

# Rethinking the Strategic Value of Investment Operations

How can Van Halen & Brown M&Ms help define an effective operating environment for investment managers?

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# Van Halen & the Art of the Proxy Indicator

In 1982, the American rock band Van Halen was conducting one of the most technically ambitious concert tours in the history of the music industry.

The production involved nine semi-trucks of equipment, elaborate lighting rigs, and pyrotechnics that placed extraordinary demands on venue infrastructure. The technical rider (the contract that each venue was required to satisfy as a condition of the performance) ran dozens of pages, containing specific requirements outlining structural load limitations, electrical specifications, rigging attachment points, and safety protocols.

Buried within that contract was a requirement that became the subject of considerable media attention. The clause stated that the backstage catering must include a bowl of M&Ms from which all brown candies had been removed. It contained the explicit warning that failure to comply could result in cancellation of the show. The immediate interpretation was predictable. The clause was cited as an example of rock star excess, and the brown M&M became a cultural shorthand for pointless diva behavior.

However, the band has since offered a different explanation, reframing the clause entirely. The contract's technical requirements were not aesthetic preferences. They were safety specifications. A venue that failed to correctly implement the electrical grounding requirements, or underestimated the structural load of the staging, or made informal substitutions in the rigging

specifications, was a venue where crew members could be injured or even killed. The consequences of non-compliance were serious and, in several cases, had materialized as actual incidents during the tour.

The challenge Van Halen faced was a familiar one in any complex operational environment: how do you efficiently assess the reliability of a partner whose work you cannot directly observe, against a document that is too long and too technical to verify comprehensively on arrival?

The answer was to find one cheap, easily observable indicator that was strongly correlated with comprehensive compliance. In other words, a proxy variable that could be checked in thirty seconds and would reliably signal whether the venue had engaged with the contract seriously.

The Brown M&M Clause was that proxy. If brown M&Ms were present, it meant one of two things: the venue had not read the contract in full, or they had read it and decided that some requirements were optional. The M&M was not the problem. The M&M was the signal that a problem existed somewhere in the system.

Van Halen's Brown M&M Clause is an instructive illustration of what good signal infrastructure looks like. This paper expands this concept into a framework for reassessing investment operations as a system of deterrence and early-warning signals. We then apply that framework to the contemporary operating environment, examining how accelerating settlement timelines, increasingly networked data architectures, and machine-scale transaction volumes are reshaping what effective operations requires. The paper concludes with practical implications for operations leaders and the senior stakeholders who set their mandates.

## Proxy Indicators in Investment Operations

Investment operations is dense with analogues to the brown M&M: specific, observable indicators whose presence or absence carries disproportionate information about the health of a broader process. Across our engagements with global asset and wealth managers, we have consistently observed that the most effective operations professionals develop, often through experience rather than explicit design, a personal library of these indicators.

They know which reconciling items are genuinely routine and which, however small in dollar terms, indicate a structural problem in a data feed or a process handoff. They recognize which fields that should never be null are most likely to expose gaps in reference data management. They understand which timing mismatches are

symptoms of deeper system integration failures.

What distinguishes these professionals is not that they look at more information than their peers. It is that they have learned to look at the right information. That is the specific indicators that, in their operational environment, serve as reliable proxies for broader systemic health. The institutional challenge is that this knowledge is frequently tacit. It lives in the judgment of experienced practitioners rather than in documented control frameworks. When those practitioners leave, the knowledge goes with them. When the firm grows or changes its operating model, the indicators that were calibrated to one environment may no longer be valid in another.

The operational implication is a design problem. Rather than waiting for brown M&Ms to be discovered by experienced staff, organizations should build the identification of proxy indicators into the formal design of their control environments. But how can a firm identify an effective proxy indicator?

This requires asking, for each critical process, a specific question: what is the cheapest, earliest, most observable signal that would indicate this process has not been followed as designed?

## The Structure of an Effective Proxy Indicator

Van Halen's proxy indicator works as a control mechanism because it has four specific properties that, taken together, make it an unusually efficient signal. Understanding those properties is the first step toward designing a more deliberate operating environment.

First, the indicator is **specific**. It does not measure general compliance or overall care. It tests one precisely defined condition that is unambiguous and admits no partial fulfillment. This specificity is what gives it diagnostic power. A general inspection checklist can be gamed, approximated, or completed in the spirit of technical compliance that misses the underlying intent. The Brown M&M Clause cannot.

Second, the indicator is **cheap** to observe. Checking a bowl of M&Ms takes thirty seconds and requires no expertise or equipment to interpret. The cost of the signal is essentially zero, which means it can be checked every time, without negotiation about whether the check is worth the effort.

