

Enabling Innovation: Why Risk-Tolerant Financing is Critical for Pandemic Preparedness

Kaleem Ullah Khan

Global Health Finance Professional, Independent Researcher, Michigan, United States

Email: Kaleem002@hotmail.com

DOI Link: <http://dx.doi.org/10.6007/IJARBSS/v16-i3/278035>

Published Date: 30 March 2026

Abstract

Pandemic preparedness requires rapid, adaptive responses amid significant uncertainty. However, traditional financing mechanisms in global health are often structured to minimize risk, emphasizing strict controls, predefined outputs, and rigid compliance frameworks. While these approaches ensure accountability, they can inadvertently constrain innovation and delay critical interventions during emerging health threats. This paper argues for integrating risk-tolerant financing models into global health systems, highlighting the need to balance flexibility with financial discipline. Drawing on lessons from recent pandemics and existing global health financing practices, the paper proposes a conceptual framework that incorporates adaptive funding mechanisms, governance guardrails, and accountability structures. The adoption of such models is essential to enable timely decision-making, support scientific innovation, and strengthen global pandemic preparedness.

Keywords: Risk-Tolerant Financing, Pandemic Preparedness, Global Health Financing, Adaptive Funding Mechanisms, Financial Accountability

Introduction

The increasing frequency, scale, and complexity of emerging infectious diseases have underscored the urgent need for robust and adaptive pandemic preparedness systems worldwide (World Health Organization, 2021). Recent global health crises, including COVID-19, Ebola, and Zika, have demonstrated not only the devastating human and economic consequences of pandemics but also the limitations of existing preparedness frameworks in responding effectively to rapidly evolving threats. Despite substantial global investments in health security, many countries continue to face significant challenges in achieving timely detection, coordinated response, and resilient recovery (World Bank, 2022).

A critical yet often underexplored dimension of pandemic preparedness lies in the design and structure of financing mechanisms that support these efforts. Effective financing is essential for ensuring that resources are available, flexible, and deployable under conditions of uncertainty. However, global health financing systems have historically been shaped by principles of risk minimization, emphasizing strict accountability, predefined deliverables, and controlled disbursement processes. While such approaches are important for maintaining

financial oversight and donor confidence, they may inadvertently constrain rapid decision-making and limit the ability to respond dynamically in crisis situations (Moon et al., 2015). The tension between accountability and flexibility becomes particularly pronounced in pandemic contexts, where uncertainty, urgency, and evolving information require adaptive and responsive financial systems. Rigid, risk-averse financing structures may delay critical interventions, restrict innovation, and reduce the overall effectiveness of preparedness and response strategies. As a result, there is a growing recognition of the need to rethink traditional financing models and explore approaches that better accommodate uncertainty and complexity.

This paper addresses this gap by examining the limitations of risk-averse financing approaches in pandemic preparedness and proposing a risk-tolerant financing framework. By aligning financial mechanisms with the dynamic nature of global health emergencies, this study aims to contribute to the development of more resilient and responsive pandemic preparedness systems.

Literature Review

Existing literature highlights persistent structural challenges in global health financing, particularly in the context of pandemic preparedness. Studies have shown that financing systems are often fragmented, reactive, and insufficiently flexible to support timely responses to emerging health threats (WHO, 2021; World Bank, 2022; Abbas et al., 2024).

Moon et al. (2015) emphasized the need for systemic reforms in global health governance following the Ebola outbreak, noting that delays in funding and coordination significantly hindered response efforts. Similarly, the Global Preparedness Monitoring Board (2021) identified financing constraints as a critical barrier to effective preparedness and response. Research also indicates that traditional donor funding models prioritize accountability through rigid compliance mechanisms, which may limit adaptability in crises (OECD, 2020). Yamey et al. (2020) further argue that pandemic preparedness requires sustained investment in high-risk, high-reward research, which is often incompatible with risk-averse financing structures.

While these studies recognize the need for improved financing systems, there remains a gap in the literature regarding how financial frameworks can be redesigned to balance flexibility and accountability. This paper contributes to this discussion by proposing a conceptual model for risk-tolerant financing.

Conceptual Approach

This paper adopts a conceptual and policy-oriented approach, drawing on existing literature and practical insights from global health financing to develop a framework for risk-tolerant financing.

Rather than relying on empirical data analysis, the paper synthesizes key themes from global health policy, financing mechanisms, and pandemic response experiences to identify structural limitations and propose an alternative model.

The objective is to provide a structured framework that can inform policy discussions and guide the design of more adaptive financing systems in global health.

Risk-Averse Financing in Global Health

Donor-funded programs are typically governed by financial frameworks designed to ensure transparency and prevent misuse of funds. These frameworks often include rigid budgeting structures, restricted fund reallocation, and extensive approval processes.

While effective in stable environments, such mechanisms can introduce delays in crisis situations. During the COVID-19 pandemic, delays in mobilizing and reallocating funds were widely reported as a barrier to timely response (OECD, 2020). Similarly, the Global Preparedness Monitoring Board highlighted persistent structural weaknesses in financing systems that hinder rapid action (GPMB, 2021).

