REPORT

To: ONE Joint Investment Board
From: Keith Taylor, Chief Investment Officer, ONE Investment
Date: May 29, 2025
Re: Central Frontenac Investment Plan – Additional Analysis
Report: ONE JIB 2025-028

1. RECOMMENDATIONS

It is recommended that the Board:

1. Receive the report.

2. SUMMARY

Central Frontenac's Investment Plan was approved at the ONE JIB meeting on November 27, 2024, which included an investment allocation with a 60% allocation to equities. All Central Frontenac's MNRI will be used to cover capital spending to maintain Road 38. Central Frontenac's plan outlined expected annual MNRI contributions and included a schedule of anticipated future drawdowns.

It was noted at that time that the allocation to equities seemed high, considering the expected future MNRI drawdowns involved. There was concern that large negative returns could potentially erode the initial capital invested, making it impossible to achieve the expected schedule of MNRI drawdowns. This report is intended to address this concern and provide more detail on the circumstances.

Investment modelling has been conducted to support the basis of this report, which confirms that the contribution and withdrawal assumptions are unlikely to provide a sustainable investment solution, regardless of the assigned investment allocation. This reflects a common issue facing municipal financial planning, where there is a mismatch between financial obligations and the resources available to meet them. This suggests that additional funding will be required to fund the maintenance of Road 38 or assumed spending needs may require revision.

3. BACKGROUND

All Central Frontenac's MNRI is associated with reserves that will be utilized to maintain Road 38

All Central Frontenac's MNRI is linked to reserves designated for the ongoing maintenance of Road 38. Current projections suggest that $4 million will be needed for maintenance spending in four years, and $8 million will be required every eight years thereafter. However, these expenditure amounts and timelines remain uncertain. Depending on the road's condition, spending may be postponed, or the actual amount spent may vary. Ultimately, the actual expenditure will be limited by Central Frontenac's financial resources, and spending will have to be managed by staff and council within the constraints of the municipality's financial capabilities.

Since concerns have been raised, staff are providing further detail on Central Frontenac's investment allocations

During the ONE JIB meeting on November 27, 2024, concerns were expressed regarding the sustainability of the investment solution presented for Central Frontenac. A specific concern was raised regarding the allocation's ability to provide adequate funding in the future to meet anticipated spending requirements. This concern focused on scenarios where capital losses in earlier years could diminish the value of investments to such an extent that subsequent growth would be insufficient to achieve the stated investment objectives. Consequently, it was questioned whether reducing the allocation to equities would be a prudent strategy to mitigate the associated risks. This report offers further analysis that illustrates the effect of reducing equity exposure and its impact on the likelihood of achieving Central Frontenac's investment goals.

The annual MNRI contributions identified in Central Frontenac's MCQ have not been approved by Council and the actual maintenance spending for Road 38 is not known

The annual contribution amount in the MCQ does not represent a maximum contribution amount approved by Central Frontenac Council. If larger contributions are necessary, the annual contribution amount can be adjusted upwards. It is likely that the $500,000 annual contributions identified in Central Frontenac's MCQ may not adequately fund the spending needs indefinitely. As appropriate, Central Frontenac's annual contribution may need to be adjusted, and as appropriate, could be increased.

The specific details regarding maintenance have been outlined in Central Frontenac's Investment Plan; however, these are only estimates. The actual amounts and timing of these expenditures are not yet known. The timing of expenditures is flexible and may be expedited or postponed based on road conditions. Furthermore, the actual costs for maintenance will depend on the state of the roads at the time maintenance is carried out.

4. ANALYSIS

Planned contributions of MNRI by Central Frontenac may not be sufficient for the funding plan for Road 38 to be sustainable

It is acknowledged there is a significant risk that the current MNRI and planned contributions may not fully fund the expected future spending. This is not a result of the assigned allocation, as changing the investment allocation to a lower risk profile will not lower Central Frontenac's ability to meet the expected expenditures with the current MNRI and planned contributions.

Instead, this reflects a common issue facing municipal financial planning, where there is a mismatch between financial obligations and the resources available to meet them. Additional funding may be required for financial planning, or the spending plan could also be adjusted.

Central Frontenac's primary investment goal is to generate investment returns to help fund future road maintenance. Growth of MNRI balances is the main objective, and the Treasurer is fully aware that more funding may be needed for the maintenance of Road 38 than was identified in the Investment Plan. While the Treasurer does not expect additional grant funding for the maintenance of Road 38, Council could potentially approve larger annual contributions to MNRI.

With annual MNRI contributions of $500,000 it is likely that all MNRI will be depleted within 12 to 20 years, regardless of the investment allocation assigned

The current contribution target of $500,000 per year is highly unlikely to provide a sustainable investment solution for Central Frontenac, given the existing assumptions of cash flows and investment returns. The issue is that the initial MNRI contribution of $2.8 million and an annual contribution of $500,000 may be insufficient; regardless of the investment allocation chosen, this funding plan is likely not sustainable. Lower allocations to equities reduce the probability of the funding plan being sustainable. This conclusion was confirmed by the Monte Carlo analysis demonstrated below.

