REPORT

To: ONE Joint Investment Board
From: Colin Macdonald, Manager of Investments and Keith Taylor, Chief Investment Officer
Date: May 20, 2020
Re: Investment Outcomes
Report: 20-011

1. Recommendations

It is recommended that the Board:

1.1. Approve an investment outcomes framework that will guide the allocation of investments for prudent investor mandates.

1.2. Approve an asset allocation to be assigned to each of the investment outcomes.

2. Summary

- The new outcomes framework differs significantly from what Municipal Councils approved in the Investment Policy Statement (IPSs) and Municipal Client Questionnaire (MCQs). Because ONE JIB must discharge its prudential obligation within the existing IPS and MCQ four key questions must be answered by ONE JIB:
  - (i) How best to exercise its fiduciary duty while respecting Council approved Investment Policy Statements and Municipal Client Questionnaires?
  - (ii) Is the standard deviation estimated appropriate considering each the municipality's risk profile?
  - (iii) How much foreign exposure is appropriate?
  - (iv) In the case of Canadian bond exposure - what mix should be used of the Canadian Government Bond Fund (short duration) versus Canadian Corporate Bond Fund (intermediate duration with somewhat higher credit exposure)?
- ONE Investment worked with its Investment Advisory Committee to develop investment outcomes that would allow staff to translate municipal IPSs and cash flow forecasts into draft investment plans that include asset allocations
- While trying to operationalize the outcomes framework, ONE Investment staff experienced challenges in translating the information provided by the municipalities without imposing a significant degree of judgement.
- To address subjectivity, the investment outcomes have been reviewed to better align with the municipal objectives and cash flow forecasts while also allowing better assignment to appropriate investment allocations in a consistent and defensible manner.

- The new outcomes framework is not consistent with the Council approved IPSs and MCQs.
- ONE Investment funds are designed to be low risk, which influenced the allocation weights in each of the outcomes.
- Exposure to global equities and fixed income provide higher return potential and diversification benefits not available under the Legal List and are limited to a maximum of 70% of each investment outcome allocation.

3. Background

ONE Investment worked with municipal finance experts to devise a series of outcomes aligned with municipal reserve and reserve fund objectives

Over the last year, ONE Investment has worked with the staff from the Founding Municipalities (FMs) to clearly define their investment needs. By aligning their cash flow forecasts with investment outcomes, ONE JIB has a better understanding of the future use of funds and required investment horizons. When combined with the Council approved IPS and MCQ, ONE JIB has the necessary information and tools to guide the investment decisions which will ultimately find their way into ONE JIB's Investment Plan for each FM.

As ONE Investment staff worked with municipalities a series of outcomes emerged, as outlined in the table below, to differentiate the ultimate uses of funds available for investment. This helped inform the draft Investment Plans shared with municipal Councils and which were agreed upon by ONE Investment's Investment Advisory Committee (IAC).

Investment Outcome	Objective(s)
Contingency	Contributions for unexpected events
Stable Return	To generate stable returns to fund recurring needs
Target Date	Contributions toward specific projects, mitigate inflation impacts and meet target funding requirements. May also include contributions to asset management reserves

All FMs used this initial framework to inform IPSs and MCQs.

The IAC helped ONE Investment determine appropriate allocations for each outcome to aid in drafting Investment Plans

For each outcome, the IAC developed allocations based on the funds that would be initially offered to the FMs (Appendix 1). ONE Investment staff used these allocations to guide the development of the draft Investment Plans. However, in implementing the untested framework staff noticed that many judgement calls were required regarding risk tolerance and assignment of funds to appropriate outcomes. Additionally, applying the framework ultimately yielded highly conservative draft Investment Plans with lower than anticipated return expectations.

