

# **Operational Risk Management in Banks and Idiosyncratic Loss Theory**

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# **Operational Risk Management in Banks and Idiosyncratic Loss Theory: A Leadership Perspective**

BY

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Emerald Publishing Limited  
Howard House, Wagon Lane, Bingley BD16 1WA, UK

First edition 2023

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**British Library Cataloguing in Publication Data**

A catalogue record for this book is available from the British Library

ISBN: 978-1-80455-224-7 (Print)

ISBN: 978-1-80455-223-0 (Online)

ISBN: 978-1-80455-225-4 (Epub)



ISOQAR certified  
Management System,  
awarded to Emerald  
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Environmental  
standard  
ISO 14001:2004.

Certificate Number 1985  
ISO 14001



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To my daughter Shikurah Velez, you are my biggest cheerleader, and I am thankful for your love and support.

To Ms Henry my third-grade teacher at Goshen Primary School, Lucky Hill, St Mary, I thank you for believing in my abilities as a student. This dream could not have actualized if it wasn't for your hard work and time spent mentoring me.

To my cousins Doreen Ellis and Albert Ellis (Bogart), I could not have done this book if it wasn't for the role model you played in my early life that has stayed with me throughout the years. You have always believed in me.

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## About the Author

**Sophia Beckett Velez, PhD**, has worked for over 16 years as a Certified Public Accountant (CPA) with large banks providing consulting services. Her work experience has provided her with valuable background information on the banking industry in general. As a CPA, she worked for firms such as PricewaterhouseCoopers, where she performed financial audits, attestation services, and risk management analysis of large banks. Many of the regulatory compliance problems noted during her review of the large banks required her to cultivate relationships with line of business managers, and work with them to develop action plans and solutions to the issues noted. This has sparked her research interest in exploring the issues at hand in the banks, magnified subsequent to the 2008 recession.

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# Preface

This book discusses idiosyncratic viral loss theory and systemic operational losses that are evident in human error, fraud, and legal expenses that are aligned to systemic operational risk. Systemic operational risk events that lead to substantial losses in significant financial institution (SIFI) banks expose them to insolvency, cause significant volatility, and unpredictable negative impact on the US economy. A qualitative e-Delphi study of 10 banking finance experts were convened to build consensus on effective risk management practices. The conceptual framework for this study was the Open Compliance and Ethics Group's (OCEG's) standard that integrates governance, risk management, internal control, assurance, and compliance (GRC capability model) into one functional goal to improve quality and principled performance through measurable tools that may enhance effectiveness and efficiency practices. The important considerations identified are: (a) a comprehensive enterprise-wide risk; (b) controlling fraud; (c) going beyond the minimum risk assessment requirements set forth by the banking regulators; (d) independent risk identification and management that can bolster effective risk management practices. These considerations towards effective risk management practices may help reduce systemic operational losses viral spread in banks.

A systemic risk event that leads to significant losses in banks classified as SIFI can expose them to insolvency and have negative impacts on the US economy. The viral spread of operational losses through global markets by interconnected multinational banks can be compared to viruses' spread through interconnected countries and the significant losses incurred can be referred to as idiosyncratic viral loss theory.

This book offers an original contribution to the field of banking that undergraduates, master's and PhD students, academics, and researchers can use to gain a deeper understanding of idiosyncratic viral losses in banks and the use of effective risk management practices.

This book will be the first to discuss idiosyncratic viral loss theory and systemic operational losses in banks.

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# **Acknowledgement**

This book could not have been written without the support and encouragement of my daughter Shikurah Velez.

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# Introduction: Outline of Chapters

This book is divided into three parts. Part 1 discusses idiosyncratic viral losses in mega banks and significant financial institutions (SIFIs) and global economic impact. Part 2 examines the nature of systemic operational risk embedded in human and process errors, fraud and criminal activities, legal and government enforcement of legal settlements, and statutory penalties. Part 3 reviews bank operational environment as host for idiosyncratic viral losses, natural disasters and viruses, and the failed efforts of government executed through governance and leadership.

