

OPE25's Sector Case Report—RWA Calculation for Operational Risk: Corporate Accounting FinTech Cash Surplus (Economic Capital Accounts and SOX Ratio)

John P. Koeplin¹, Pascal Lélé^{1,2}

¹School of Management, University of San Francisco, San Francisco, USA

²HCM Accounting Academy, Innovation Hub of LELE-HCM Accounting Industry Inc., Atlanta, USA

Email: koeplin@usfca.edu, l.pascal@hcm-accounting.com

How to cite this paper: Koeplin, J. P., & Lélé, P. (2023). OPE25's Sector Case Report—RWA Calculation for Operational Risk: Corporate Accounting FinTech Cash Surplus (Economic Capital Accounts and SOX Ratio). *Journal of Financial Risk Management*, 12, 137-165.

<https://doi.org/10.4236/jfrm.2023.122008>

Received: December 5, 2022

Accepted: April 25, 2023

Published: April 28, 2023

Copyright © 2023 by author(s) and Scientific Research Publishing Inc. This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).
<http://creativecommons.org/licenses/by/4.0/>



Open Access

Abstract

This article is the culmination of the research and practical work of the network of academics and industries which has been set up worldwide since 2013 to help banks and the credit risk counterparty business sectors through action research and appropriate publications in Corporate Accounting FinTech to cross the threshold of OPE25 effective January 1, 2023. The OPE 25 standard—Calculation of RWA for operational risk indeed underpins the accounting and financial management strategy of Banks and Counterparties Credit Risk or CCR (insurance companies, industries, and services, including local authorities). The forward management paradigm serving as the basis for insuring bank credit and raising funds on the stock market has changed. Forecasting future sales based on past sales data is no longer enough: To be realistic, the mathematical or quantitative approach (statistics and probabilities) for estimating the forecast turnover and future cash flows, in particular the calculation of the growth rate, must now be linked to the use of historical data (at least 5 years) and the future financial performance plan (over at least 3 years), to the corporate accounting process taking into account the total paid workforce, due to the predominant effect of HR, to mitigate losses generating economic capital accounts and the SOX ratio impacting both the cost price of products and services sold and the competitiveness of the entity and securing investments. This is the requirement of the “General criteria on loss data identification, collection and treatment”, (BCBS, 2017a) which is now incorporated into the Consolidated Basel III Framework, for OPE25, https://www.bis.org/basel_framework/.

Keywords

Loss Control, SOX Ratio, Incentivized Pay, FinTech SAF, Human Capital, Corporate Accounting, Historical Data, Economic Capital Accounts, Profitability Ratios

1. Introduction

The mathematical risk management approach (statistics and probabilities) used so far for the OPE30 expires on December 31, 2022, to make way for the advanced cross-cutting innovation accounting approach known as the standard approach (“General criteria on loss data identification, collection and treatment” (BCBS, 2017b): this standard has been integrated into the consolidated Basel Framework for OPE25 (BCBS, 2020), Past & future changes to the Basel Framework).

US Federal Reserve, UK, EU, and central banks of all G20 countries aim to adopt last Basel III part by January 2023 with new requirements to be calibrated for “capital neutrality” (BCBS, 2021a).

Apart from FinTech SAF (FinTech Sustainability Accounting provided in SaaS mode without changing anything to the existing IT), there are no other cross-cutting solutions to do this, without increasing your expenses: all OPE25 expenses must be self-financed, the difference constituting your Net Economic Capital. The opposite increases risk and losses: “Gross loss is a loss before recoveries of any type” (BCBS, 2019).

ISACA Journal of the World Association of IT Auditing and a network of specialized American, British and European academics cooperate with the American publisher LELE-HCM ACCOUNTING INDUSTRY INC. to promote the FinTech SAF of corporate accounting since 2013. See in particular:

1) The accompanying articles of Basel III of banks, as well as Solvency II and NAIC of insurance companies in 2013, 2014 and 2016 with ISACA Journal by academics from the FinTech SAF network of US-EU universities (Malta, UK, Germany, New Jersey, and Georgia).

2) The book (449 pages) “*Recent Developments in Asian Economics—International Symposia in Economic Theory and Econometrics*” published in UK (Emerald Publishing) on March 1, 2021, with 54 universities coordinated by Harvard University (USA), the center for Financial Stability (USA) and the Accounting Department of the University of San Francisco (USA).

3) It also works from the World Finance Conference (Malta 2020) and the Society for Interdisciplinary Business Research (SIBR) 2020 conferences in OSAKA, SEOUL, and SYDNEY.

4) It is also necessary to consider the networks of the universities of the 2020 management conference in Berlin (Germany) and the Academy of Management (AOM) which was associated with the 2020 international conference of Lyon-

France.

The references provided relate to the regulatory corpus and publications relating to FinTech SAF and domain. The main points of this article are as follows:

- *Methods.*
- *Why do banks and CCRs need to take this step?*
- *For what result do banks and CCRs take this step?*
- *Where should banks and CCRs provide investors with this OPE25 data, which until now has been lacking in financial publications?*
- *FinTech workstation to OPE25 cross-cutting accounting interactions (standard approach).*
- *Structural, regulatory, and technical requirements making these cross-cutting advances in risk management essential.*
- *Accounting process avoiding the financial mathematics of putting the cart before the horse.*
- *Corporate Accounting Global Fintech Action Research and Popularization Network.*
- *Conclusion.*
- *References.*
- *Permission to publish.*

2. Methods

This article is situated in a context of empirical study and demonstrative research. The methodology includes an explanation of the techniques or procedures used to identify and analyze information concerning the subject of research as well as expectations and assumptions that are already formulated by the laws and regulations in force. The case study research activity in this context consists of carrying out a sampling to target the business income statements to be analyzed and to establish an action plan for data collection. This study is situated in a particularly specialized field of simulation: the simulation in management accounting of the added value of human capital in economic capital resulting from SOX compliance with the operational risk standards of the final framework of Basel III. Like all simulations, it mimics the operation of real business financial performance processes or systems using the HCMA model.

