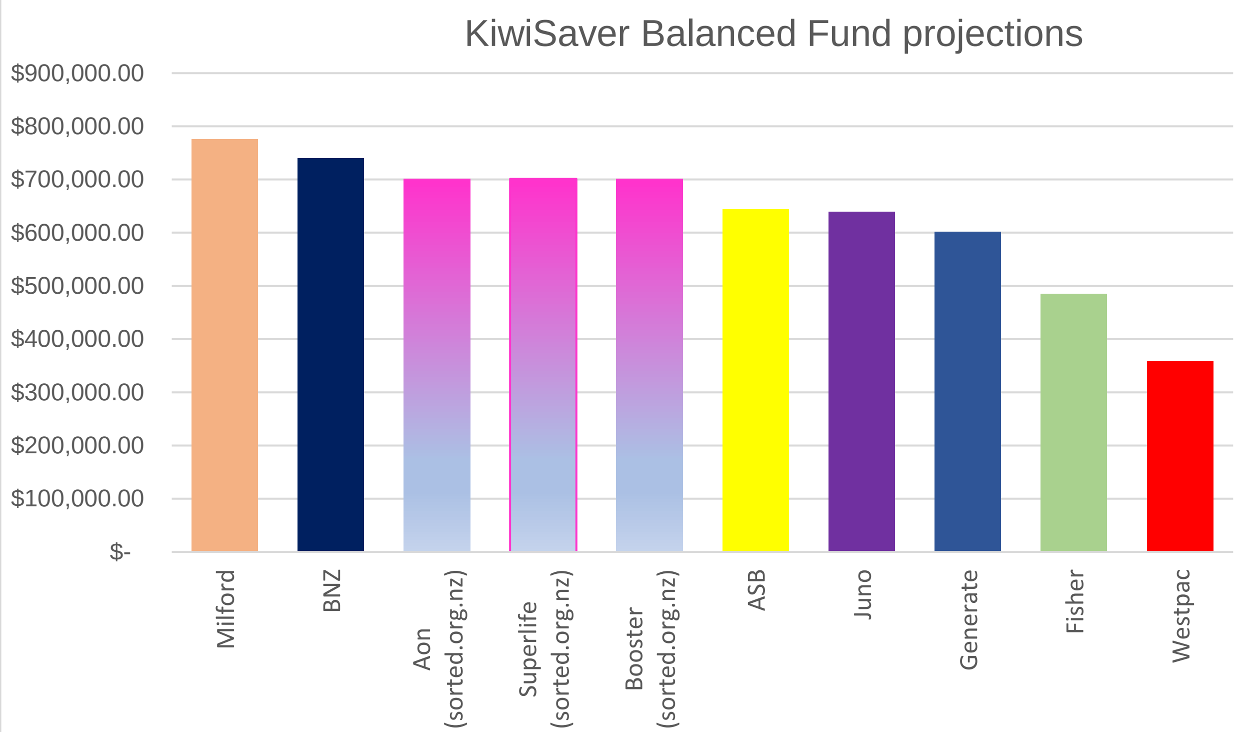
Using the inputs listed above, projections for a KiwiSaver growth funds ranged from $311,215 to $1.36 million. For balanced funds the range was from $357,694 to $775,400.

While we expected to see some variance in the ranges for each risk profile, we were surprised with a $1 million discrepancy. Our expectations were for a variance in the $100,000 to $200,000 range.

Growth and Balanced fund outcomes are shown below for those funds that we could compare on similar terms.



Example: 20yr old, $40K p.a. salary, 3% employee and 3% employer contribution, $0 starting balance.
Note:
AMP, ANZ, Kiwiwealth & Mercer only provided after inflation data so are excluded from this sample set
AON, Booster & Superlife refer members to Sorted.org.nz website. Sorted calculate returns on a Balanced Fund.



Example: 20yr old, $40K p.a. salary, 3% employee and 3% employer contribution, $0 starting balance.

