Muesli Pty Ltd Cash-Flow Forecast: Loan Repayment Decision Report

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Executive Summary

Muesli Pty Ltd is in a strong cash position. The simulation results from the model suggest that there is a 100% probability of accumulating sufficient funds to repay the $2.13M bank loan within 16 weeks. The recommended repayment date is **Week 10**, which balances interest savings against potential liquidity risks (allowing for a 2-week buffer).

However, if business conditions deteriorate, specifically, if revenue falls by more than 10% and costs rise by more than 10%, it becomes less likely that the firm will be able to repay the loan without significant liquidity risks. Hence, management should defer repaying the loan until the 2-week cash buffer has been achieved (target Week 12-13). If market conditions remain unchanged, the company's strong cash generation trajectory would likely be sufficient to repay the loan as well as support further capital investment in later weeks.

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1. Can Muesli Pty Ltd Repay the Loan?

Yes, however the key question is the timing of repayments and whether repayment is even the best use of the cash.

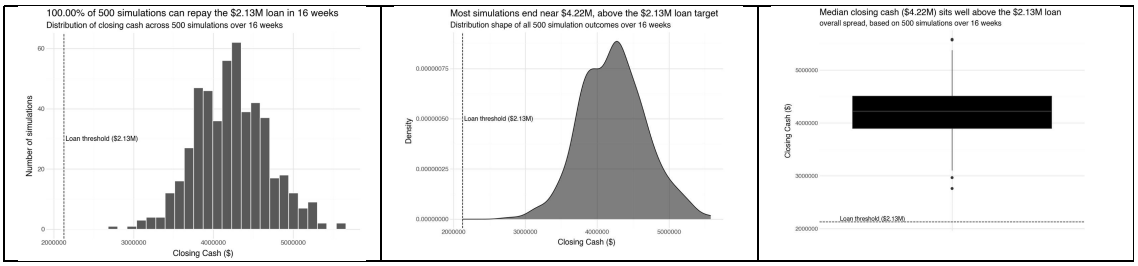
Five hundred independent simulations of the next 16 weeks show that Muesli will accumulate sufficient cash to repay the $2.13M bank loan in 100% of all modelled outcomes.

The simulation outputs are presented across three complementary visuals below. The frequency distribution confirms that no single simulation out of 500 produced a Week 16 closing balance below the loan threshold, every modelled path ends in a position of full repayment capacity.

The density curve reinforces this finding, suggesting the entire probability mass sits to the right of the $2.13M threshold, with the distribution centred around a median closing balance of $4.22M, which is $2.09M above the loan amount.

The box plot completes the picture, showing that simulated outcomes are tightly clustered around $4M, even the lower tail which represents the least favourable scenarios, remains comfortably above the repayment threshold.

Any simulation falling short of the loan amount does not represent an inability to repay, but rather a timing delay of one to two additional weeks at most.



The company's liquidity position is strong. This raises a more strategically important question for the CEO: **is repaying the loan actually the best use of this cash, and if so, when is the optimal moment to act?**

2. The CEO's Core Decision: Repay, Reinvest, or Refinance?

Before recommending a repayment week, it is also important to consider the broader business context and the reasoning behind repaying the loan. It is not necessarily guaranteed that repaying the loan at all is the best financial choice for Muesli Pty Ltd. It is important to consider any positive NPV projects that the cash could otherwise be used towards, the loan interest rate and term, and the tax shield benefits of the interest payments.

Option A - Repay the loan. Repaying the 2.13M loan eliminates $2,583 per week in interest expense and clears the bank debt from the balance sheet. The benefit is certain and immediate, as it reduces the default risk of being unable to repay debt obligations to zero by eliminating the debt. However, by using cash for this repayment the company may face some liquidity issues if unexpected costs are to arise. Hence if selecting this option, it is very important to carefully consider the payment week to ensure that there is a sufficient buffer to account for unexpected costs. Additionally, by using cash to repay the loan the company's capacity to invest into expansion is reduced as they have neither cash nor a line of credit.