The emphasis on predefined outputs and strict cost controls may also discourage investment in early-stage scientific innovation, where outcomes are uncertain but potential impact is high (Yamey et al., 2020).

The Case for Risk-Tolerant Financing

Risk-tolerant financing recognizes that in high-uncertainty environments, some degree of financial risk is necessary to achieve impactful outcomes. Rather than eliminating risk, this approach seeks to manage it strategically.

In pandemic preparedness, risk-tolerant financing can:

- Enable faster allocation of resources
- Support early-stage research and development
- Facilitate adaptive programme implementation
- Improve responsiveness to evolving threats

Organizations such as Coalition for Epidemic Preparedness Innovations have demonstrated the value of flexible funding models in accelerating vaccine development, particularly during COVID-19 (CEPI, 2022).

Importantly, risk tolerance does not imply reduced accountability. Instead, it requires a shift toward more adaptive governance structures that balance flexibility with oversight (Kettler & Towse, 2015).

Balancing Flexibility and Financial Discipline

A key concern in adopting risk-tolerant financing is the potential dilution of financial discipline, particularly in donor-funded environments where transparency and auditability are essential.

This balance can be achieved through structured flexibility supported by governance mechanisms. Key elements include:

- Predefined guardrails for financial decision-making
- Milestone-based funding models tied to outcomes rather than inputs
- Enhanced reporting systems to maintain transparency
- Robust audit trails to ensure accountability

These approaches align with broader recommendations for strengthening global health governance while enabling adaptive responses (World Bank, 2022).

A Conceptual Framework for Risk-Tolerant Financing

This paper proposes a three-component framework:

1. Adaptive Funding Mechanisms - Flexible financial structures enabling rapid reallocation and scaling of resources.
2. Governance and Oversight - Clearly defined roles, approval thresholds, and accountability mechanisms.

3. Transparency and Assurance - Strengthened reporting and audit systems to maintain trust and compliance.

This framework reflects a shift from rigid financial control to risk-informed financial management, consistent with emerging best practices in global health financing (Yamey et al., 2020).

Implications for Policy and Practice

Adopting risk-tolerant financing requires:

- A shift from risk avoidance to risk management
- Greater collaboration across finance, scientific, and programme teams
- Investment in systems that support real-time decision-making

Institutions such as World Health Organization and World Bank have emphasized the need for more flexible and sustainable financing mechanisms to strengthen pandemic preparedness (WHO, 2021; World Bank, 2022; Abbas et al., 2024)

Conclusion

Pandemic preparedness operates in an environment defined by uncertainty and urgency. Traditional risk-averse financing models, while essential for accountability, may limit the ability to respond effectively.

Risk-tolerant financing offers a pathway to balance flexibility and discipline, enabling faster and more adaptive responses while maintaining transparency. Integrating such approaches will be critical to strengthening global health resilience and supporting innovation in future pandemics.

References

- Abbas, S. I. (2024). *The impact of digital literacy on the performance of Islamic banks in the era of fintech and digital banking transformation.*
- Abbas, S. I. (2024). *The impact of green HRM on employee technostress: The moderating role of emotional intelligence in digital leadership.*
- Coalition for Epidemic Preparedness Innovations (CEPI). (2022). *CEPI's approach to equitable access and vaccine development.*
- Global Preparedness Monitoring Board. (2021). *From worlds apart to a world prepared.*
- Kettler, H., & Towse, A. (2015). Public-private partnerships for research and development: Medicines and vaccines for diseases of poverty. *Health Affairs, 34*(2), 303–310.
- Moon, S., Sridhar, D., Pate, M. A., Jha, A. K., Clinton, C., Delaunay, S., Edwin, V., Fallah, M., Fidler, D. P., Garrett, L., Goosby, E., Gostin, L. O., Heymann, D. L., Lee, K., Leung, G. M., Morrison, J. S., Saavedra, J., Tanner, M., Leigh, J. A., ... Piot, P. (2015). Will Ebola change the game? Ten essential reforms before the next pandemic. *The Lancet, 386*(10009), 2204–2221.
- Organization for Economic Co-operation and Development (OECD). (2020). *Global health crisis: COVID-19 and development finance.*
- World Bank. (2022). *Financial intermediary fund for pandemic prevention, preparedness, and response.*
- World Health Organization. (2021). *Global preparedness monitoring report.*
- Yamey, G., Schäferhoff, M., Aars, O. K., Bloom, B., Carroll, D., Chawla, M., Dzau, V., Echalar, R., Fan, V., Fraser, M., Ihekweazu, C., Jamison, D., Kluge, H., Mahmoud, A., Moon, S.,

Oppenheim, B., Pavlin, J., Pate, M., Sands, P., ... Yates, R. (2020). Financing of international collective action for epidemic preparedness. *The Lancet Global Health*, 8(6), e744–e745.