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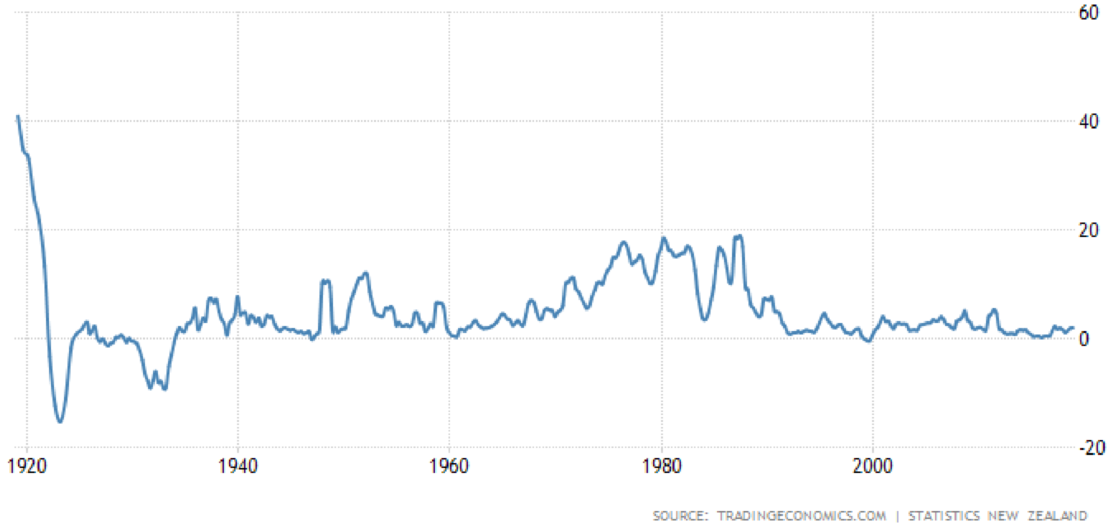
Variance in assumptions

Inflation

Managers assume different inflation rates with a majority choosing 2% per annum.

The range was between 0% (Lifestages) to 3.2% (Mercer). The charts below illustrate New Zealand's inflation rate over the past 10 years, and since 1920. Current inflation, at 1.9%, is historically low.

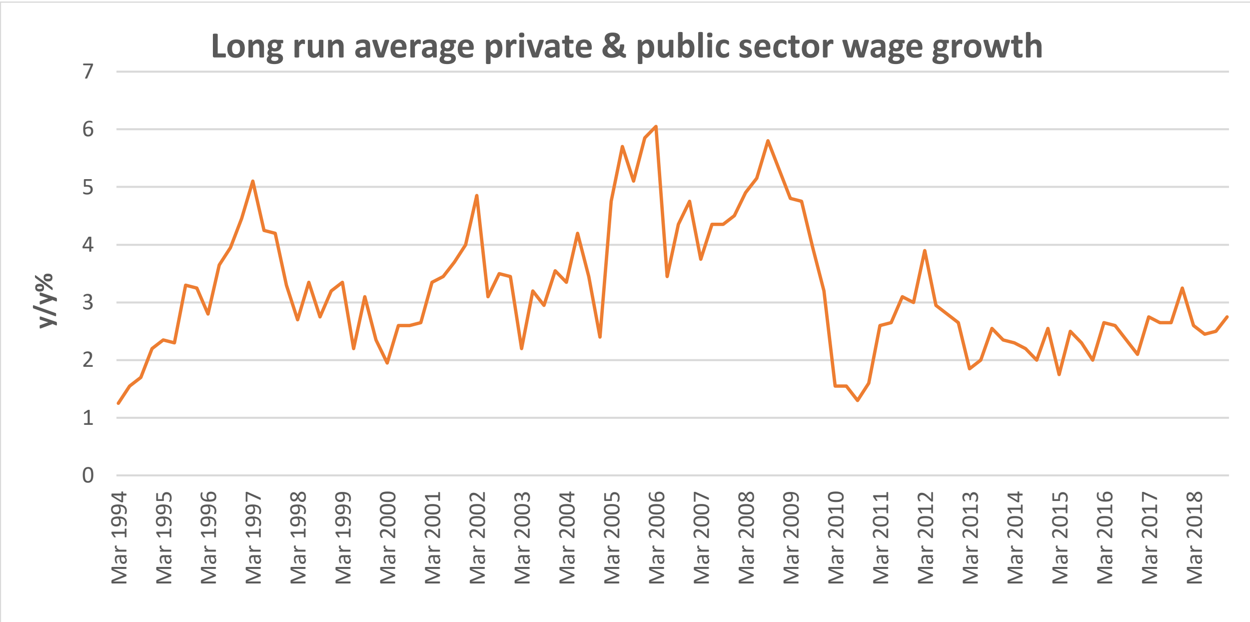


Four managers only provided projections and assumptions on an after-inflation basis, to show the true purchasing power of their capital. Most provided data in future dollar terms (not inflation adjusted).