Simulations are typically computer-based, using a software-generated model to provide decision support for managers and engineers as well as for certification purposes adjusting cross-functional interaction skills. This simulation would have been impossible without FinTech SAF which, under a patent filed in France in 2003 and extended to the USA in 2005, deploys the architecture of the Service-oriented Business Interaction Dynamics to meet:

- The basics of the standardized approach methodology as described in paragraph 25.1 of the OPE25 (BCBS, 2020).
- The management accounting process providing the “Forward looking provi-

sioning” required by BCBS (2010).

- The expectations of central banks in charge of rating companies with approved firms and supervisors in charge of banking supervision and stock exchanges (BCBS, 2019).
- The laws of countries requiring separate reporting of the financial performance of fixed salaries and variable salaries (EUR-LEX, 2017; SEC, 2018).

3. Why Do Banks and CCRs Need to Take This Step?

“The recognition of the coverage of operational risk losses by insurance cannot exceed 20% before considering the economic capital accounts”, BCBS (2010).

- It derives the SOX ratio (Economic Capital/Variable Salary or Incentivized Pay) to be calculated for monitoring internal financial stability as part of the insurer’s Own Risk and Solvency Assessment (ORSA): NAIC’s last Updated 5/11/2022

(<https://content.naic.org/cipr-topics/own-risk-and-solvency-assessment-orsa>).

Until now, two ratios were used to measure a company’s leverage (the ratio borrowings/equity and debt ratio). The SOX ratio complements the main balance sheet ratios (Financial autonomy ratio, Net debt ratio, General liquidity ratio and Stable employment coverage ratio).

- The urgency is to fill the gaps in the internal assurance you give to the investor for economic capital based on your historical income statements and the added value of the Total Paid Workforce impacting your future financial performance.

This requirement affects all aspects of your access to credit and investment finance, including major aspects of the insurance industry [Trade credit insurance, Investment insurance, General Insurance, Inward Reinsurance (Financial Risk), Export credit insurance, Comprehensive Trade Credit Insurance, Investment Insurance for equity investors, etc.].

- The challenge of the SOX Ratio is that when the company pays bonuses or variable salaries, and the turnover varies little or stagnates, or when the company can neither identify nor mitigate its operational risk losses, this is a business that may be in arrears on its debt and may not be able to borrow additional funds to ensure its survival. A long period of slow growth can indeed render the company insolvent.

4. For What Result Do Banks and CCRs Take This Step?

4.1. Banking Sector

- A bank with an average of 759,755 employees

The economic capital accounts of its Loss Control process on FinTech SAF are as follows.

4.1.1. History of Income Statements for the Last Five Years

See Table 1.

Table 1. Banking sector—History of income statements for the last five years (Boursorama Sources: <https://www.boursorama.com/cours/societe/chiffres-cles/1rPACA/>).

Data published in thousands of \$	N – 1	N – 2	N – 3	N – 4	N – 5
Net banking income	19,500,000	19,736,000	20,152,000	20,500,000	22,650,000
Net profit	3,138,000	5,027,000	5,458,000	3,238,000	6,849,000
Net income (group share)	2,592,000	4,400,000	4,844,000	2,692,000	5,844,000
Gross HR financial ratios provided (without calculating HR efficiency)					
Workforce at the end of the year	76,305	75,811	0	73,817	75,711
Average workforce	71,308	72,510	72,524	72,520	75,975

4.1.2. Expected Added Value of the Total Paid Workforce (Programming the Predictability of Variable Salaries)

- Estimated Absolute VaR (EL + UL) = \$1,543,974,423.
- Potentially Recoverable Losses (PRL) = Absolute VaR – Risk Appetite Threshold calibrated at 0.02% for a 99.98% PRL = \$1,543,665,628.
- Current contribution per employee to the average net income (Group share) for an average net income (group share) of \$4,074,400,000 = \$67,668.
- Economic Capital expected on plan of 3 years for 67% of the PRLs = \$1,034,255,971.

Incentivized Pay Leverage Effect (IPLE):

- Gross economic capital per employee at the new risk appetite threshold over a 3-year plan supplementing the financial statements. This financial performance per employee is progressive as follows over 3 years, considering the period of adaptation, by learning by doing and deepening:

In year N it will provide a result equal to 30% of PRLs = \$7691.

In year N + 1 it will provide a result equal to 60% of PRLs = \$15,383.

In year N + 2 it will provide a result equal to 100% of the PRLs = \$25,638.

Cost of HR competitive advantage in economic capital expected from the Organizational Dynamics of Human Capital:

Cost to pay (Total variable salary on a 3-year plan programmed on 33% of PRL) for internal financial performance mitigating operational risk losses = \$509,409,657.

Fixed Salaries Financial Performance:

These economic capital accounts supplement the financial statements which will relate to the future financial performance of fixed salaries as part of the governance report. Given the dysfunctions, habits and skills constituting the corporate culture and group phenomena, the financial performance of fixed salaries will be established around the average of the last five years = \$20,509,000,000.

Instead of stagnating as in the history of the last five years, this average will change every 3 years on the spillover effect of Incentivized Pay, modifying the

collective standards of tolerance of dysfunctions given the Risk Appetite Threshold.

4.1.3. Summary Compliance Table to Be Provided Separately from the Income Statement (Table 2 Below)

- “The remuneration policy shall contribute to the company’s business strategy and long-term interests and sustainability and shall explain how it does so” (European Directive Article 9a, of the May 17, 2017).
- “Companies are permitted to present non-GAAP performance measures on a per-share basis, such as adjusted EPS (Adjusted earnings per share), but they are prohibited from presenting non-GAAP measures of liquidity or cash flow, such as free cash flow, on a “per-share basis” (SEC, 2018).

Table 2. Banking sector—Summary compliance table to be provided separately from the income statement: Accounts generated by FinTech SAF V1 of Senior Management (CEO) on <http://www.hcm-accounting.com/> prerequisite to comply with the “General criteria on loss data identification, collection and treatment”, (BCBS, 2017b).