## **Part 1: Idiosyncratic Viral Losses Behaviour and Global Economic Impact**

This part of the book discusses systemic spread of operational losses through global markets by interconnected multinational banks and idiosyncratic viral loss theory. The lack of effective risk management practices to control systemic losses is reviewed.

### ***Chapter 1: Idiosyncratic Viral Losses and Its Behavioural Practices***

In this chapter, I discuss idiosyncratic operational losses that are evident in human error, fraud, and legal expenses that are aligned to systemic operational risk. Idiosyncratic losses' behavioural likeness to viruses, unpredictable formation, environmental spread rate, and global impacts are examined. The existence of these types of losses in SIFIs such as banks expose them to insolvency and a systemic risk to the US economy.

### ***Chapter 2: Regulation of Operation Losses and Capital in Banks***

Bank regulators require SIFIs to implement risk indicators in their internal measurement frameworks to capture operational risk drivers through the use of four data elements: internal loss data, external loss data, scenario analysis, and business environmental and internal control factors. This chapter highlights banks' mixed attitude towards new regulation that places financial burden on the business to meet the requirements and their lobbying efforts to repeal them.

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**Operational Risk Management in Banks and Idiosyncratic Loss Theory:**

**A Leadership Perspective, 1–4**

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**doi:10.1108/978-1-80455-223-020221002**

### ***Chapter 3: Idiosyncratic Losses in Mega Banks and SIFIs***

The growing threat of idiosyncratic losses in global banks and global financial services industry cannot be ignored. Business continuity risk is monitored by regulators to ensure companies have controls to mitigate this risk; the lack of controls in place that are effective can subject the company to findings. Systemic risk is examined and the possibility that the financial system as a whole might become unstable when a large bank (SIFI) suffers a loss event.

### ***Chapter 4: SIFI Losses and Global Economic Impact***

Banks in the United States are negatively impacted by losses incurred in the European markets that passed through interconnected market and have a negative domino effect on US banks' financial position. This chapter walks through the systemic impact these losses have on banks and the knock-on effect that is evident in significant layoffs of employees, growth of unemployment rate, and country in economic turmoil.

### ***Chapter 5: Idiosyncratic Viral Losses and Operational Risk***

Operational risk events generate significant losses that are unpredictable and have no historical behaviour that acts as an alert to management to take pre-emptive measures. Operational risk has been a significant host to idiosyncratic losses that thrive in SIFIs and hard to contain. Insider fraud and rogue trading in banks and the root causes leading to operational losses are examined.

## **Part 2: Nature of Systemic Operational Risk (Human Error, Fraud, and Legal)**

This part of the book discusses many of the frequent operation losses (human error, fraud, and legal) in banks that are aligned to cost borne by the bank. This chapter discusses some of the root causes and business impacts: processing errors, errors between banks, rework, system downtime, and lost customers.

### ***Chapter 6: Human Errors and Processing Errors***

This chapter discusses that trades are susceptible to human error such as fat finger, equipment malfunction, and a software bug which could results in a monetary loss. There is always reputational risk and the possibility of legal risk exposure tied to these types of events.

### ***Chapter 7: Fraud and Criminal Activity***

Market manipulations are linked to significant viral growths of operational losses in the financial sector. The cover-ups of inadequate business operation performances have an element of management fraud involvement which delays the detection of this risk and issue from audit and the regulators.

***Chapter 8: Internal Fraud***

This chapter discusses internal fraud event by individual or groups to derive selfish gain through the element of deliberate deception, securing transactions through unfair advantage, and by means of dishonesty and cheating. The various types of internal fraud committed by members of staff, such as unofficial borrowing, over invoicing, unauthorized stamps, fictitious transactions, committing, fraudulent use of document, cash on hand converted to personal use, are examined.