Third, and most importantly, the indicator is statistically **correlated** with the condition it is intended to detect. This is the property that requires the most care to establish and the most rigor to validate. The Brown M&M Clause worked because Van Halen had empirical evidence, accumulated over the course of the tour, that violations of that specific clause reliably co-occurred with other, more serious deficiencies.

Fourth, the indicator operates **early** in the process. It surfaces the signal before the show begins, when there is still time to act. A proxy indicator that only confirms a problem after the damage is done is an autopsy, not a control.

These four properties, specificity, low observation cost, empirical correlation, and early timing, define what makes a proxy indicator operationally useful and what most monitoring systems are missing.

## What Are Some Common Indicators In Practice?

### Reconciliation breaks

A single unresolved break in a low-volume, well-understood counterparty relationship is often a more reliable signal than a hundred breaks in a high-volume flow because it shouldn't happen.

### Reference data

A security with a null benchmark field is a cheap signal that the onboarding checklist wasn't completed and that other attributes may be wrong.

### Corporate actions

A late or missing corporate action election in a routine scenario proxies for a process gap that will be far more costly when the action is complex or time-sensitive.

### Private markets valuations

A stale NAV input that persists past the expected refresh date is a canary for the broader data pipeline between the GP and the fund administrator.

# A Changing Operating Environment

The deployment of effective proxy indicators is not static. Their practical application depends on the operating environment in which they are deployed.

That environment is currently undergoing three structural shifts that have significant implications for how operations functions should be designed.

## Shift One: The Acceleration of Settlement

The transition from T+2 to T+1 settlement in major markets is, on its surface, an operational efficiency improvement. In practice, it is a fundamental compression of the window available for exception identification, escalation, and resolution. Exceptions that previously had overnight runway to be investigated and corrected before they affected settlement now need to be surfaced and addressed within hours. In markets moving toward real-time settlement, that window disappears entirely.

This shift has direct implications for signal design. Proxy indicators that were calibrated for an end-of-day review cycle are not adequate in a T+1 environment. The signal needs to surface by noon, not at 5:00. And the escalation and resolution processes that follow the signal need to be pre-designed and pre-tested, not worked out in the moment. Firms that have not redesigned their monitoring architecture for this compressed timeline have accepted a structural degradation in their operational control environment. In our experience working with firms navigating T+1 readiness, the gap

between policy intent and actual control redesign is wider than most leadership teams appreciate. In effect, they are running the same controls on a shorter runway, which means the controls are less likely to catch problems before they become costly.

## Shift Two: From Sequential Chains to Interconnected Networks

The architecture of investment operations has changed fundamentally in the past decade. The traditional model was sequential, with clear handoffs and identifiable ownership at each stage. This model had significant inefficiencies, but it also had a structural property that is easy to underestimate in retrospect. A problem in one stage of the chain did not automatically propagate to adjacent stages. In short, failures were largely contained.

Contemporary investment operations is not a chain. It is a network. Data flows simultaneously across front office, middle office, back office, client reporting, regulatory reporting, and risk management systems, often through multiple integration points and with limited centralized coordination. The efficiency gains from this architecture are real, but so are the failure modes. In a networked architecture, a data quality issue that would previously have been contained

within a single system can propagate across multiple downstream consumers before it is detected.

A reference data error that affects a position in one system may simultaneously corrupt valuations, risk metrics, and client reports in others. The speed of propagation frequently exceeds the speed of detection.

This has important implications for control design. The old model of silo-specific controls (i.e., each team responsible for the integrity of its own data and processes) is structurally inadequate in a networked environment. Effective controls in this context require an understanding not just of individual processes but of the integration points between them, and of how failures at those points propagate through the broader architecture.

### Shift Three: From Human Judgement to Machine-Scaled Decisions

In today's environment, proxy indicators must be machine-readable and continuously monitored, not reviewed by a person looking at a PDF report at the end of the day. The value of a proxy indicator is precisely its speed and ability to surface a signal quickly enough to act on it. In a high-velocity environment, indicators that require human review to surface are operating on a time lag that defeats much of their purpose.

This is the context in which the conversation about automation in operations should be situated. The question is not whether automation displaces experienced practitioners. The judgment required to design, calibrate, and interpret automated controls remains deeply dependent on human expertise. The question is whether the controls themselves can operate at the speed and scale the environment requires. In most cases, they cannot without significant automation.

### Risk Isn't Where You Think It Is

Historically, operational risk in investment management was primarily associated with the trade: counterparty default, pricing errors, settlement failures.