1.	Current average workforce	(a)	60,211
2.	Current average net income (group share) (b)	(b)	\$4,074,400,000
3.	Current contribution per employee to average net income (Group share)	(b)/(a)	\$67,668
4.	Estimated Absolute VaR (EL + UL) = Gross loss = loss before recoveries (BCBS, 2017b)		\$1,543,974,423
5.	Potentially Recoverable Losses (PRL) or recovery = Absolute VaR – Risk Appetite Threshold (Net loss) calibrated at 0.02% for 99.98% PRL		\$1,543,665,628
	3-year plan to recover historical absolute VaR losses (UL + EL) of the last five years based on the risk appetite threshold	N: 30% N + 1: 60% N + 2: 100%	
6.	Free Gross Cash Flow per employee at the new risk appetite threshold on a 3-year plan	\$7691 \$15,383	\$25,638
7.	Economic Capital or Net Cash Surplus of its loss control system on a 3-year plan for 67% of PRL		\$1,034,255,971
8.	Variable salaries or Incentivized Pay (Earnings bonus for employees mobilized by the cross-cutting dynamics of the organization on a 3-year plan for 33% of PRLs)		\$509,409,657
9.	SOX ratio of the capital structure (Economic Capital/Variable Salary or Incentivized Pay) securing investments and the predictability of variable salaries over a 3-year plan		2.03
10.	Fixed salary future financial performance measurement data for salary negotiations in year N or 1st year of the plan [Average of the last five years in millions in accordance with the logical historical basis of the new standardized approach to operational risk (BCBS, 2017b)].		\$20,509,000,000

4.2. Insurance Sector

- An Insurer with 110,477 employees
The EC accounts of its Loss Control process on FinTech SAF are as follows.

4.2.1. History of Income Statements for the Last Five Years

See **Table 3**.

4.2.2. Expected Added Value of the Total Paid Workforce (Programming the Predictability of Variable Salaries)

- Estimated Absolute VaR (EL + UL) = \$2,252,957,461
- PRL = Absolute VaR – Risk Appetite Threshold calibrated at 4.5% for a 95.5% PRL = \$2,151,574,375
- Current contribution per employee to the average net income (Group share) for an average net income of \$3,699,000,000 = \$35,246
- EC expected on plan of 3 years for 67% of the PRLs = \$1,441,554,831
Incentivized Pay Leverage Effect (IPLE)
- Gross economic capital per employee at the new risk appetite threshold over a 3-year plan supplementing the financial statements. This financial performance per employee is progressive as follows over 3 years, considering the period of adaptation, by learning by doing and deepening:
 - In year N it will provide a result equal to 30% of PRLs = \$6150.
 - In year N + 1 it will provide a result equal to 60% of PRLs = \$12,301.
 - In year N + 2 it will provide a result equal to 100% of the PRLs = \$20,501.

Cost of HR competitive advantage in economic capital expected from the Organizational Dynamics of Human Capital

Cost to pay (Total variable salary on a 3-year plan programmed on 33% of PRL) for internal financial performance mitigating operational risk losses = \$710,019,544.

Fixed Salaries Financial Performance

These EC accounts supplement the financial statements which will relate to the future financial performance of fixed salaries as part of the governance report. Given the dysfunctions, habits and skills constituting the corporate culture and group phenomena, the financial performance of fixed salaries will be established around the average of the last five years = \$96,530,400,000.

Table 3. Insurance sector—History of income statements for the last five years (Boursorama Sources: <https://www.boursorama.com/cours/societe/chiffres-cles/1rPACA/>).

Data published in thousands of \$	N – 1	N – 2	N – 3	N – 4	N – 5
Gross written premiums	97,034,000	94,148,000	99,852,000	96,309,000	95,309,000
Net profit	7,508,000	3,331,000	4,182,000	–373,000	3,182,000
Net Income (Group share)	7,294,000	3,164,000	3,857,000	2,140,000	2,040,000
Work force at the end of year	110,477	114,625	99,843	104,065	95,728

- Instead of stagnating as in the history of the last five years, this average will change every 3 years on the spillover effect of Incentivized Pay, modifying the collective standards of tolerance of dysfunctions given the Risk Appetite Threshold.

4.2.3. Summary Compliance Table to Be Provided Separately from the Income Statement (Table 4 Below)

- “The remuneration policy shall contribute to the company’s business strategy and long-term interests and sustainability and shall explain how it does so” (European Directive Article 9a, of the May 17, 2017).
- “Companies are permitted to present non-GAAP performance measures on a per-share basis, such as adjusted EPS (Adjusted earnings per share), but they are prohibited from presenting non-GAAP measures of liquidity or cash flow, such as free cash flow, on a “per-share basis” (SEC, 2018).

Table 4. Insurance sector—Summary compliance table to be provided separately from the income statement: Accounts generated by FinTech SAF V1 of Senior Management (CEO) on <http://www.hcm-accounting.com/> prerequisite to comply with the “General criteria on loss data identification, collection and treatment”, BCBS, 2017b).

1.	Current average workforce	(a)	104,948
2.	Current average net income (group share)	(b)	\$3,699,000,000
3.	Current contribution per employee to average net income (Group share)	(b)/(a)	\$35,246
4.	Estimated Absolute VaR (EL + UL)		\$2,252,957,461
Potentially Recoverable Losses (PRL) = Absolute VaR – Risk			
5.	Appetite Threshold Calibrated at 4.5% (Standard Threshold) for a PRL at 95.5%: the application can be custom-calibrated to 99.5%		\$2,151,574,375
3-year plan to recover historical absolute VaR losses (UL + EL) of the last five years based on the risk appetite threshold			
N: 30% N + 1: 60% N + 2: 100%			
6.	Free Gross Cash Flow per employee at the new risk appetite threshold on a 3-year plan	\$6150	\$12,301
			\$20,501
7.	Cash surplus planned on 67% of PRLs (E)		\$1,441,554,831
8.	Employee incentive bonus planned on 33% of PRLs		\$710,019,544
9.	SOX ratio of the capital structure (Economic Capital/Variable Salary or Incentivized Pay) securing investments and the predictability of variable salaries over a 3-year plan		2.03
Fixed salary future financial performance measurement data for salary negotiations in year N or 1st year of the plan			
10.	[Average of the last five years in millions in accordance with the logical historical basis of the new standardized approach to operational risk (BCBS, 2017b)].		\$96,530,400,000

4.3. Industry Sector

- A metallurgical group with 157,909 employees
The economic capital accounts of its Loss Control process on FinTech SAF are as follows.