Option B - Delay repayment and invest in growth. The simulation results show the company generating substantial surplus cash. If a positive-NPV project is available for example, expanding production capacity, opening a new warehouse location, investing in newer machinery or potentially acquiring a competitor to expand market-share. The return on such investments may exceed the loan's interest rate (especially once accounting for the post tax effective interest rate which considers the tax shield generated by the interest expense). Hence, in that scenario, deferring loan repayment and using the cash to invest into a high return project creates more value for the business and its owners than repaying the debt early. The CEO should evaluate whether such projects are available and ready to execute before committing to a repayment date. If the company is bound by strict loan terms a discussion with the bank may be necessary to extend the credit facility to facilitate investment into a high-return project, rather than repaying the loan.

Option C - Refinance. If the company believes that their current loan has an unfavourable interest rate compared to the market. They may be able to refinance based on their strong financial performance to obtain a better (lower) interest rate. Refinancing rather than repaying outright would reduce ongoing interest costs while preserving cash for operational flexibility and investment projects into expansion. This option requires further research/analysis of market financing terms and is outside the scope of the model but should be considered before a final decision is made.

Recommendation: If no positive-NPV project is immediately available and refinancing is not being actively pursued, proceed with the loan repayment at Week 10 given market conditions do not change and there is a sufficient buffer for unexpected costs. The interest saving is real and certain. If an investment project is under active consideration, the project's rate of return should be compared against the loan's weekly interest cost (after deducting the tax benefits) before the repayment decision is finalised.

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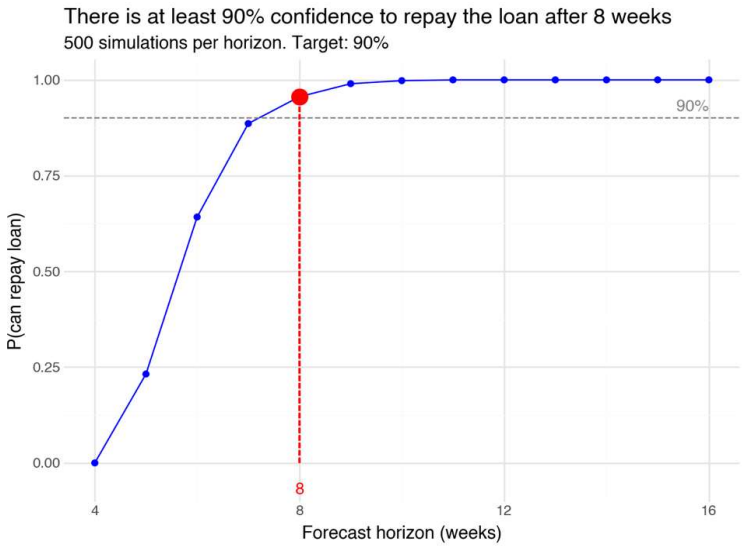
3. What Is the Optimal Repayment Week?

Assuming repayment is the chosen path, and market conditions are unchanged from the model, the simulations identify **Week 10** as the optimal timing. This point minimises the combined cost of ongoing interest expense and liquidity risks.

Week	Repayment Probability	Assessment
1-4	Misleading/inaccurate	Opening balances for A/R cause model behaviour which should lead to this range of weeks being omitted from analysis (see later elaboration on this limitation in section 8)
5-7	<90%	Too early, below 90% threshold, higher liquidity risks
8	95.6%	First week crossing 90% baseline threshold. However, it is problematic with later on stress test scenario with potential liquidity concerns
9-10	**>99%**	**Recommended: 2-week buffer over baseline crossing under normal conditions**
11-13	100%	If aiming to be extra conservative to protect against stress scenarios should target this range of weeks
14–16	100%	Progressively higher certainty but diminishing returns due to added interest expense



	weeks	prob
0	4	0.000
1	5	0.232
2	6	0.642
3	7	0.886
4	8	0.956
5	9	0.990
6	10	0.998
7	11	1.000
8	12	1.000
9	13	1.000
10	14	1.000
11	15	1.000
12	16	1.000

Growth in repayment probability stalls significantly following Week 10, confirming that further delay buys negligible additional certainty at a cost of $2,583 per week in interest expense. Hence Week 10 provides the ideal balance between repayment confidence and preserving liquidity.