***Chapter 9: External Fraud***

This chapter discusses external fraudulent acts carried out by a third party without the cooperation of bank employees. The various types of these array of bank fraudulent acts, impacts of significant operational losses to financial institutions, and enforcement actions taken by the government are discussed in this chapter.

***Chapter 10: Legal Expenses, Legal Settlements, and Statutory Penalties***

Legal uncertainties surrounding the legality of banks' contractual agreement that are binding in transactions such as derivatives, legal risk involved, and the exposure of banks to significant losses. Banks significant legal expenses and penalties are examined.

**Part 3: Operational Risk Environment and Leadership**

This part of the book discusses banks' operational environment, an active host of idiosyncratic viral losses attributable to its control environment, volatility, proximity, and connectivity. The role of global leadership in a crisis, the struggle to implement governance measures to stabilize the economy, the root causes of crises, and the application of effective risk management practices in varied scenarios are also discussed.

***Chapter 11: Technology Risk***

This chapter discusses information technology as the backbone of operational risk framework. Its role as the foundation and facilitator of risk, shortcomings, and vulnerabilities to system attack by external and internal actors, and financial consequences are also discussed.

***Chapter 12: Natural Disasters and Viruses***

Natural disasters idiosyncratic and systemic nature cannot be ignored. Banks and regulators were forewarned by health authorities to have a disaster preparedness plan for pandemics. This chapter looks at disasters and viruses that cause significant losses to banks, business, and global economy.

***Chapter 13: Risk Management***

The need for effective risk management measures to reduce risks before disaster strikes and building back after the disaster is examined. The economic crisis the world experienced in 2008 is juxtaposed to the present situation through a crisis caused by a pandemic. Risk management efforts are reviewed and global communities acts of resiliency.

***Chapter 14: Bank Operational Environment as Host for Idiosyncratic Viral Losses***

Banks are interconnected globally, function as hubs, and an operational environment as a host for idiosyncratic viral losses. The role banks play within this system and being instrumental to significant bank losses spreading through global markets.

***Chapter 15: Control Environment and Systemic Risk***

This chapter discusses the control environment relative to increase or decrease of idiosyncratic losses and systemic risk spread throughout the bank's operation. The role of ineffective control activities facilitating the operational environment serving as an incubator/hotbed for systemic viral losses to breathe and exponentially spread is discussed.

***Chapter 16: Governance and Leadership***

Global leadership struggles to implement governance measures to stabilize the economy and quell the fears of its citizens when economies are in crisis mode. This chapter discusses the response of central banks and governments around the world to various forms of crisis. The timing of the responses, measures rolled out, and root causes of banks' and citizens' rejection of these policies are also discussed.

Part 1

# **Idiosyncratic Viral Losses Behaviour and Global Economic Impact**

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## Chapter 1

# Idiosyncratic Viral Losses and Their Behavioural Practices

Significant financial institutions (SIFIs) such as banks that sustain significant losses without adequate capital may become insolvent and pose a systemic risk to the US economy (Berger, Curti, Mihov, & Sedunov, 2018; Crawford, 2017; Gong, Huizinga, & Laeven, 2018). SIFIs are significant financial institutions the Federal Reserve Bank (Fed) identified as too big to fail and offered them bailouts to prevent insolvency during the 2008 recession (Coffee, 2018). SIFIs can be large insurance companies such as AIG that are multinationals that operate on a global scale. The business practices of these insurance giants are connected to banks, insurance company, Hedge and mutual funds, and significant corporations. The collapse of a company such as AIG losses would spread throughout the global markets causing negative dominoes effects, companies expose to bankruptcy, and possibly causing another recession. The significant losses in SIFIs are tied to operational loss events that are idiosyncratic in nature and pose a systemic risk to the United States and global economy. Whenever there are errors or failures in control activities due to human behaviour that causes losses, these losses are identified as operational losses. The viral spread of operational losses through the global markets by interconnected multinational banks can be compared to viruses spread through interconnected countries; the significant losses incurred can be referred to as idiosyncratic viral loss theory. This idiosyncratic viral loss theory discusses systemic operational losses that are evident in human error, fraud, and legal expenses that are aligned to systemic operational risk. Idiosyncratic viral loss theory derives its label from its character, behavioural likeness to viruses, unpredictable formation, environment, spread rate, and global impacts (Velez, 2021). Significant operational losses that are idiosyncratic in nature in the US banking sector have knock-on effects that replicates in the global banking and financial sector (Velez, 2021). Viruses penetrate the living host environment, evolves, replicates, and assemble its component parts into multiple offspring's (Oldstone, 2020). A recent type of exhibition of this type of virus is the novel corona virus (COVID-19), first detected in Wuhan, China, December 2019; the World Health Organization (WHO) declared this virus a pandemic 11 March 2020 (Tariku & Hajure, 2020). There are several forms of viruses that are classified as