4.3.1. History of Income Statements for the Last Five Years

See **Table 5**.

4.3.2. Expected Added Value of the Total Paid Workforce (Programming the Predictability of Variable Salaries)

- Estimated Absolute VaR (EL + UL) = \$3,807,817,626
- Potentially Recoverable Losses (PRL) = Absolute VaR – Risk Appetite Threshold calibrated at 0.5% for a 95.5% PRL (Alignment with the insurer's ORSA) = \$3,636,465,833
- Current contribution per employee to the average net income (Group share) for an average net income (group share) of $-\$1,080,800,000 = \$20,937$
- Economic Capital expected on plan of 3 years for 67% of the PRLs = \$2,436,432,108

Incentivized Pay Leverage Effect (IPLE):

- Gross economic capital per employee at the new risk appetite threshold over a 3-year plan supplementing the financial statements. This financial performance per employee is progressive as follows over 3 years, considering the period of adaptation, by learning by doing and deepening:
 - In year N it will provide a result equal to 30% of PRLs = \$5910.
 - In year N + 1 it will provide a result equal to 60% of PRLs = \$11,821.
 - In year N + 2 it will provide a result equal to 100% of the PRLs = \$19,701.

Cost of HR competitive advantage in economic capital expected from the Organizational Dynamics of Human Capital:

- Cost to pay (Total variable salary on a 3-year plan programmed on 33% of PRL) for internal financial performance mitigating operational risk losses = \$1,200,033,725

Fixed Salaries Financial Performance:

These EC accounts supplement the financial statements which will relate to the future financial performance of fixed salaries as part of the governance report. Given the dysfunctions, habits and skills constituting the corporate culture and

Table 5. Industries sector—History of income statements for the last five years (Boursorama Sources: <https://www.boursorama.com/cours/societe/chiffres-cles/1rPACA/>).

Data published in thousands of \$	N – 1	N – 2	N – 3	N – 4	N – 5
Turnover	67,618,333	43,379,479	63,056,989	66,474,615	65,474,615
Net profit	13,745,143	–470,684	–2,135,088	4,659,946	4,559,946
Net Income (Group share)	13,207,347	–596,906	–2,191,345	4,501,700	4,401,700
Work force at the end of year	157,909	167,743	191,248	209,000	197,000

group phenomena, the financial performance of fixed salaries will be established around the average of the last five years = \$61,200,806,200.

- Instead of stagnating as in the history of the last five years, this average will change every 3 years on the spillover effect of Incentivized Pay, modifying the collective standards of tolerance of dysfunctions given the Risk Appetite Threshold.

4.3.3. Summary Compliance Table to Be Provided Separately from the Income Statement (Table 6 Below)

- “The remuneration policy shall contribute to the company’s business strategy and long-term interests and sustainability and shall explain how it does so” (European Directive Article 9a, of the May 17, 2017).
- “Companies are permitted to present non-GAAP performance measures on a per-share basis, such as adjusted EPS (Adjusted earnings per share), but they are prohibited from presenting non-GAAP measures of liquidity or cash flow, such as free cash flow, on a “per-share basis” (SEC 2018).

Table 6. Industries sector—Summary compliance table to be provided separately from the income statement: Accounts generated by FinTech SAF V1 from Senior Management (CEO) on <http://www.hcm-accounting.com/> prerequisite to comply with the “General criteria on loss data identification, collection and treatment”, BCBS, 2017b).

1.	Current average workforce	(a)	184,580
2.	Current average net income (group share)	(b)	\$3,864,499,200
3.	Current contribution per employee to average net income (Group share)	(b)/(a)	\$20,937
4.	Estimated Absolute VaR (EL + UL)		\$3,807,817,626
	Potentially Recoverable Losses (PRL) = Absolute VaR – Risk Appetite Threshold Calibrated at 4.5% (Standard Threshold) for a PRL at 95.5%: the application can be custom-calibrated to 99.5%		\$3,636,465,833
	3-year plan to recover historical absolute VaR losses (UL + EL) of the last five years based on the risk appetite threshold	N: 30% N + 1: 60% N + 2: 100%	
6.	Free Gross Cash Flow per employee at the new risk appetite threshold on a 3-year plan	\$5,910 \$11,821	\$19,701
7.	Cash surplus planned on 67% of PRLs (E)		\$2,436,432,108
8.	Employee incentive bonus planned on 33% of PRLs		\$1,200,033,725
9.	SOX ratio of the capital structure (Economic Capital/Variable Salary or Incentivized Pay) securing investments and the predictability of variable salaries over a 3-year plan		2.03
10.	Fixed salary future financial performance measurement data for salary negotiations in year N or 1st year of the plan [Average of the last five years in millions in accordance with the logical historical basis of the new standardized approach to operational risk (BCBS, 2017b)].		\$61,200,806,200

4.4. Service Sector

- A supermarket group with an average of 319,565 employees
The economic capital accounts of its Loss Control process on FinTech SOX are as follows.

4.4.1. History of Income Statements for the Last Five Years

See **Table 7**.

4.4.2. Expected Added Value of the Total Paid Workforce (Programming the Predictability of Variable Salaries)

- Estimated Absolute VaR (EL + UL) = \$7,705,990,410
- PRL = Absolute VaR – Risk Appetite Threshold calibrated at 4.5% for a 95.5% PRL = \$7,359,220,842
- Current contribution per employee to the average net income (Group share) for an average net income of \$346,000,000 = \$1014
- EC expected on plan of 3 years for 67% of the PRLs = \$4,930,677,964
Incentivized Pay Leverage Effect (IPLE)
- Gross EC per employee at the new risk appetite threshold over a 3-year plan supplementing the financial statements. This financial performance per employee is progressive as follows over 3 years, considering the period of adaptation, by learning by doing and deepening:
 - In year N it will provide a result equal to 30% of PRLs = \$6471.
 - In year N + 1 it will provide a result equal to 60% of PRLs = \$12,942.
 - In year N + 2 it will provide a result equal to 100% of the PRLs = \$21,570.