Wage inflation

In many instances, wage growth inflation (i.e. salary increases) appeared on the surface to be high at around 2.5% to 3% however these proved to be around long run averages (1994 to 2018).

As at the September 2018 quarter end, Statistics NZ data showed wage growth was 1.8% per annum. The average hourly earnings growth has averaged 3% since March 1994 according to Statistics NZ data (RBNZ Labour Market (M9) tables). This is illustrated below.



Since the Global Financial Crisis (GFC) in 2007/08 average annual wage growth has been between 1.3% (trough) and 3.9% (peak). For the most part of the last decade wage growth has been below 3%.

Tax

There was large variance in tax assumptions. One manager (Juno) did not deduct any tax from their forecasts, resulting in their numbers appearing at the upper end of the scale.

It is arguably misleading to display forecast projections without deducting tax at the individuals PIR rate or at least assuming and noting clearly that a static PIR rate is assumed.

Most managers assumed 28% tax was deducted (the highest PIR). Some used an interactive approach which adjusted the tax rate based on the forecast future earnings of the member.

Conclusion

The underlying hypothesis we tested is whether the forecasts appearing on KiwiSaver manager websites are realistic, consistent across managers, and of any use to members for wealth projection and manager comparison purposes.

Our findings show that the results being produced are inconsistent, misleading and of very little use to a member seeking to reasonably project their future retirement income.

Given an average KiwiSaver member's inability to differentiate inputs and outputs, there is a very real possibility that many will believe projections are likely to be achieved, no matter how large the number.

This not only influences the composition of the KiwiSaver market based on questionable outputs, it may also lead to KiwiSaver members underproviding for their retirement.

Given some inputs and assumptions are without precedent, we question whether some of the outputs are being inflated to entice members to invest.

Tax is an integral part of an investment return and must be included in any projections. It is naïve and misleading to assume no tax is deducted from member returns.

Only one of the managers surveyed disclosed that the projection assumptions were provided by an independent actuarial company.

We assume the other data has been generated internally by managers (or Sorted) using either historical data or their own forecasts.

Recommendations

1) The KiwiSaver industry be required to use a standard set of underlying assumptions in order to forecast a KiwiSaver member's future wealth.
This is necessary for sensible retirement planning, and to avoid the risk of members under providing for their retirement.

We note that this is already the approach mandated for KiwiSaver Annual Member Statements.

Standard assumptions, or at least a set of assumptions giving a sensible range of outcomes, can be achieved by either;

a) mandating that the same set of assumptions are required for all future income projections, or;

b) that an independent actuary be required to sign off that the assumptions made by a manager and used to market their fund are reasonable.

2) Retirement saving outputs should be provided on a before and after inflation basis, to show the impact of inflation on the purchasing power of a member's money.
Pre-inflation numbers can easily create an overly optimistic forecast of a members purchasing power in retirement.

3) Tax should be deducted at the PIR applicable for the member based on their income, and be adjusted in line with the forecast income growth over time.
Tax assumptions have a major impact on member purchasing power, and can create a pessimistic impression of purchasing power in retirement.

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Appendix 1 – Assumptions for Sorted, Simplicity, Juno, Generate & Milford