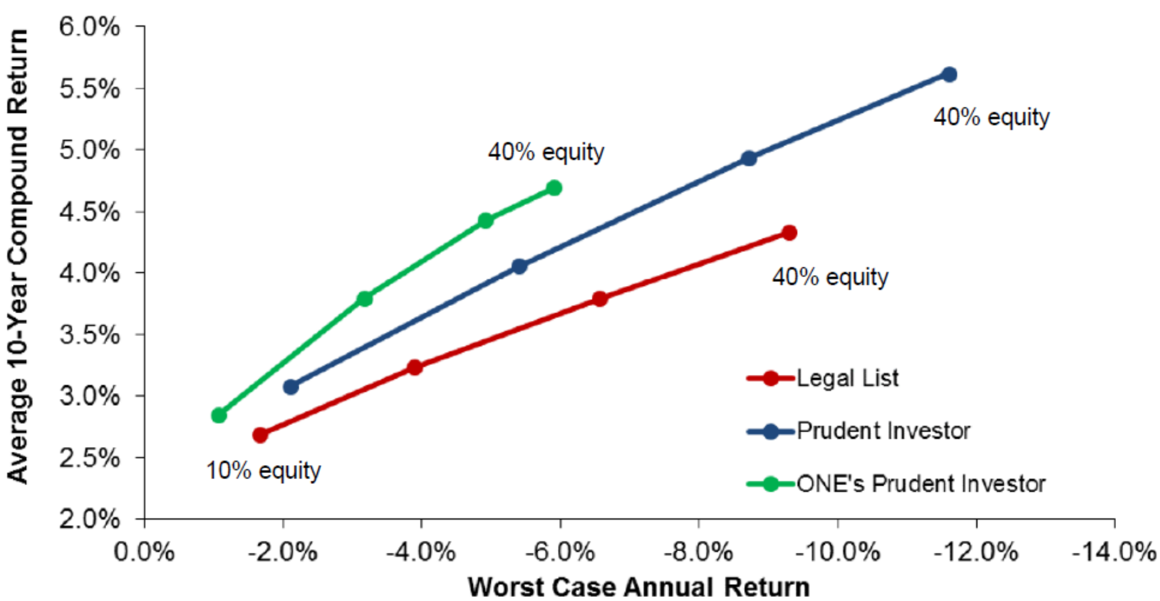
4. Analysis

When all FM investment work was examined as a complete package, an opportunity presented itself to review the investment plan to improve the return profile.

ONE Investment selected investment products and managers which focus on low risk which presented on opportunity to increase the allocation of equity and returns – helping to offset tax rate increases as well as continuing to focus on the preservation and growth of principal.

The projected overall risk level of the asset allocations for ONE Investment prudent investor offerings was evaluated by an external consultant, Aon, and has been presented in Chart 1. Aon's analysis includes a proprietary risk measure that measures worst-case annual returns via a Monte Carlo analysis. The key point demonstrated in the chart is that moving from the legal list investment regime increases the return potential but can also increase the overall investment risk also.

Chart 1
Efficient Frontiers



NOTE: The data in Chart 2 was provided by the investment consultant, Aon. The 'worst case annual return' represents an average return of 50 of the worst outcomes from 1000 scenarios run. Because it is an average, it does not preclude results lower than this average in any single year. The blue prudent investor line was created by Aon to represent a generic prudent investor efficient frontier.

Lower risk investment funds allow meaningful equity allocations with acceptable amount of risk.

One of the primary goals of the prudent investor regime is to generate higher returns at acceptable levels of risk. ONE Investment prudent investor funds are relatively low risk strategies by design; hence allocations can assume higher equity weightings while still maintaining reasonable risk levels. The risk return characteristics of the ONE Investment prudent investor funds should allow superior returns without necessarily involving more risk. It allows flexibility to increase equity allocations to achieve higher returns while still assuming reasonable levels of investment risk.

ONE JIB needs to establish a methodology to guide the process of assigning investment allocations.

To leverage the increased return potential contemplated in the 'efficient frontiers' modeling, ONE Investment re-imagined the outcomes framework as is summarized in the Table 1. The revised framework has two main factors – outcomes and investment horizon.

From an outcomes perspective, it defines the anticipated use of the funds under four different categories. Target date outcomes are for a future anticipated use of the funds. In some case this may be a specific capital project or to meet reserve level. They involve a well-defined time frame for when the money will be required. Contingency outcomes are intended to meet unexpected events as well as create stable returns for future asset management needs. The stable return outcomes produce a regular anticipated flow of income. Finally, cash plus outcomes identifies funds that are transitioning between MNRI and Money Required Immediately (MRI).

The investment time horizon perspective corresponds to each outcome. As the cash plus strategy has a time frame under five years, the remaining outcomes have been aligned with a longer time horizon and a greater potential for returns.