Cost of HR competitive advantage in economic capital expected from the Organizational Dynamics of Human Capital

- Cost to pay (Total variable salary on a 3-year plan programmed on 33% of PRL) for internal financial performance mitigating operational risk losses = \$2,428,542,878

Fixed Salaries Financial Performance

These EC accounts supplement the financial statements which will relate to the future financial performance of fixed salaries as part of the governance report. Given the dysfunctions, habits and skills constituting the corporate culture and group phenomena, the financial performance of fixed salaries will be established around the average of the last five years = \$72,649,000,000.

Table 7. Services sector—History of income statements for the last five years (Boursorama Sources: <https://www.boursorama.com/cours/societe/chiffres-cles/1rPACA/>).

Data published in thousands of \$	N – 1	N – 2	N – 3	N – 4	N – 5
Turnover	72,105,000	69,967,000	71,651,000	75,261,000	74,261,000
Net profit	1,301,000	831,000	1,311,000	–344,000	–334,000
Net Income (Group share)	1,072,000	641,000	1,129,000	–561,000	–551,000
Work force at the end of year	319,565	322,164	321,383	363,862	378,923

- Instead of stagnating as in the history of the last five years, this average will change every 3 years on the spillover effect of Incentivized Pay, modifying the collective standards of tolerance of dysfunctions given the Risk Appetite Threshold.

4.4.3. Summary Compliance Table to Be Provided Separately from the Income Statement (Table 8 Below)

- “The remuneration policy shall contribute to the company’s business strategy and long-term interests and sustainability and shall explain how it does so” (European Directive Article 9a, of the May 17, 2017).
- “Companies are permitted to present non-GAAP performance measures on a per-share basis, such as adjusted EPS (Adjusted earnings per share), but they are prohibited from presenting non-GAAP measures of liquidity or cash flow, such as free cash flow, on a “per-share basis” (SEC, 2018).

Table 8. Services sector—Summary compliance table to be provided separately from the income statement: Accounts generated by FinTech SAF V1 of Senior Management (CEO) on <http://www.hcm-accounting.com/> prior decision to comply with the “General criteria on loss data identification, collection and treatment”, (BCBS, 2017b).

1.	Current average workforce	(a)	341,179
2.	Current average net income (group share)	(b)	\$346,000,000
3.	Current contribution per employee to average net income (Group share)	(b)/(a)	\$1,014
4.	Estimated Absolute VaR (EL + UL)		\$7,705,990,410
	Potentially Recoverable Losses (PRL) = Absolute VaR – Risk		
5.	Appetite Threshold Calibrated at 4.5% (Standard Threshold) for a PRL at 95.5%: the application can be custom-calibrated to 99.5%		\$7,359,220,842
	3-year plan to recover historical absolute VaR losses (UL + EL) of the last five years based on the risk appetite threshold		
		N: 30%	N + 1: 60% N + 2: 100%
6.	Free Gross Cash Flow per employee at the new risk appetite threshold on a 3-year plan	\$6471	\$12,942 \$21,570
7.	Cash surplus planned on 67% of PRLs (E)		\$4,930,677,964
8.	Employee incentive bonus planned on 33% of PRLs		\$2,428,542,878
	SOX ratio of the capital structure (Economic Capital/Variable Salary or Incentivized Pay) securing investments and the predictability of variable salaries over a 3-year plan		
9.			2.03
	Fixed salary future financial performance measurement data for salary negotiations in year N or 1st year of the plan		
10.	[Average of the last five years in millions in accordance with the logical historical basis of the new standardized approach to operational risk (BCBS, 2017b)].		\$72,649,000,000

4.5. Public Sector

- A great US City with 309,859 employees
The economic capital accounts of its Loss Control process on FinTech SOX are as follows.

4.5.1. History of Income Statements for the Last Five Years

See **Table 9**.

4.5.2. Expected Added Value of the Total Paid Workforce (Programming the Predictability of Variable Salaries)

- Estimated Absolute VaR (EL + UL) = \$7,471,939,926
- PRL = Absolute VaR – Risk Appetite Threshold calibrated at 4.5% for a 95.5% PRL (alignment with the insurer's ORSA) = \$7,135,702,629
- Current contribution per employee to the average net income (Group share) for an average net income of $-\$11,655,200,000 = -\$35,336$
- EC expected on plan of 3 years for 67% of the PRLs = \$4,780,920,762
Incentivized Pay Leverage Effect (IPLE)
- Gross EC per employee at the new risk appetite threshold over a 3-year plan supplementing the financial statements. This financial performance per employee is progressive as follows over 3 years, considering the period of adaptation, by learning by doing and deepening:
 - In year N it will provide a result equal to 30% of PRLs = \$6490.
 - In year N + 1 it will provide a result equal to 60% of PRLs = \$12,980.
 - In year N + 2 it will provide a result equal to 100% of the PRLs = \$21,634.

Cost of HR competitive advantage in economic capital expected from the Organizational Dynamics of Human Capital

- Cost to pay (Total variable salary on a 3-year plan programmed on 33% of PRL) for internal financial performance mitigating operational risk losses = \$2,354,781,868

Fixed Salaries Financial Performance

These EC accounts supplement the financial statements which will relate to the future financial performance of fixed salaries as part of the governance report. Given the dysfunctions, habits and skills constituting the corporate culture and group phenomena, the financial performance of fixed salaries will be established around the average of the last five years = $-\$11,655,200,000$.

Table 9. Public sector—History of income statements for the last five year (Stock Analysis Sources: <https://stockanalysis.com/stocks/nyc/financials/>).