The trade-off is clear. Every additional week of delay beyond Week 10 costs $2,583 in interest expense but buys only small amounts of additional certainty. Acting at Week 8 saves two weeks of interest but leaves significantly lower cash reserves potentially causing liquidity risks. Waiting until Week 16 is unnecessarily conservative, it incurs 6 additional weeks of interest cost in exchange for a probability increase from 99.8 % to 100%, a minimal gain that does not justify the delay and extra interest expenses. However, if Muesli would prefer to be extra conservative and defensive in their repayment strategy it may be best to opt for repayments within the Week 11-13 range as these perform even better under later stress tests in section 5.

All recommendations are further validated by stress tests in section 5.

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4. Liquidity Assessment: Is It Safe to Repay?

Repaying $2.13M in a single transaction is a significant cash outflow. Before committing to any repayment date, management must satisfy itself that the company would retain sufficient liquidity to continue operating normally after the payment clears. Further allowing for an extra cash buffer in case unexpected costs are to arise.

The simulation results address this directly. At Week 10, the median projected cash balance before repayment is approximately $3.01M. After repaying the $2.13M loan, the company retains a median post-repayment balance of approximately $885K which acts as a buffer to support operations and any unexpected costs. This is a meaningful but not excessive liquidity buffer for a business of this scale.

Three liquidity considerations that deserve attention:

Intraday versus period-end liquidity. The model measures closing cash balances at the end of each week. It does not model daily cash flows. Before executing the wire transfer, the finance team must confirm that drawing down $2.13M on that specific date will not temporarily leave operating accounts with insufficient funds needed to satisfy same-day payroll expenses, supplier invoices due that week, or immediate working capital requirements. The end-of-week balance may look adequate for operations while the intraday positions are temporarily strained.

The 10th percentile scenario. In the worst 10% of simulated outcomes at Week 10, the pre-repayment balance falls to approximately $2.62M still above the 2.13M threshold, but with a strongly reduced margin. If the company is experiencing difficult trading weeks as Week 10 approaches, management should monitor the cash position closely and be prepared to delay by one week rather than executing a repayment that leaves almost no liquidity reserve.

Ongoing operational commitments. The company pays fortnightly supplier accounts and weekly operational costs. The large loan repayment should ideally be timed to avoid coinciding with any major supplier settlement dates, which would compound the cash outflow in that single week, again leaving the business with limited liquidity and flexibility.

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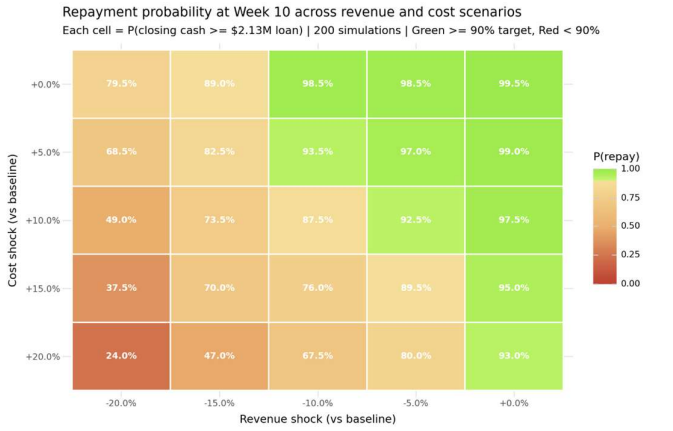
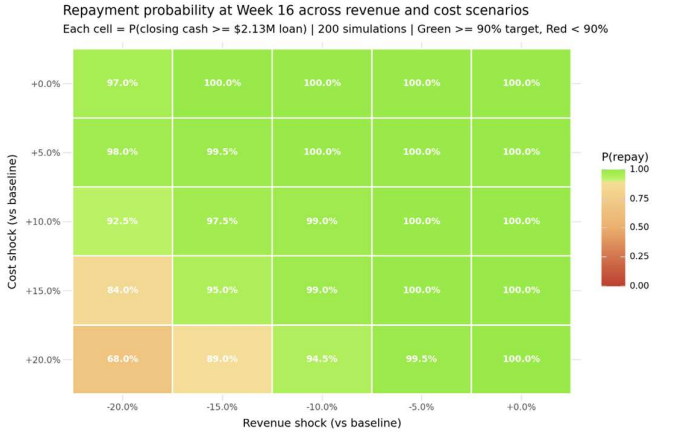
5. What Happens If Business Conditions Deteriorate?