**These remain real risks, and the infrastructure for managing them is relatively mature. What has changed is where the more insidious operational risk has migrated.**

Increasingly, operational risk lives in the data layer, specifically in the handoffs between systems. Private market assets, now a significant and growing portion of institutional portfolios and lack the transparency of public securities, sit in portfolios whose operational infrastructure was designed for listed instruments. This is a pattern we observe with increasing frequency as our clients expand into private equity, private credit, and other alternative asset classes.

These risks share a common characteristic: they are often invisible, until they are not. A reference data error may sit undetected for months, silently corrupting downstream calculations, until a client inquiry or regulatory review forces a reconciliation. A private asset whose valuation is based on stale or inconsistent inputs may carry risk that is entirely absent from the firm's risk metrics.

The Brown M&M Framework suggests a direct response: the proxy indicators that matter most are the ones positioned at the data layer, at the seams between systems, and at the points where private market data enters quantitative frameworks designed for public market inputs. Building controls that can consistently surface these signals is among one of the highest-value investments an operations function can make.

# Practical Implications for Building an Effective Operating Environment

The Brown M&M Clause translates into two core operational imperatives for investment management organizations to consider when building an effective operating environment.

## Design Your Proxies Deliberately

The identification of proxy indicators should not be left to informal accumulation of practitioner experience, valuable as that experience is. It should be a deliberate design activity, conducted with the same rigor applied to other elements of the control environment.

In practice, this means allocating structured time in control reviews, post-incident analyses, and operating model design projects to the specific question of signal design. For each critical process, the exercise is to identify the earliest, cheapest, most observable indicator of process failure: the condition that, if observed, should immediately trigger a more thorough review. That indicator should be documented, built into monitoring tooling, tested against historical data to validate its correlation with actual failures, and reviewed periodically as the operating environment changes.

The output is not a longer exception report. It is a shorter, more curated set of high-diagnostic signals. This is the operational equivalent of a bowl of M&Ms rather than a full catering inspection at every venue. The discipline is in knowing which signals carry enough information to justify treating them as proxies for systemic health, and which are noise.

## Learn to Tell the Story

There is a structural irony at the heart of investment operations. The better it works, the less visible it becomes. When settlement is seamless, reconciliation is clean, and exceptions are resolved before they cascade, the systems responsible for those outcomes receive little attention. However, when something breaks, those same systems become the subject of board-level concern and, frequently, blame.

This dynamic creates a persistent challenge in how operations functions are resourced, budgeted, valued, and led. Senior executives who have never experienced a significant operational failure often struggle to articulate what they are buying when they invest in operational capability. Boards ask why headcount in the middle and back office hasn't declined as automation has increased. Clients, when they think about operations at all, think about it as a commodity.

The consequences of this misunderstanding are material. Firms that treat operations as a cost to be minimized, rather than a capability to be developed, tend to discover the limits of that approach at precisely the wrong moment: during periods of market stress, during rapid growth, or during the onboarding of more complex investment strategies.

The visibility problem in investment operations, the tendency of operations functions to be undervalued until something goes wrong, is not primarily a communication problem. It is a signal design problem. Operations functions that struggle to make their value legible to senior stakeholders often do so because they are communicating in the wrong register: reporting on volumes processed, errors corrected, and SLAs met rather than on the problems that were caught early, the losses that were avoided, and the systemic risks that were identified before they materialized.

Proxy indicators, properly designed and documented, provide the basis for a different kind of operational reporting. When a brown M&M is found, when a specific indicator surfaces a systemic issue that is then traced to its source and remediated, that event is a demonstration of operational strength, not an operational failure. It is evidence that the early warning system works. Organizations that track and report on these events, and that document the downstream consequences that were averted, are building the evidentiary base for a different conversation with their boards and senior executives about what investment in operations actually delivers.

The absence of disaster is not the same as the absence of risk. Making that distinction legible to non-technical stakeholders is among the most important capabilities an operations leader can develop.

The Brown M&M Framework is not abstract. Its value is most visible when applied to the operational challenges that are front of mind for investment management executives right now.

## Where Does the Framework Apply Today?

Across our work with global asset managers and wealth managers, four areas stand out as places where the discipline of deliberate signal design is both urgently needed and largely underdeveloped.

### Artificial intelligence & automation

As firms deploy AI across investment and operational workflows, a new category of risk has emerged. The question every operations leader should be asking is not "do we have AI controls?" but "what is our brown M&M for the AI pipeline?"

### Private markets

The proxy indicators that work well for listed instruments have no direct equivalent in private markets, and firms that assume otherwise tend to discover that gap at the worst possible moment.

### Total portfolio view

The move toward TPV is creating exactly the kind of integration seam the M&M framework is designed to address. The proxy indicators that matter here are positioned precisely at that seam and need to be designed for it rather than inherited from either legacy environment.