Data published in thousands of \$	N – 1	N – 2	N – 3	N – 4	N – 5
Operating budget	95,297,000	94,030,000	91,293,000	88,666,000	874,400,000
Accounting result (Deficit or budget surplus)	-2,900,000	-2,776,000	-23,000,000	-3,000,000	-26,600,000
Work force at the end of year	309,859	332,511	333,859	326,739	346,251

- Instead of stagnating as in the history of the last five years, this average will change every 3 years on the spillover effect of Incentivized Pay, modifying the collective standards of tolerance of dysfunctions given the Risk Appetite Threshold.

4.5.3. Summary Compliance Table to Be Provided Separately from the Income Statement

See **Table 10**.

5. Where Should Banks and CCRs Provide Investors with This OPE25 Data, Which until Now Has Been Lacking in Financial Publications?

5.1. Complete under the OPE25 the Critical HR Financial Ratios Usually Presented as Those That Matter to the Investor

- We have done this (**Table 11** below) with FinTech V1 for the banking group in this case study (add lines 8 - 18 for missing financial security accounts):

Table 10. Services sector (A local authority)—Summary compliance table to be provided separately from the income statement: Accounts generated by FinTech SAF V1 of Senior Management (CEO) on <http://www.hcm-accounting.com/> (Advance decision-making calculation to comply with the “General criteria on loss data identification, collection and treatment”, BCBS, 2017b).

1.	Current average workforce	(a)	329,844
2.	Accounting result (Deficit or budget surplus) in millions	(b)	-\$11,655,200,000
3.	Current contribution per employee to the accounting result (Deficit or budget surplus)	(b)/(a)	-\$35,336
4.	Estimated Absolute VaR (EL + UL)		\$7,471,939,926
5.	Potentially Recoverable Losses (PRL) = Absolute VaR – Risk appetite threshold aligned with the insurer, thus calibrated to 4.5% for a 95.5% PRL		\$7,135,702,629
	3-year plan to recover historical absolute VaR losses (UL + EL) of the last five years based on the risk appetite threshold	N: 30% N + 1: 60% N + 2: 100%	
6.	Free Gross Cash Flow per employee at the new risk appetite threshold on a 3-year plan	\$6490 \$12,980	\$21,634
7.	Cash surplus planned on 67% of PRLs (E)		\$4,780,920,762
8.	Employee incentive bonus planned on 33% of PRLs		\$2,354,781,868
9.	SOX ratio of the capital structure (Economic Capital/Variable Salary or Incentivized Pay) securing investments and the predictability of variable salaries over a 3-year plan		2.03
10.	Fixed salary future financial performance measurement data for salary negotiations in year N or 1st year of the plan [Average of the last five years in millions in accordance with the logical historical basis of the new standardized approach to operational risk (BCBS, 2017b)].		-\$11,655,200,000

Table 11. Lines of data analysis missing under OPE25 for critical HR financial ratios that matter to the investor (Banking example).

	2017	2018	2019	2020	2021	
1	Net income group share per share (in \$)	1.12	1.39	1.48	0.8	1.84
2	Diluted net income group share per share (in \$)	1.12	1.39	1.48	0.8	1.84
3	Operating coefficient (in %)	65.49	63.79	61.6	60.7	59.3
4	International solvency ratio (in %)	11.7	11.5	12.1	13.1	11.9
5	Return on equity (ROE)	6.52	7.67	7.7	4.41	8.9
6	Workforce at the end of the year	76,305	75,811	0	73,817	75,711
7	Average workforce	71,308	72,510	72,524	72,520	75,975
8	Accounts of the Human Resources added value of loss mitigation based on the risk appetite threshold (we also say "HR efficiency") that this bank should program and publish on a 3-year plan under OPE25					
9	Current average workforce		(a)		60,211	
10	Current average net income (group share) (b)		(b)		\$4,074,400,000	
11	Current contribution per employee to average net income (Group share)		(b)/(a)		\$67,668	
12	Estimated Absolute VaR (EL + UL) = Gross <i>loss</i> = <i>loss before recoveries</i> (BCBS, 2017b)				\$1,543,974,423	
13	Potentially Recoverable Losses (PRL) or recovery = Absolute VaR – Risk Appetite Threshold (Net loss) calibrated at 0.02% for 99.98% PRL				\$1,543,665,628	
	3-year plan to recover historical absolute VaR losses (UL + EL) of the last five years based on the risk appetite threshold		N: 30%	N + 1: 60%	N + 2: 100%	
14	Free Gross Cash Flow <u>per employee</u> at the new risk appetite threshold on a 3-year plan	\$7691		\$15,383	\$25,638	
15	Economic Capital or Net Cash Surplus of its loss control system on a 3-year plan for 67% of PRL				\$1,034,255,971	
16	Variable salaries or Incentivized Pay (Earnings bonus for employees mobilized by the cross-cutting dynamics of the organization on a 3-year plan for 33% of PRLs)				\$509,409,657	
17	SOX ratio of the capital structure (Economic Capital/Variable Salary or Incentivized Pay) securing investments and the predictability of variable salaries over a 3-year plan				2.03	
18	Fixed salary future financial performance measurement data for salary negotiations in year N or 1st year of the plan [Average of the last five years in millions in accordance with the logical historical basis of the new standardized approach to operational risk (BCBS, 2017b)].				\$20,509,000,000	
	Sources of correction data					
	Income statement (Historical bank data)					
Thousands \$	2017	2018	2019	2020	2021	
Net banking income	19,500,000	19,736,000	20,152,000	20,500,000	22,650,000	
Net profit	3,138,000	5,027,000	5,458,000	3,238,000	6,849,000	
Net income (group share)	2,592,000	4,400,000	4,844,000	2,692,000	5,844,000	

Continued

	Gross HR financial ratios provided (without calculating HR efficiency)				
Workforce at the end of the year	76,305	75,811	0	73,817	75,711
Average workforce	71,308	72,510	72,524	72,520	75,975

5.2. Then Complete Your Financial Hedging Instruments

A hedging financial instrument is a derivative financial product which makes it possible to reduce or cancel the risk inherent in a hedged item called the underlying. Many underlying financial instruments can be the subject of a hedging operation, we quote in particular, shares, bonds, currencies, raw materials, rates.