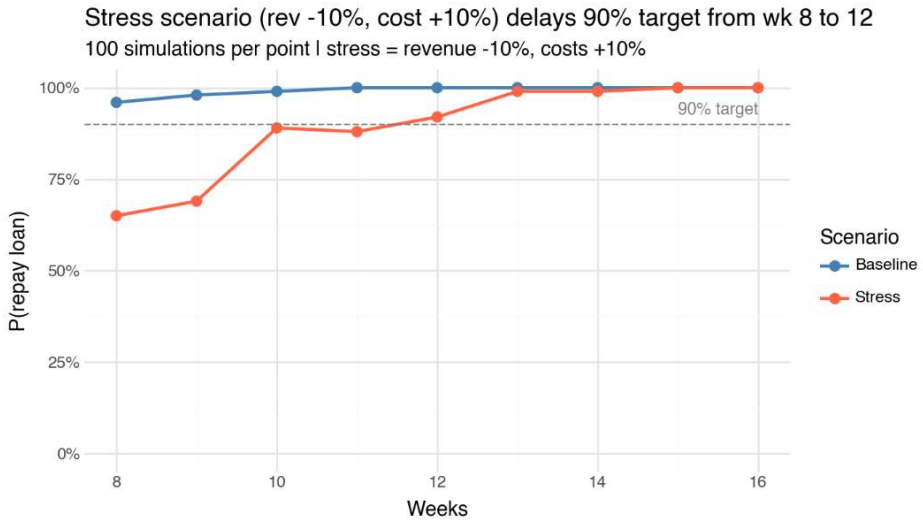
A stress test scenario combines a wide range of possible combinations of declines in revenue paired with increases in costs. It is important to note at which levels of change the probability of having sufficient funds to repay the loan crosses below the 90% confidence threshold. Further implying the market conditions which would require a shift in payment date.

Rather than a one-time sensitivity check, this should function as a monitoring framework for management, allowing them to adjust strategy early if certain revenue and cost patterns are detected. Note that the sensitivity check conducted do not simulate for the upside where revenue increases or costs decrease as it is sufficiently clear that the base case already represents a strong position hence any improvements would simply be a bonus and would not materially impact business decisions.

Week 10 Stress Test Heat Map	Week 16 Stress Test Heat Map
	

From the heatmaps sensitivity analysis illustrated above it can be seen that the Week 10 loan repayment recommendation is quite resilient to revenue and cost shocks. For the 90% confidence target to be violated, there would have to be a simultaneous decrease in revenue by at least 10% and an increase in costs of at least 10%. If both of these factors occur simultaneously it would indicate a significant change in market conditions which would require an immediate strategic adjustment.

However, even in this strong shock case, the firm will still be able to repay its loan within the full 16-week window. In order for there to be significant uncertainty about the company's ability to repay their loan within 16 weeks there would need to be a shock of at least 20% in either cost or revenue paired with a shock of at least 15% in the other variable. This represents an extremely rare an unlikely crisis event thus indicating that Muesli Pty Ltd is in a strong financial position (with respect to cashflows) and is highly unlikely to default on their debt obligations or face insolvency.