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**Operational Risk Management in Banks and Idiosyncratic Loss Theory:**

**A Leadership Perspective, 7–22**

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**doi:10.1108/978-1-80455-223-020221004**

RNA type or DNA type in nature. However, RNA type viruses spread at a rapid rate faster than the DNA type viruses which makes it harder to control. Viruses that are RNA type evolve 1 million times faster than DNA type (Oldstone, 2020).

The volatile and unpredictable nature of viruses makes them idiosyncratic; the spread rate and behaviour of the virus are essential to identify how dangerous and potential damages this virus will cause, for which models are used to predict. When models indicate that  $R_t > 1$ , this signals that there is exponential increase in incidences of the virus; one can infer that the virus is not in the declining mode instead it is increasing in numbers (Parag & Donnelly, 2020). This indicates that the measures rolled out thus far whether vaccines or lockdown is not bending the virus increase curve downwards. However, the readings from these models should be reviewed with caution as they are susceptible to inaccuracies; the  $R$  from epidemic data are experimental choices and estimates that could be deceptive, sometimes leads to unreliable results (Parag & Donnelly, 2020). The use of models to project and anticipate the behaviour of viruses or losses in an environment such as banking is useful as an estimate that should be taken into consideration with other factors. The reliance on estimates from models in isolation can mislead the users of this information. This was demonstrated in the current pandemic with the modelling of the COVID-19 viruses; the viruses' impact and spread rate globally were deadlier than anticipated; many government heads and their supporting sectors were under prepared to deal with this virus. Likewise, bank idiosyncratic operational loss events are hard to predict, and not anticipatory by the stock market investors (Kaspereit, Lopatta, Pakhchanyan, & Prokop, 2017). The task of predicting significant losses that could cause a recession is a struggle for many banks and many regulators such as the Fed (Velez, 2021). The prediction of significant losses is a requirement outlined in the Dodd–Frank Bill 2010 which is just as important as maintaining the minimum capital requirements outlined in the bill. The Fed requires banks to use scenario analysis models to predict significant operational losses; the building out of these models relies on historical data made them questionable in its capability to predict actual market risk and losses (Velez, Neubert, & Halkias, 2020). While historical data provide a good basis of understanding in hindsight those occurrences of losses, a blended approach should be used in the use of these data with forward-looking information. Historical losses should be reviewed in conjunction to current market behaviour information and forward-looking events to have a better forecasting and estimate result. Another questionable factor with scenario analysis provides a level of accuracy and whether the lack thereof posed a significant danger to the financial sector stability; this over reliance on historical data and events and static balance sheet has been viewed as a weakness (Baradaran, 2014). Idiosyncratic losses frequency, significant impact on SIFI banks, and the risk to the economy make it a problem that cannot be ignored. The spread of these losses through the global banking system is facilitated by the close and interconnected relationships between these institutions. The interconnected network of banks creates an environment where these banks conduct business in easy manner, partnered globally on deals, share information timely, and share risk and rewards of the related deals. The range of these deals varies from global trades, loans, and business financing.