You should under OPE25 add Economic Capital (EC) among the main risks below that can impact an underlying financial instrument (such as stocks, bonds, currencies, commodities, rates):

- Issuer risk: linked to the quality and prospects of the person who issued the financial instrument.
- Market risk: related to general variations in the economy and financial markets.
- Liquidity risk: this is the fact of not being able to convert a financial instrument into immediate liquidity for lack of a buyer on the market at a given time.
- The interest rate risk related to the financial commitment.

6. FinTech to Automate OPE25 Cross-Cutting Accounting Interactions (Standard Approach)

6.1. Architecture Overview

The overview schematized by **Figure A1**, in appendix, shows that with OPE25, the time of top managers or management gurus is outdated or remains pure fiction if the organization does not have the capacity to mobilize the total paid workforce in real time or its human capital providing, in return for the incentive pay, the expected added value in economic capital.

The business line mapping requirement would be ineffective without FinTech structuring corporate collective action and empowering corporate business lines and the local and international Total Paid Workforce to act in real time as a driving force of economic capital based on the risk appetite threshold: “The measurement system must be able to support an allocation of economic capital for operational risk between business lines in such a way as to create incentives to improve the operational risk management of the business lines” [BCBS (2010), *Operational Risk, Supporting Document to the New Basel Capital Accord*].

Without these transversal modules of the FinTech architecture of corporate

accounting, each business unit may go in a direction that has nothing to do with what others are doing. The result obtained by the CEO then depends solely on “market chance” or on the strategic flair of the CEO as in games of chance: We are far away from the collective organizational process run by the board which is to create value or wealth for its stakeholders, first and foremost, customers, shareholders, employees, and taxes.

The orchestration of the whole in the pyramidal form of the organization chart is deployed in SaaS mode on two platforms essential for the cross-cutting interactions necessary for the SOX Internal Control accounts to the OPE25 standard [the CEO platform for forward-looking management and the CFO platform to manage internal financial performance in real time and provide the non-GAAP reporting accounts required for the SOX ratio (economic capital/ Incentivized Pay)]. This cross-cutting tool for driving companies as an organizational team that was missing until the OPE25 requirement is represented by **Figure A2** of access to FinTech V1 and V2 platforms in appendix.

6.2. FinTech SAF Platform of the CEO or Senior Management

The Forward-Looking Management decision-making system of the board of directors based on the SOX ratio is represented in the FinTech SAF model by **Figure A3** in appendix. This figure is associated with **Table 12** of cross-cutting tasks to be performed for the holistic functioning of the company in the sense of the organizational chart driven by the CEO and the Board. They are reproduced with permission from HCM Accounting ACADEMY.

Table 12. Forward looking management tasks of the CEO function for the board.

-
- 1) Current average net income (group share)
 - 2) Current contribution per employee to average net profit (Group share)
 - 3) Absolute VaR estimate (EL + UL) = Gross loss = Loss before recoveries (BCCB, Dec 2017)
 - 4) Current Potentially Recoverable Losses (Absolute VaR – Risk Appetite Threshold or Net Loss calibrated to the % of the business sector’s risk appetite threshold)
 - 5) Gross Free Cash Flow (Economic Capital) per employee at the new risk appetite threshold on a 3-year plan
 - 6) Economic capital or net cash surplus of the loss control system over a 3-year plan for 67% of the PRL (Not for distribution: SEC, 2018)
 - 7) Variable remuneration or Incentivized Pay (Bonus for employees mobilized by the transversal dynamic of the organization on a 3-year plan for 33% of PRLs)
 - 8) SOX ratio of the capital structure (Economic Capital/Variable Salary or Incentivized Pay) securing investments and the predictability of variable salaries over a 3-year plan
 - 9) Data for measuring the future financial performance of the fixed salary, basis for calculating the differences to be considered for the fixed salary evolution grid
-

Regulatory requirements to do this:

For EU, article 9a, of the May 17, 2017, European Directive (“Shareholder Rights II”): *“The remuneration policy shall contribute to the company’s business strategy and long-term interests and sustainability and shall explain how it does so. Where a company awards variable remuneration, the remuneration policy shall set clear, comprehensive, and varied criteria for the award of the variable remuneration. It shall indicate the financial and non-financial performance criteria, including, where appropriate, criteria relating to corporate social responsibility, and explain how they contribute to the objectives set out in the first scope, and the methods to be applied to determine to which extent the performance criteria have been fulfilled. It shall specify information on any deferral periods and on the possibility for the company to reclaim variable remuneration.”*

For USA, SEC Non-GAAP Financial Measures of April 4, 2018: *“Companies are permitted to present non-GAAP performance measures on a per-share basis, such as adjusted EPS (Adjusted earnings per share), but they are prohibited from presenting non-GAAP measures of liquidity or cash flow, such as free cash flow, on a “per-share basis”.*

6.3. CFO’s FinTech SAF Platforms

The CFO cross-cutting interaction financial technology is represented in the Corporate Accounting FinTech SAF model in **Figure A4** in appendix. This figure is associated with **Table 13** of the cross-cutting tasks to be performed for the holistic functioning of the company in the sense of the organizational chart driven by the CEO and the Board. They are reproduced with permission from HCM Accounting ACADEMY.

Table 13. Driving tasks to be performed by the CFO to guide the expected internal financial performance.

- a) Perform calculations for anticipating and mitigating operating losses from data stored in the Unexpected Losses (UL) and Expected Losses (EL) internal databases.
- b) Execute financial planning based on expected losses considering the absolute VaR and the risk appetite threshold.
- c) Weigh the socio-economic indicators of operational risk based on survey data provided by the HR function.
- d) Distribute the economic objectives of internal financial performance to the business lines according to their consumption of budgetary resources.
- e) Retrieve Fintech SAF dashboard data from Excel internal reporting for quarterly, semi-annual, or annual EBITDA to analyze financial performance gaps to pay variable wages.

