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OPINION

Futures @ Risk
History teaches us how to manage risk

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History teaches us how to manage risk - The Globe and Mail

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In an age of cascading crises, the ability to remember is the ultimate competitive advantage; this essay launches a four-part series called **Futures @ Risk** on why that capacity is the most critical – and most endangered – asset for institutional survival

The night of Sept. 13, 1569, brought catastrophe to Venice's Grand Arsenal, the beating heart of the maritime republic's naval power. A devastating explosion ripped through the fleet's gunpowder magazines.

While the cause was never definitively proven, it sparked immediate fears of sabotage, coming just months after a major, violent labour revolt by disgruntled Arsenal workers and amid escalating tensions with the Ottoman Empire. The blast demolished a significant portion of the surrounding fortress wall, levelled adjacent buildings and sent a powerful shock wave across the city. This was no mere industrial accident; it exposed a strategic vulnerability at the very nexus of Venetian military might.

The Venetian response exemplifies a sophisticated understanding of risk that modern institutions would do well to recover. In the wake of the disaster, the Republic's leadership moved decisively. The Senate decreed that gunpowder would no longer be stored in the Arsenal, the collection of shipyards and armouries in the city. Gunpowder would henceforth be produced and stored away from urban Venice at Sant'Angelo Della Polvere, an island in the Venetian lagoon, so no single accident could ignite such devastating consequences. Security protocols were tightened, inattentive guards dismissed and replaced with proven men. By 1570, despite war having been declared by the Ottomans, the Arsenal was back in operation. By 1574, during King Henry III of France's visit, the arsenalotti famously assembled and outfitted an entire galley in a single day. Casualties tied to Arsenal mishaps dropped dramatically within a generation because the Republic treated danger as data, not destiny, and accidents as pathways to remedies rather than reasons for despair.

This fusion of rigorous crisis response and pro-active risk mitigation would prove strategically decisive within two years. When the Christian fleet assembled to sail for the Ottoman naval station of Lepanto, located in what is now western Greece, in October, 1571, Venice's contribution emerged from an Arsenal that had not merely recovered from catastrophe but had systematically eliminated the vulnerabilities that caused it. The victory was a profound psychological blow to Ottoman prestige, restoring European confidence after decades of seemingly inexorable advance by the Ottomans. While its long-term strategic impact was complex, the triumph at Lepanto gave Christendom a generation's breathing room – a lesson in institutional resilience whose consequences extended far beyond naval warfare.

The Venetian example is a case of institutional memory – a collective, documented approach to decision-making. This principle of embedding memory into practice is not a historical curiosity; its presence or absence determines the outcome of modern crises as well. Time and again, we are reminded that robust institutions survive the adverse periods of "leaderism" and "personalism" that dominate our current moment. These destructive periods inevitably give way to moments of profound institutional recalibration, often forced by systemic shock.

Without the Second World War, for example, we would not have had the European construct; the war solidified the institutions and agreements that built modern Europe. Interestingly, our current nationalist moment may similarly herald a reinforcement of

institutional effectiveness on both sides of the Atlantic as governments seek to shore up their defences against external geopolitical shocks and the internal political volatility inherent in personalized leadership.

This principle of institutional memory as risk mitigation appears equally in contemporary settings, proven in both observance and breach. The 1984 Bhopal disaster in India led to widespread adoption of systematic hazard analysis frameworks mandated by national and international regulatory bodies that embed operational memory into industrial processes. By contrast, the 2017 collapse of Puerto Rico's water infrastructure after Hurricane Maria demonstrated how a breakdown in institutional capacity – both in terms of deferred maintenance and a catastrophic failure of logistical response – can amplify a disaster's impact. More recently, the institutional chaos during the 2020 pandemic could have been mitigated if the existing preparedness documents and strategies had been actively maintained, adequately resourced and sufficiently integrated into operational reality.

In each case, the core lesson remains: Risk lives in the gap between what institutions remember and what they forget.

What Venice learned centuries ago – that resilience begins with institutional memory – is precisely what today's risk frameworks are forgetting. Even central banks quietly concede this. A recent study from the Federal Reserve Bank of New York shows that recession models, long viewed as reliable, carry far more uncertainty than most assume. The real problem isn't randomness – it's the institutional tendency to sidestep inconvenient forecasts. Banking regulations developed since the 2008 financial crisis taught banks to hoard capital; the next generation of rules, if they are to matter, must teach them to hoard memory. The intensity of political and historical forces now outstrips any model's backward-looking window.

