

Financial advisory and risk

Connecting risk to financial consequences.

A risk register identifies what could go wrong. A financing decision needs the next link: how that event changes cash, value and the ability to keep operating—and whether the proposed response is worth its cost.

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Executive summary

Financial risk analysis becomes useful when it traces an operational event into cash-flow timing, project value and funding needs. Documents and interviews help establish the mechanism; a model tests the consequences of that mechanism and of feasible responses. The same risk can affect several financial outcomes, which must be connected without counting the loss twice.

A hypothetical supplier-interruption example shows the trade-off. A backup arrangement reduces the severe funding shortfall from RM600,000 to RM150,000, yet lowers expected project value at the assumed price and probabilities. The decision therefore depends on effectiveness, cost and available liquidity, alongside expected return. The example's probabilities are teaching assumptions, not measured business risks.⁷

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Tracing the event into the financial decision

A management team is considering paying for a backup supplier. Its risk register describes the primary supplier as a high risk. That label may justify attention, but it cannot tell the finance director what to approve. The useful questions are more concrete: how long production could stop, which sales would be lost, what cash costs would continue and whether the proposed backup would address the cause.

Three outcomes deserve separate treatment. Project value measures discounted future cash generation. Liquidity measures whether cash is available when obligations fall due. Funding need measures the additional resources required to close a shortfall. A project can appear attractive on value while becoming unable to meet a near-term payment. Conversely, a costly safeguard may reduce a severe funding requirement while lowering expected value.

HM Treasury's Green Book distinguishes impact, correction and prevention costs, and calls for weighing the benefits of mitigation against its cost. Although written for public appraisal, that distinction is useful here: disruption losses, recovery expenditure and the price of prevention belong in the same comparison. Its social discount rate is not a commercial valuation rate and is not used in this example.¹

Establishing what the response can change

The analysis begins with an operational explanation. The Orange Book encourages describing risks through causes, events and consequences, while drawing on different functions and sources of evidence. A supplier delivery failure and an internal commissioning failure can both delay revenue, but a second supplier may help with only one. A response should be linked to the mechanism it can actually affect.²

EXHIBIT 1

Turning operational evidence into model choices

Delivery and acceptance records	Distinguishing late supply from internal commissioning delay. Change the interruption mechanism before estimating its duration.
Orders and cancellation terms	Distinguishing deferred sales from business that is permanently lost. Separate recoverable contribution from lost contribution and date the cash receipt.
Shared ports or subcontractors	Identifying a possible common cause affecting both suppliers. Test reduced or absent backup effectiveness instead of assuming independence.

Andi illustrative diagnostic questions. These are proposed checks, not findings from an actual company investigation. Related principles: Orange Book and GAO cost-estimation guidance.^{2, 3}

This is where qualitative and quantitative work should meet. An interview may reveal a dependency that changes the model; the resulting calculation may show which claim most needs documentary verification. Feters and colleagues describe such integration across research design, methods and interpretation. Merely placing interview quotations beside a spreadsheet would leave the important connection unexplained.⁶

People close to delivery may know what records miss, but their estimates can also reflect optimism or incentives. GAO's cost-estimation guidance discusses interviews, common risk drivers and dependencies. Where an event probability is needed, define it carefully and use relevant observations or a documented elicitation process. EFSA's guidance provides one established approach to structuring expert judgment; agreement in a meeting is not a measured event frequency.^{3, 4}

Comparing the existing and backup arrangements

Consider a hypothetical project with an RM8 million initial investment and 36 months of operations. Normal monthly contribution after variable costs is RM500,000. Fixed cash costs of RM200,000 leave RM300,000 of monthly net cash. After the initial investment has been financed, RM1.5 million of existing unrestricted cash is available as a reserve.⁷

An interruption beginning in month one lasts zero, two or six months. In each affected month the project loses its normal contribution, continues paying fixed

costs and spends a further RM150,000 on its response. Net cash becomes negative RM350,000. One-quarter of foregone contribution is assumed to be recovered as catch-up business in month 24; the remainder is permanently lost.