Monte Carlo analysis was conducted to validate the sustainability of the funding plan for Central Frontenac's MNRI

An investment model was developed to help validate the sustainability of the funding plan and to demonstrate how altering the investment allocation would impact this. This model used Monte Carlo analysis that simulated return scenarios over the next 28 years to determine the probability that the MNRI would be able to fund the expected MNRI drawdowns of $4 million in year 4, and $ 8 million in years 12, 20 and 28. This model uses the capital market assumptions and model details as presented in the ONE JIB meeting on November 27, 2024. These returns and variances were used to run 1000 annual return simulation scenarios for each of the 28 years in the study. This analysis was repeated using investment models with equity allocations ranging from 20% to 70% equity to demonstrate the impact of model selection on the outcome.

The simulation results show the probability of achieving the MNRI drawdown targets in each of the anticipated drawdown periods. These probabilities are presented in Table 1 below, assuming an initial MNRI contribution of $2.8 million and annual contributions of $500,000. The table displays the probabilities for various investment allocations.

Table 1 – Probability of achieving investment goals (base case scenario)

$2,800,000 + $500,000 annually (base case)	Probability of achieving payout goal			
	Y4	**Y12**	**Y20**	**Y28**
Model G - 70% Equity	99.4%	52.6%	24.6%	15.3%
Model F - 60% Equity	99.8%	52.8%	22.1%	12.3%
Model E - 50% Equity	100.0%	51.8%	17.7%	7.6%
Model D - 40% Equity	100.0%	45.7%	8.8%	2.6%
Model C - 30% Equity	100.0%	37.9%	3.6%	0.6%
Model B - 20% Equity	100.0%	24.8%	0.3%	0.0%

As shown in Table 1, there is nearly a 100% probability that the $4 million drawdown can be funded in year 4, regardless of the assigned investment model. In year 12, when an $8 million drawdown is anticipated, the probability of the MNRI fully funding this drawdown falls to approximately 52.8% (using model F with a 60% equity allocation), with the probability decreasing as the allocation to equities declines. Table 1 also indicates that by year 20, the funding plan is not sustainable. Central Frontenac's 60% allocation to equities has only a 22.1% chance of fully funding the $8 million MNRI drawdowns in year 20. Higher allocations to equities enhance the probability of the funding plan being sustainable. This analysis considers the sequence of investment returns, where significant negative returns in the early years could jeopardize the financial plan's capacity to achieve investment goals in later periods.

Central Frontenac may adjust to ensure the financial planning is sustainable

The Treasurer noted that the details in the MCQ and Investment Plan regarding the MNRI contributions and expected spending are not fixed numbers. These are only estimates, and these values may change. If larger contributions are required, Council may approve larger annual contributions.

Additional analysis was conducted using the Monte Carlo Analysis, demonstrating the effect of larger annual contributions, which was shared with the Treasurer. This analysis suggests that increasing the annual contributions to $600,000 would significantly improve the sustainability of the financial planning. Table 2 below presents the details of this analysis.

Table 2 – Probability of achieving investment goals (scenario 2)

$2,800,000 + $600,000 annually (Increased contributions)	Probability of achieving payout goal			
	Y4	**Y12**	**Y20**	**Y28**
Model G - 70% Equity	99.9%	82.0%	62.8%	51.3%
Model F - 60% Equity	100.0%	84.8%	64.1%	51.2%
Model E - 50% Equity	100.0%	87.3%	62.8%	47.9%
Model D - 40% Equity	100.0%	88.2%	57.2%	38.7%
Model C - 30% Equity	100.0%	90.7%	51.9%	28.5%
Model B - 20% Equity	100.0%	90.6%	37.9%	13.3%

In this scenario, the probability of fully funding the year 20 drawdown, with an allocation of 60% equity exposure, rises to 64.1%, significantly surpassing the 22.1% probability in the base case scenario. This analysis indicates that the investment allocation for Central Frontenac is appropriate, as a lower equity allocation would diminish the likelihood of the plan being sustainable in the long term. Larger contributions, rather than lower equity allocations, are crucial for making Central Frontenac's plan to fund the ongoing maintenance of Road 38 sustainable.

5. CONCLUSION

Further analysis has been conducted to assess the sustainability of Central Frontenac's ONE JIB approved Investment Plan and the appropriateness of the assigned investment allocations. This analysis confirmed that the financial planning related to the maintenance of Road 38 may not be sustainable over the long term. The allocation of 60% to equities is appropriate, but additional contributions will likely be necessary from Central Frontenac to address the anticipated future expenditures.

The assigned investment allocation aimed to provide growth over time to help fund anticipated future expenditures. The allocations in the Investment Plan were not designed to be a sustainable investment solution; rather, they were intended to offer investment growth that could potentially offset future expenditures. However, it is important to understand that the details regarding MNRI contributions and expected future drawdowns are only estimates. The actual spending needed for Road 38 may be lower than planned, spending might be postponed, or annual contributions could be increased.

Drafted by: Keith Taylor, Chief Investment Officer
Approved by: Judy Dezell and Donna Herridge - Co-Presidents/CEO