Each modern crisis has a historical twin, dissected in dusty reports few bothered to read. The 1907 collapse of lightly regulated trust companies eerily presaged the 2021 implosion of the opaque and undercapitalized fund Archegos, a U.S. family office that utilized undisclosed, leveraged derivative positions. Likewise, the 1929 market crash, fuelled by investors borrowing heavily against their stock portfolios, was a structural forerunner of the 1998 collapse of Long-Term Capital Management (LTCM), whose demise was triggered by similarly overleveraged derivative positions. These names may mean little to current executives, but they are object lessons that could have alerted decision-makers to disasters they were hurtling toward.

New Orleans, Louisiana, after hurricane Katrina

A critical challenge is selecting the right temporal horizon for each risk type. Financial rules require banks to maintain short-term risk measurements – standard metrics looking at potential losses over days or a year – to ensure day-to-day stability. However, these capture only narrow historical slices. Leading into 2007, bank risk models showed historically low readings because they were calibrated primarily to the unusually placid "Great Moderation" period, a two-decade era of decreased macroeconomic volatility and stable inflation in the U.S. When unprecedented shocks appeared, these models catastrophically underestimated systemic risk. When LTCM collapsed in 1998, it could have taught financiers to institutionalize lessons from the risks of excessive leverage and flawed models. Their failure to institutionalize these lessons contributed significantly to the financial system's subsequent fragility and the eventual eruption of the larger subprime crisis a decade later.

Risk management requires more than algorithmic sophistication – it demands a fundamental recalibration of how institutions process time itself. Rather than generating stress tests from mathematical extremes alone, resilient organizations build scenarios from historical precedents. In response to the widespread systemic failures exposed by the 2008 Global Financial Crisis, regulators like the Bank of England have developed sophisticated stress tests, using long-run historical data to calibrate severe but plausible 'tail risk' scenarios that force institutions to look beyond recent placid periods. When properly recontextualized, the Panic of 1907, when customers rushed to withdraw their deposits from banks over fears of banks' solvency, offers more insight into modern fintech vulnerabilities than many synthetic models. Progressive boards balance quantitative expertise with historical literacy. True diversification includes dissent – sponsoring contrarian scenarios and funding asymmetric experiments the herd ignores.

This call for historical consciousness directly challenges the ethos of the machine-learning age. Advocates insist that vast data streams and transformer models have made history

obsolete. They are half-right: Computation is indispensable. Yet models without memory resemble GPS systems with no underlying map data: They provide precise co-ordinates but lack the geographical context essential for navigation during disruptions. Black-box engines still underprice tail risk because they train on placid decades and ignore infrequent but devastating avalanches. Pre-embedded historical consciousness becomes the only brake that works at microsecond speed.

These principles demand cultural transformation, not cosmetic adjustments. Organizations must marry artificial intelligence's computational power with archives' institutional wisdom.

La Serenissima earned its "serene" title through foresight, not temperament. When the Arsenal exploded in 1569, the Republic's leadership moved with decisive clarity, dispersing powder magazines and institutionalizing risk memory. Intriguingly, the bronze lion dominating Piazza San Marco whispers an additional lesson: As reported in the journal Antiquity, recent analysis suggests this quintessential Venetian symbol may have originated in Tang Dynasty China, masquerading for centuries as purely Western iconography. Like complex financial instruments and geopolitical currents, symbols harbour hidden depths and unexpected provenances. What appears immediately obvious often obscures more intricate histories – just as current models frequently miss fundamental elements shaping our reality.

Today's risk frameworks must embrace both technological sophistication and historical preservation. Ignore historical depth and chief risk officers from Toronto to Rome to Mumbai will reap an ever-bitter harvest, as political economy writes its ledgers in defaults, sanctions and sudden devaluations. Instead, marry artificial intelligence's computational power with archives' institutional wisdom, and organizations can navigate uncertainty with the balanced stance of that Venetian lion: one paw planted firmly on solid memory, the other testing the turbulent waters of change.

The choice is urgent, the tools are ready, and history – quite literally – waits for no one.