The strength of the Week 10 recommendation is further illustrated by this graph of the -10% revenue and +10% cost stress scenario. As although the 90% target is only formally satisfied at Week 12, it is reasonable to state that it is sufficiently close at Week 10 meaning that liquidity risks would remain sufficiently low to be able to repay the loan. However, the more conservative recommendation of Week 11-13 is upheld with more strength, where Week 12 represents the first point where the 90% confidence target is met. Furthermore, by approximately Week 13, both the baseline and stressed scenarios appear to have converged to very close to 100% repayment probability. Meaning that the defensive strategy of targeting Week 11-13 remains extremely strong even when faced with stress factors.

These stress parameters are not arbitrary. On the revenue side, major supermarket chains conduct annual category range reviews, during which underperforming products can be discontinued. This scenario is potentially consistent with the complete revenue drop-offs already observed in the Ch10 channel data. On the cost side, raw material inputs for a muesli manufacturer (oats, nuts, dried fruit) are directly exposed to global price cycles and shipping cost volatility, both of which can move significantly between quarters.

This interpretation of stress tests frames them as a tool to support decision-making. Underscoring the fact that management does not need to (and should not) commit irrevocably to a repayment date in advance, they must continually monitor and adjust their plans based on how the market circumstances align with the stress tests.

Note the core repayment probability simulation uses 500 iterations for precision. However, the stress test and sensitivity analysis use fewer iterations (100 and 200, respectively) because their purpose is to explore the direction of outcomes across many scenario combinations, rather than to produce a single precise probability, so at this level, fewer iterations are sufficient to reveal the robust patterns.

6. Post-Repayment: Can the Company Invest in Growth?

The company's cash generation trajectory is potentially strong enough to support capital investment alongside debt repayment. By Week 10, after clearing the $2.13M loan, the projected median post-repayment balance is approximately $885K. By Week 16, given market conditions do not deviate from the model, that surplus grows to approximately $2.09M.

This is a meaningful signal for the CEO. The company likely does not need to choose between repaying debt and investing in growth, it can do both, provided that all payments and investments are done in a way that does not jeopardise the liquidity of the business.

A factory expansion, investment into new products, investment into new warehouses, or even acquiring a competitor to expand market share are all potentially possible following loan repayment. The simulation results show that the company consistently accumulates cash above the loan threshold, which suggests that the business has sufficient internal cash generation to fund moderate capital projects without requiring additional external financing. However, it is important to consider if these opportunities are present and provide higher returns than the post tax cost of the debt, yet, require more capital than would be available post-repayment, the firm should strongly consider delaying repayment to prioritize fund allocation to these higher return opportunities. These calculations regarding a potential project’s NPV require additional project specific data which is beyond the scope of this model.

The key message that can be deduced from the company's forecasted finances is that the strong cashflows could potentially support both loan repayment and investment in the near-term. Clearing the bank debt at Week 10 does not necessarily eliminate the possibility of future investment.

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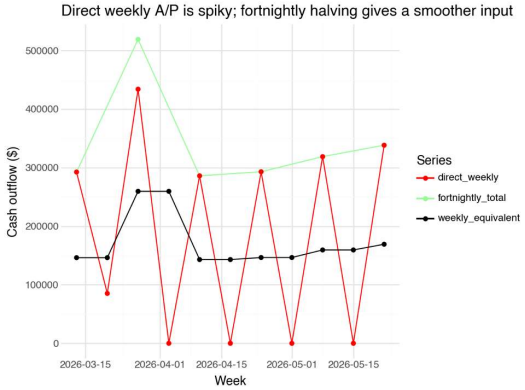
7. Why Should Management Trust This Forecast?

The simulation is only reliable if the underlying assumptions below are valid. There are several areas requiring particular care.

The key assumption of this model is that the past 12 weeks of operation will accurately reflect the future 16 weeks. Specifically, this forecast model assumed that the future variable cashflows for the 16 weeks would be bound and randomly distributed between the minimum and maximum values which occur in the 12 weeks preceding the analysis. What this implies is that there will be no major shocks to the business or its operations within the next 16 weeks. If the company anticipates declines in revenue or increases in costs, then the model should be adjusted to accommodate for these circumstances and provide more accurate estimates.