Table 1
Investment Outcomes

Outcome Category	Outcome Strategy	Objective	Risk Tolerance, Liquidity	Investment Horizon
Cash Plus	Cash < 3 yrs	Preservation of capital	Low risk; high liquidity	< 3 years
	Cash Plus 3-5 yrs	Preservation of capital	Low risk; high liquidity	3 - 5 years
Stable Return	Stable Return	Income generation: To generate stable returns to fund recurring needs	Moderate risk with emphasis on growth and stable returns, regular liquidity	> 5 years (Perpetual)
Contingency	Contingency	Contributions for unexpected events	Higher risk, emphasis on longer-term capital growth with some liquidity	> 5 years (Perpetual)
	Asset mgt reserves	Contributions to generate stable returns to fund asset management reserves	Higher risk, emphasis on longer-term capital growth; low liquidity	> 10 years (Perpetual)
Target Date	Target Date 5-10 yrs	Contributions toward specific projects, mitigate inflation impacts and meet target funding requirements	Moderate risk, liquid	5 - 10 years
	Target Date > 10 yrs	Contributions toward specific projects, mitigate inflation impacts and meet target funding requirements	Higher risk, emphasis on long term inflation-adjusted growth	> 10 years

The choice of investment outcomes defines the asset allocation assigned to each municipality.

Each outcome strategy has a unique asset allocation, which reflects the risk/return characteristics appropriate for each outcome. A municipality may have portions of its MNRI allocated to several different outcomes. The investment allocations for each outcome are reflected in Table 2.

Table 2
Outcomes - Investment Allocations

							Allocation			
Outcome	HISA	Canadian Equity Fund	Global Equity Fund	Canadian Government Bond Fund	Canadian Corporate Bond Fund	Global Bond Fund	Equity	Fixed Income	Cash	Total
Cash	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%			100%	100%
Cash Plus	20.0%	3.0%	7.0%	10.5%	10.5%	49.0%	10%	70%	20%	100%
Stable Return	10.0%	9.0%	21.0%	9.0%	9.0%	42.0%	30%	60%	10%	100%
Contingency	0.0%	18.0%	42.0%	6.0%	6.0%	28.0%	60%	40%		100%
Asset Management	0.0%	27.0%	63.0%	1.5%	1.5%	7.0%	90%	10%		100%
Target Date 5-10	0.0%	15.0%	35.0%	7.5%	7.5%	35.0%	50%	50%		100%
Target Date 10+	0.0%	22.5%	52.5%	3.8%	3.8%	17.5%	75%	25%		100%

The allocation of equity versus fixed income has some implications for the level of risk associated with each outcome, but a more relevant understanding of the risk/return relationship of these investment allocations is presented in Table 3, which shows the return and standard deviations that have been estimated for each outcome.

Typically, standard deviation is the metric that is used to evaluate the level of investment risk. It is a measure of the dispersion of investment returns. A standard deviation of 5% means that typically (two-thirds of the time) investment returns will tend to be within 5% of the expected return. Table 3 illustrates the risk/return estimates for the outcomes. Note that the values presented are projections to be used for discussion purposes and might not be representative of actual investment results.

Table 3
Outcomes - Investment Allocations

Outcome Category	Outcome Strategy	Allocation			Strategy Expected Return	Strategy Standard Deviation
		Equity	Fixed Income	Cash		
Cash Plus	Cash < 3 yrs			100%	0.9%	1.3%
	Cash Plus 3-5 yrs	10%	70%	20%	3.0%	2.8%
Stable Return	Stable Return	30%	60%	10%	3.8%	4.2%
Contingency	Contingency	60%	40%		4.9%	6.6%
	Asset mgt reserves	90%	10%		5.8%	9.1%
Target Date	Target Date 5-10 yrs	50%	50%		4.6%	5.8%
	Target Date > 10 yrs	75%	25%		5.3%	7.9%

Outcomes with higher equity allocations still tend to have reasonable standard deviations. Appendix 2 provides a comparison of the initial versus revised outcome framework from a risk perspective.

International investment exposure offers diversification benefits but is capped at 70%

A key reason for municipalities to join the prudent investor regime is to expand the available investment opportunities, which includes the ability to invest in foreign equities and fixed income securities. The outcomes presented in the tables above have up to 70% of their allocations in non-Canadian investments. This will dramatically increase the investment universe for Ontario municipalities and offers the potential for greater returns and better diversification. Note that the Global Fixed Income Fund has an active currency hedging policy that should limit the foreign currency exposure of the international investments.