### Outsourcing & global operating models

Rather than relying on lagging SLA metrics, firms should identify signals that reveal in near real time whether processes are functioning as designed.

# Perspectives Beyond Investment Operations

This paper has been grounded in the specific context of investment operations, but the Brown M&M Framework is not unique to that function.

The underlying logic, that complex processes benefit from the deliberate design of proxy indicators that surface systemic issues cheaply and early, applies wherever three conditions are met:

The process is complex enough that comprehensive real-time monitoring is impractical; the cost of late detection significantly exceeds the cost of early detection; and the indicators of systemic health are not self-evident without deliberate design effort.

Those conditions describe most operational functions in a sophisticated investment management organization. This broader applicability is significant. This is not merely an analytical observation but also a practical opportunity. The investment management industry has tended to develop operational frameworks function by function, with limited cross-pollination of control design principles. Risk functions design risk controls. Compliance functions design compliance

controls. Technology functions design system monitoring. The insight that all of these functions share the same underlying challenge, surfacing the right signals early enough to act on them, suggests that a more unified framework for operational signal design could generate meaningful improvements across the enterprise.

The commonality across these functions reflects a structural feature of operational control design that the investment management industry has not yet fully exploited: the same analytical framework (identify the proxy, validate the correlation, embed the indicator, pre-design the response) applies across all of them, and the discipline of applying it consistently is more valuable than any of the specific indicators it generates.

This suggests an opportunity that goes beyond the optimization of any individual function. Organizations that develop a shared vocabulary and methodology for operational signal design, one that can be applied by risk, compliance, technology, client services, and operations functions using common principles, are building something more durable than a set of operational controls. They are building an institutional capability for systemic self-awareness. That is, the organizational equivalent of always knowing whether there are brown M&Ms in the bowl.

This paper serves as [Part I](#) in our [Investment Operations Series](#). In [Part II](#), we will further develop this cross-functional argument by examining how the Brown M&M Framework applies to [Risk Management & Compliance](#). The processes that Risk and Compliance functions oversee are increasingly becoming more complex to audit comprehensively in real time. However, the cost of discovering a failure late, whether through a regulatory examination, a model blow-up, or a client-facing error, is vastly higher than the cost of catching it early.

In Risk, this means building proxy indicators upstream of the models themselves, such as signals in data quality or risk factor coverage that reveal whether quantitative frameworks are operating on accurate foundations. These would be critically placed before their outputs are relied upon for portfolio decisions.

In Compliance, it means identifying the observable conditions that reliably signal whether regulatory processes are functioning as designed, including the pattern of late filings that proxies for capacity constraints, the concentration of exceptions in a single business unit that signals a training gap, or the rising rate of technical pre-clearance declines that suggests policies are being applied inconsistently.

In both functions, the discipline of designing these indicators deliberately, rather than reactively, is where the greatest unrealized value sits.

Read more in [Part II](#), which releases next month.



# Conclusion

Investment operations occupies a paradoxical position in the institutional landscape. Its contribution to organizational stability and market function is substantial and, in many respects, foundational.

Its visibility is inversely proportional to its effectiveness. The better it works, the less notice it receives.

Van Halen's model offers a reframing that is both analytically more accurate and more useful for the practical challenges operations leaders face. Operations is not only back-office administration. It is also a system of deterrence and early warning, one that makes the cost of bad behavior unacceptably high and surfaces the signals of systemic problems before they compound.

That system is operating in an environment that is changing along three dimensions simultaneously: settlement timelines are compressing, operating architectures are becoming more networked, and transaction volumes are exceeding human monitoring capacity. Each of these shifts raises the bar for what effective operations requires. Meeting that bar demands deliberate control design, automated enforcement, and the willingness to invest in operational capability as a strategic asset rather than manage it as an overhead cost.

The M&M bowl is a simple idea. Getting it right, identifying the right signals, building the right monitoring, and designing the right responses, is not. But the firms that do it well are the ones where operational failures remain hypothetical, where capital flows with

confidence, and where the value of the function that made that possible is, finally, legible to the people who need to understand it. The firms that invest in this capability don't just avoid failure. They grow faster, with less risk, and with greater confidence from their internal teams and clients alike.

To get it right, here are five questions every COO should ask themselves:

Have we identified which indicators in our operations are proxies?

Are our controls designed to surface signals early enough to act on?

When an operations practitioner leaves, does their knowledge leave with them?

Are our indicators calibrated for the environment we're operating in today?

When we report performance, are we communicating what we prevented?

# Contributors



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# Confidence in the complex

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