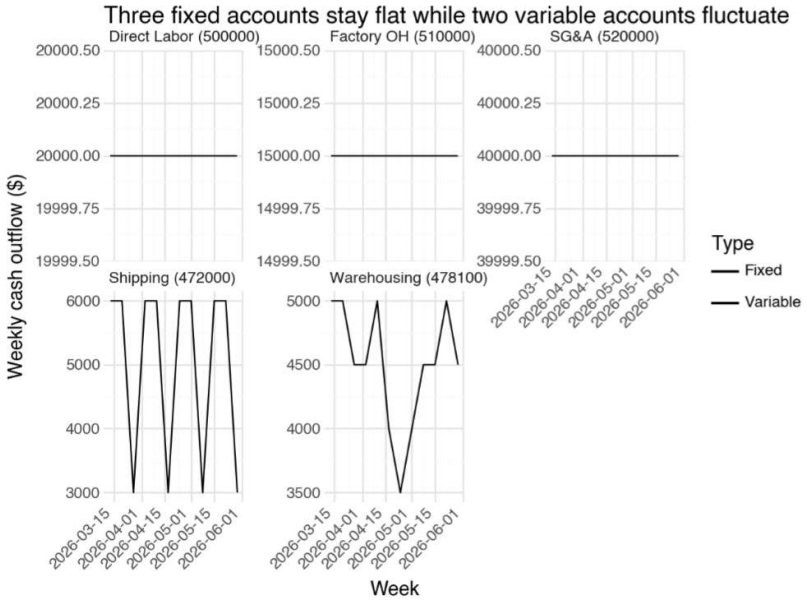
Revenue data integrity and the zero-revenue limitation. A notable anomaly in the historical data, is that revenue from Hypermarket customers (Ch10) reduced to $0.00 during the weeks ending April 10th and May 22nd. Given the typical revenue levels from this channel, these complete drop-offs are highly unusual. This scenario may require deeper investigation to determine if these values are expected to recur in future weeks or if they are one offs due to scheduled supply chain blackouts, invoicing delays, or data capture errors. If the zero values are not a genuine part of the company's expected revenue cycle, then it is important for them to be filtered out to tighten the revenue range and hence adjust the model. However, they were not removed from the model as it was assumed that they are genuine business cycle events which could occur again in the future 16 weeks.

Supplier payment timing. Accounts payable are settled fortnightly, not weekly. Using the raw weekly data would have introduced artificial zero-cost weeks into the model, hence understating the true cost burden as the simulation would be able to take values much lower than what is historically true. To mitigate this concern the model converts fortnightly payment totals into weekly equivalents (split across 2 weeks) to reflect the company's actual financial obligations. As seen below (in black) this produces a much tighter range for the accounts payable balances and hence provides for a more accurate forecast.



Separating stable and variable costs. Historical data confirms two structurally different cost behaviours. Direct Labour, Factory Overhead, and SG&A (Sales, General and Administrative) are flat week-to-week and are treated as fixed outflows. While Raw Materials, Shipping, and Warehousing fluctuate with production volume and are modelled as random draws between their minimum and maximum historical values. Furthermore, in the historical 12-week window there were no transactions in any of the Advertising accounts nor in the Lean Manufacturing Program Expenses hence the assumption was made that they would continue to remain zero for the 16-week forecast period and were hence excluded from the model. However, if there are plans to advertise or continue the consulting program the model would have to be adjusted to accommodate for these costs. Fixed costs cannot be reduced in the short term, acting as an unavoidable cash drain hence amplifying downside risk in a liquidity stress scenario. Whereas, the variable costs could be altered to manage a crisis, by reducing procurement and consolidating shipments Muesli can partially offset a revenue shortfall through active cost reduction.