What FMs are saying

In analyzing the potential new outcomes framework, feedback was sought from FMs. ONE Investment staff presented the revised outcomes framework to FMs to help them understand how MNRI will be invested. Staff also explained how it is possible to categorize all municipal reserves, reserve funds and other balances within this outcome framework. Feedback can be generally described as supportive with the consistent question being how ONE JIB would reconcile the new outcomes framework to the outcomes framework upon which municipal Council approved IPSs and MCQs were built. The revised outcome framework was well received. The assigned investment allocations are viewed as a separate decision and the ultimate risk/return profile of investments should be reflective of the risk profile of the municipalities.

Appendices 3-8 provide a short summary comparing the original outcomes framework with the revised outcomes framework for each FM along with its draft Investment Plan that was presented to municipal Council when approving the IPS and MCQ as background information.

5. Conclusion

The revised outcome framework is an essential component that will be used when drafting the final Investment Plans for municipalities investing under ONE JIB. Any changes in the outcome framework will directly impact the investment allocations of all FMs.

The revised outcome framework provides a method to systematically link the municipal circumstances with the process of assigning investment allocations. This framework is designed to be understandable for the municipalities, but still provides ONE JIB with a solid basis to allocate client MNRI in an appropriate way. It provides a template that guides how information provided in the municipality's IPS and MCQ will be translated into investment allocations.

The specific weights of equity versus fixed income in these outcomes will directly impact the risk profile for municipalities investing through ONE JIB, and ONE JIB should consider and discuss the weights presented in this document and advise amendments as appropriate. The overall allocation to foreign fixed income and equities is another aspect that the ONE JIB should deliberate on and provide feedback as this will also have a significant impact on the overall risk/return profile of the investment program.

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Approved for submission by: Judy Dezell and Donna Herridge, Co-President/CEO

Appendix 1: Returns and Standard Deviation and weight of Original Outcome Allocations

Outcome	ONE High Interest Savings Account (HISA)	ONE Global Unconstrained Bond Fund	ONE Canadian Government Bond Fund	ONE Canadian Corporate Bond Fund	Total fixed income	ONE Canadian Equity Fund	ONE Global Equity Fund	Total Equity	Total Investments	**Estimated outcome returns**	**Estimated Standard Deviatiuon**
Contingency (default)		60	10		70	5	25	30	100	**4.2%**	**4.5%**
Contingency (moderate risk)		50	10		60	5	35	40	100	**4.4%**	**5.1%**
Contingency (higher risk)		35	5		40	10	50	60	100	**5.0%**	**6.7%**
Stable Return (default)		60	30		90	0	10	10	100	**3.4%**	**3.0%**
Stable Return (Moderate risk)		60	20		80	5	15	20	100	**3.8%**	**3.8%**
Target Date 2-3	100		0		100			0	100	**0.9%**	**1.3%**
Target Date 4-5		40	20	40	100	0	0	0	100	**2.7%**	**2.8%**
Target Date 2025		45		30	75	5	20	25	100	**3.8%**	**4.1%**
Target Date 2030		45		20	65	5	30	35	100	**4.2%**	**4.8%**
Target Date 2035		45		10	55	5	40	45	100	**4.6%**	**5.6%**
Target Date 2040		40		5	45	5	50	55	100	**4.9%**	**6.4%**
Forward looking 10 year return projection	0.915%	3.6%	2.1%	2.2%	na	6.0%	6.1%	na	na		
Annual Standard Deviation projection	na	4.0%	1.8%	3.4%	na	12.6%	10.4%	na	na		
Aon's average annual CTE projection	na	-4.1%	-0.8%	-4.3%	na	-18.7%	-14.6%	na	na		

Appendix 2: Revised Outcomes Framework with Return and Standard Deviation

Outcome Category	Outcome Strategy	Objective	Risk Tolerance, Liquidity	Investment Horizon	Allocation			Strategy Return	Strategy Std Dev
					Equity	Fixed Income	Cash		
Cash Plus	Cash < 3 yrs	Preservation of capital	Low risk; high liquidity	< 3 years			100%	0.9%	1.3%
	Cash Plus 3-5 yrs	Preservation of capital	Low risk; high liquidity	3 - 5 years	10%	70%	20%	3.0%	2.8%
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