The backup arrangement costs RM600,000 at the outset, paid from the reserve, and is assumed to halve the interruption. All other conditions are shared. The assumed halving is central to the comparison: it is not evidence that a real backup supplier would deliver that improvement.

The model discounts month-end cash flows at an illustrative 8% annual real rate over the same 36-month horizon. Amounts are in constant prices, before tax and financing, with no additional capital expenditure or terminal value. The existing reserve is tracked separately from incremental project NPV; no interest earned or opportunity cost on that reserve is modelled.

EXHIBIT 2

A shorter interruption does not settle the choice

No interruption	NPV: RM1.613m existing / RM1.013m backup. Minimum cash: RM1.500m / RM0.900m. The backup fee buys no realised benefit in this scenario.
Two-month interruption	NPV: RM0.540m existing / RM0.474m backup. Minimum cash: RM0.800m / RM0.550m. The upfront fee outweighs the modelled value benefit.
Six-month interruption	NPV: –RM1.558m existing / –RM0.591m backup. Minimum cash: –RM0.600m / –RM0.150m. The backup reduces the shortfall but leaves a financing need.

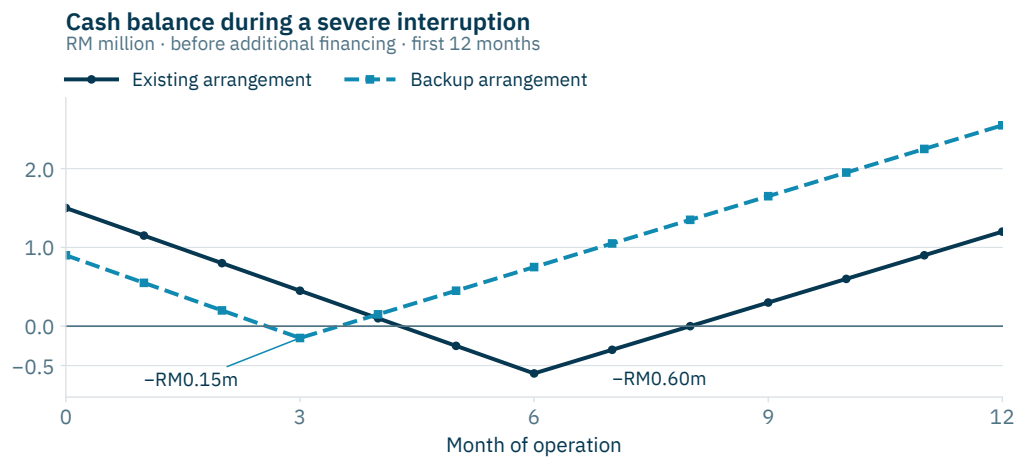
Andi illustrative model RV01. Existing / backup throughout. Negative cash is a funding gap before additional financing, not a facility assumed to be available.⁷

Following the cash through the interruption

The severe scenario is revealing. Under existing arrangements, six months of negative RM350,000 cash flow exhaust the reserve and leave a RM600,000 shortfall. With the backup, the fee first reduces the reserve to RM900,000; three affected months then leave a RM150,000 shortfall. The safeguard makes a substantial difference, but neither arrangement is fully funded through the disruption.⁷

EXHIBIT 3

Less exposure, but still a funding gap



Andi RV01. First 12 months of the severe scenario; cash before additional financing. Catch-up business is paid in month 24, outside this view.⁷

An annual total would conceal part of this timing problem. The backup project produces positive net cash over its first year, yet runs short in month three. Its later recovery cannot pay an earlier obligation unless suitable financing is already available. In a real decision, facility limits, drawdown conditions, interest, covenants and access under stress belong in the assessment. The projected NPV assumes the project continues after any funding gap is resolved; it does not price that financing.