Furthermore, for the sensitivity analysis it was assumed that only the variable costs would be subject to increasing prices with fixed costs remaining fixed throughout the 16-week forecast (for example no rental increases). Additionally, for the sensitivity analysis it was taken that A/P would also increase with Variable Cost as although they are not exactly the same thing it was assumed that higher supplier-related costs increase procurement costs and therefore increase future payment obligations.



Set Seed: By setting the seed the visualisation and simulation results are guaranteed to be consistent and reproducible solutions across multiple runs (so visuals would not change if the code is run repeatedly). Although this does not violate the randomness of the model it is important to note that in order to generate alternative distribution outcomes the seed should be changed. However, since the simulation number is quite large with 500 simulations any seed should yield very similar distribution outcomes.

8. Limitations and Constraints

Twelve weeks of history may not capture seasonal patterns. If the forecast period overlaps with seasonal demand fluctuations not reflected in the historical window, actual cash generation may largely differ from the model's expected range. This is more of a risk on the downside if seasonal trends lead to a revenue slump meaning that the firm may not be able to meet the repayment targets. Qualitative judgement should be used together with the quantitative output if there is reason to believe the upcoming 16-week period would be impacted by seasonality.

Opportunity cost is identified but not quantified. This report identifies the option of investing rather than repaying but does not model the return on specific capital projects. If the CEO is evaluating any form of investment a supplementary NPV analysis should be completed before finalising the repayment decision.

Model limitations causing potentially misleading repayment probability. For every start date both Opening Cash and Opening Accounts Receivable (A/R) balances change. However, in some scenarios, it is possible that the combination of Opening Cash and Opening A/R can already exceed the loan balance. This would lead the model to show Week 1 repayment probabilities as extremely high values which seems counterintuitive as the company could not earn all the necessary cash to repay the loan within only 1 week of operations.

This occurrence can be explained when looking at the results from an economic perspective. Opening A/R is not immediately available cash even though it already exists as an opening asset balance, those receivables still need to be collected according to the collection schedules associated with the different sales channels.

The limitation is that with the available data it cannot be concluded exactly which channel each component of Opening A/R belongs to, so the first four weeks cannot be accurately distributed across channels to implement the channel-specific collection schedules.

This case occurred with the start date set to 29/05/2026 to prevent providing misleading information the graph of loan repayment probabilities was deliberately cut off with probabilities only being shown after week 4. This is because by approximately Week 4, all of that Opening A/R should theoretically have been collected, and at that point the repayment probability appears to fall back to approximately zero. In other words, the unusual probability pattern during the first few weeks is largely reflecting how Opening Cash and Opening A/R are being handled, rather than reflecting the operating cashflows generated during the forecast period itself.

Since the Opening A/R balance across the first few collection weeks cannot be accurately allocated, the repayment probabilities during the first four weeks have limited decision-making value. The probabilities after approximately Week 4 are actually much more informative, because by that stage the influence of Opening A/R has largely disappeared and the forecast is being driven primarily by the simulated revenues, delayed collections, and operating cashflows generated during the forecast period.

Executive Recommendation

Primary recommendation	Repay the $2.13M loan at the end of **Week 10** given that no high return investment opportunities are available.
Rationale	99.8% repayment probability, optimal balance of interest saving and liquidity safety
Pre-repayment check	Confirm intraday liquidity is sufficient, avoid coinciding with major supplier settlement
If a growth project is available	Compare project IRR against loan interest rate before committing, delay repayment only if return clearly exceeds financing cost (post tax)
Contingency trigger	Revenue falls >10% and costs rise >10%
Contingency action	Defer repayment to later week when sufficient buffer accumulated
Post-repayment capacity	Projected $885K-2.09M surplus after loan is repaid supports moderate growth investment in future weeks
Conservative/Defensive repayment plan	Reasonable to consider delaying repayment towards Week 12, where the stressed scenario stabilises at 90% confidence threshold and is ready to reach 100% in the following week (Week 13)
Do not wait until Week 16	Unnecessary under baseline conditions, incurs six additional weeks of interest with negligible certainty gain