	Sorted	Simplicity	Juno	Generate	Milford
Return assumption Conservative, Balanced & Growth	2.4%, 2.9%, 3.3%	4.18%, 5.33%, 6.67%	4%, 5.5%, 10%	4.65%, 6.84%, 8.89%	2%,4%,6%,8%,10%
Return assumption	post tax	post tax	pre tax	post tax and fees	post tax and fees
Return basis	Average of provider data	MJW modelling	Offshore equity returns less 2%	5yr returns 2013-2018 (from Sorted)	Self select return - net of tax and fees
Inflation assumption	2%	1%	2%	2%	2%
Employee contributions	3%	3%	3%	3%	3%
Employee contributions increase	3.5%	1%	2.5%	3%	2.5%
Employer contribution	3%	3%	3%	3%	3%
Employer contribution (ESCT adjusted)	Yes	Yes	Yes	Yes	Yes – interactive
Fund management fees taken into account	Yes	Yes	No fees within funds	Yes - based on sorted.org data	Self select return - assume fees taken into account
Member fee taken into account	not specifically disclosed	not specifically disclosed	not specifically disclosed	not specifically disclosed	not specifically disclosed
PIR	10.5%, 17.5% or 28%	17.5%	0%	28% based on	No specifically defined
Tax credit taken into account	Yes	Yes	Yes	Yes	Yes
Only Growth funds	n/a	$459,092	$1,299,839	$1,023,000	$1,359,946
Inflation adjusted terms	n/a	n/a	n/a	n/a	$557,846
Balanced Fund	$701,240	n/a	$639,624	$602,000	$775,400
Inflation adjusted terms	$288,304	n/a	n/a	n/a	$318,067
Note:					Return assumed 8% (growth) 6% (Balanced)

Appendix 1 – Assumptions for ASB, Fisher, Westpac, BNZ & ANZ

	ASB	Fisher	Westpac	BNZ	ANZ
Return assumption Conservative, Balanced & Growth	4.49%, 5.66%, 6.31%	2.34%, 3.88%, 5.15%	2.7%, 3.9%, 4.6%	4.4%, 5.4%, 6.1%	2.3%, 3.8%, 5.1%
Return assumption	post tax and fees	post tax and fees	post tax and fees	post tax and fees	post tax and fees
Return basis	ASB provided	Fisher provided	Westpac	BNZ	ANZ
Inflation assumption	2%	2%	2%	2%	2%
Employee contributions	3%	3%	3%	3%	3%
Employee contributions increase by…per annum	2.70%	3%	not disclosed	3%	2.50%
Employer contribution	3%	3%	3%	3%	3%
Employer contribution (ESCT adjusted)	Yes – interactive	Yes	Yes	Yes	Yes
Fund management fees taken into account	Yes	Yes	Yes	Yes	Yes
Member fee taken into account	Yes	not specifically disclosed	Yes	Yes	Yes
PIR	28%	No specifically defined	10.5%, 17.5% 28%	28%	28%
Tax credit taken into account	Yes	Yes	Yes	Yes	Yes
Only Growth funds	$710,198	$665,095	$424,900	$886,774	only after inflation
Inflation adjusted terms	$291,802	$272,820	$227,465	$363,752	$255,000
Balanced Fund	$644,074	$485,437	$357,694	$739,836	
Inflation adjusted terms	$264,633	$199,125	$194,321	$303,478	$185,000

Appendix 1 – Assumptions for Lifestages, Kiwiwealth, Mercer, AMP, AON, SuperLife & Booster

	Lifestages (SBS)	Kiwiwealth	Mercer	AMP	AON/SuperLife/Booster
Return assumption Conservative,	4%	7.09% (pre tax)	4.4%, 5.8%, 6.5%	2.51%, 3.79%, 4.62%	2.4%, 2.9%, 3.3%
Return assumption	post tax and fees	Calculation result is post tax and fees		Post tax at 28%	post tax
Return basis	Lifestages	Kiwiwealth		AMP	Average of provider data
Inflation assumption	0%	not specifically stated	3.20%	2%	2%
Employee contributions	3%	3%	3%	3%	3%
Employee contributions increase	0%	2.90%	3.20%	not specifically stated	3.5%
Employer contribution	3%	3%	3%	3%	3%
Employer contribution (ESCT adjusted)	Yes	Yes	Yes	Yes	Yes
Fund management fees taken into account	Yes	Yes	Yes	Yes	Yes
Member fee taken into account	not stated	Yes	Yes	Yes	not specifically disclosed
PIR	10.5% (assumes salary does not change)	28%	28%	10.5%, 17.5% 28%	10.5%, 17.5% or 28%
Tax credit taken into account	not stated	Yes	Yes	Yes	Yes
Only Growth funds	$311,255				n/a
Inflation adjusted terms			$244,000	$213,202	n/a
Balanced Fund					$701,240
Inflation adjusted terms		$210,000		$171,216	$288,304
Note:		KW show possible ranges from $170,000 to $250,000			