Keeping value and funding need separate

$$NPV = -I - f + \sum_{m=1}^{36} \frac{CF_m}{(1+r)^{m/12}}$$

$$G = \max(0, -\min_m B_m)$$

I is RM8m, f is zero or RM0.6m, and r is 8%. Cash balance starts at RM1.5m minus f and accumulates monthly net cash. An interrupted month contributes -RM0.35m; a normal month RM0.30m. Month 24 adds RM0.125m for each effective month of interruption. G includes month 0 and all 36 operating months.

Testing probability alongside consequence

Now assign illustrative probabilities of 60% to no interruption, 30% to two months and 10% to six months. Because there are only three states, probability-weighted results can be calculated exactly. Expected NPV is RM0.974 million under the existing arrangement and RM0.691 million with the backup. On this risk-neutral mean-value comparison, the backup is too expensive for its assumed benefit.⁷

The downside tells another part of the story. Both arrangements have a 10% modelled probability of a funding gap, because both run short in the severe state. Yet the amount required in that state falls from RM600,000 to RM150,000. Expected funding gap falls from RM60,000 to RM15,000; those averages are not the reserves needed to survive the severe scenario.

A simulation of 100,000 common scenario draws, using seed 20260909, produces a 9.891% funding-gap frequency for each arrangement and mean NPVs of RM0.980 million and RM0.694 million. Exact enumeration provides the check: the small differences are sampling variation. More draws would refine the calculation without establishing whether the assumed probabilities describe a real supplier.

Within the worst 5% of simulated NPV outcomes, average NPV is negative RM1.558 million existing and negative RM0.591 million backup. With only three states, this simply reproduces the severe-state values; it says nothing about more extreme interruptions omitted from the model. A useful stress test should challenge those boundaries as well as the probability weights.

Finding what would make the response worthwhile

The comparison gives the commercial team two concrete questions. At the assumed probabilities, the break-even backup fee is about RM317,000, holding its effectiveness unchanged. Alternatively, if the moderate interruption probability remains 30%, the backup overtakes the existing arrangement on expected NPV only when the severe-state probability exceeds approximately 28.1%, with the no-interruption probability taking the remainder. Neither number is an estimate of the supplier's actual risk.⁷

Effectiveness needs its own challenge. If the backup does not shorten the interruption at all, the project bears the same disruption plus the RM600,000 fee, leaving value and cash headroom worse. Shared infrastructure or a problem inside the customer's operation could produce that result. Delivery records, contract

terms and tests of the alternative supplier matter because they can overturn the assumed mechanism.

Accounting discipline is just as important. Lost contribution already reflects avoided variable costs; subtracting lost sales again would count part of the damage twice. Fixed costs already included in monthly cash should not reappear as another loss allowance. Damodaran's discussion of risk-adjusted valuation also warns against repeated, opaque risk adjustments. Expected operating losses can properly sit in cash flows alongside a suitable market-risk discount rate; the mistake is charging again for the same adjustment without a consistent basis.⁵

Connecting the analysis to an accountable choice

For the finance director, the result is a conditional decision rather than a recommendation to buy every safeguard. Confirm the failure mechanism, negotiate the price and establish how much disruption the backup can realistically prevent. Then determine whether sufficient liquidity can be secured on acceptable terms. Where neither arrangement is financeable, a smaller commitment, another operating design or deferral may be the relevant comparison.

The decision should also name the evidence that will prompt reconsideration. Procurement can monitor verified delivery and acceptance dates; the commercial team can track cancellations and catch-up orders; finance can monitor cash headroom and facility availability. These observations serve different purposes. Together they let the organisation test whether the mechanism, financial assumptions and chosen response continue to hold.

Understanding the scope of the analysis

This is an educational synthesis of established methodological guidance and a reproducible hypothetical model. No company interviews, supplier performance dataset or causal evaluation was undertaken. The example's probabilities, recovery share, backup effectiveness and discount rate are assumptions. The model excludes taxes, financing charges and additional operating or market risks; it supports learning about the decision, not an investment recommendation.

Sources

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