6.4. HRD’s FinTech SAF Platforms

There are two: the module used for employee engagement surveys and the module used for psychosocial risks.

HRD FinTech SAF (Employee engagement surveys module)

HRD's 1st cross-functional interaction financial technology used for employee engagement surveys is represented in the Corporate Accounting FinTech SAF model in **Figure A5** in appendix. This figure is associated with **Table 14** of the cross-cutting tasks to be performed by the HR function for the holistic functioning of the company in the sense of the organizational chart piloted by the CEO and the Board. They are reproduced with permission from HCM Accounting ACADEMY.

HRD FinTech SAF (Psychosocial risks module)

The 2nd cross-functional interaction financial technology of the HRD is represented in the Corporate Accounting FinTech SAF model in **Figure A6** in appendix. This figure is associated with **Table 15** of the other cross-cutting tasks to be performed by the HR function identifying the human resources management drifts to be corrected for the healthy holistic functioning of the company in the sense of the organization chart piloted by the CEO and the Board. They are reproduced with permission from HCM Accounting ACADEMY.

Table 14. Tasks to be performed by the HRD for Employee engagement surveys.

HRD's internal financial performance mission (BCBS Principles 4 and 5 - 6, Sep 2008) requires two FinTech modules (V2-2a and V2-2b).

With V2-2a, the HR function:

- (a) Conducts surveys to anticipate the deterioration of the social situation to provide data on the motivation and mobilization of the total paid workforce.
 - b) Ensures integration of corporate learning to manage turnover and have data on knowledge gaps to identify hiring needs.
 - c) Uses the internal dashboard to monitor and support the improvement of the financial performance and purchasing power of employees indexed on five socio-economic indicators which are levers on which each employee can act in real time.
 - d) Uses the internal dashboard to take immediate and effective action to address risks based on six key areas of socio-economic improvement:
 - Labor conditions
 - Work organization
 - Consultation, communication, coordination (3C)
 - Integrated training
 - Management of working time and
 - Strategic implementation
-

Table 15. Tasks to be performed by the HRD for the prevention and mitigation of Psychosocial risks.

With V2-2b, the HR function carries out the periodic survey to provide alert data on the HR dashboard according to six areas recommended in 2012 (Report of the International College of Expertise on the monitoring of psychosocial risks:

- a) Work requirements
- b) Emotional requirements
- c) Autonomy
- d) Margins of maneuver
- e) Social and labor relations
- f) Different value conflicts

See Measuring psychosocial risk factors at work to master them (Mesurer les facteurs psychosociaux de risque au travail pour les maîtriser): https://travail-emploi.gouv.fr/IMG/pdf/rapport_SRPST_definitif_rectifie_11_05_10.pdf.

6.5. OM's FinTech SAF Platforms

The Total Paid Workforce has a preponderant effect on operational risk losses. Hence the need for OPE25 to have the ability through OM's FinTech SAF to align with the Risk Appetite Threshold, the financial performance of workstations on the loss mitigation objectives programmed and piloted by the CFO with the contribution of the HRD through dedicated modules above.

- This would be impossible without socio-economic indicators, i.e., levers on which each employee can act in real time. OM's FinTech SAF gives Banks and CCRs the functionalities for processing daily data collected by the operational units, the functionalities for articulating them and performing weighted calculations to manage the financial performance of HR in real time in order to provide, at each reporting date, loss mitigation accounts related to absenteeism, loss mitigation accounts related to work accidents, loss mitigation accounts related to quality defects, loss mitigation accounts related to direct productivity gaps (overtime and over-consumption of materials) and loss mitigation accounts related to know-how gaps (including lack of versatility). OM's FinTech SAF runs on two vectors.

FinTech SAF of the OM function (Workstations Loss Treatment module)

First there is the Workstations Loss Treatment module represented in the FinTech SAF model in **Figure A7** in appendix reproduced with permission from HCM Accounting ACADEMY. This figure is associated with **Table 16** of the cross-cutting tasks to be performed by the OM function for the internal financial performance mission of the operational managers based on the "General criteria on loss data identification, collection and treatment" as required for the OPE25—Calculation of RWA for operational risk (version effective from January 1, 2023). This requires the articulation of two FinTech modules (V2-3a and V2-3b) to generate and deliver non-GAAP reports of real-time internal financial performance feedback measuring the economic capital added value of the total paid workforce.

Table 16. Tasks to be performed by OM with heads of operational units or CGU for workstations loss treatment.

With V2-3a, the OM function accompanies with heads of operational units, weekly procedures and processes documented by daily record sheets for the identification, collection and treatment of internal loss data caused by:

- Absenteeism,
- Work accident,
- Quality defects,
- Direct productivity gaps (overtime and overconsumption of materials) and
- Know-how gaps (including lack of versatility).

Operating structurally, these socio-economic indicators are taken together in the weighting system provided by the HRM. This FinTech module avoids the mistake of focusing excessive attention on the socioeconomic indicator of greatest concern without realizing that its costs are transferred to the other indicators.

FinTech SAF of the OM function (Employee Incentivized Pay module)

The 2nd cross-functional interaction financial technology of OM is the one that decentralizes the process and concerns of variable salary at the workstation based on socio-economic indicators within the reach of all employees. This module is represented in the Corporate Accounting FinTech SAF model in **Figure A8** in appendix reproduced with permission from HCM Accounting ACADEMY.

This figure is associated with **Table 17** of the cross-cutting tasks to be performed by the OM function and the heads of operational units involving each employee by socio-economic indicators allowing him to measure his contribution to the daily, weekly, and monthly economic capital.

- Through the automatically generated variable salary e-report, OM’s FinTech V2-3b gives each employee the means to measure in real time the gain associated with their performance, to improve it and to know in a transparent way the Incisive remuneration associated with the five socio-economic indicators measuring its contribution to the collective result.

The lack of FinTech V2-3b resulting in the unpredictability of variable salaries is the main cause of the deficits of banks and CCRs:

- FinTech V2-3b is essential to measure the Incentive Pay Leverage Effect (IPLE) of the financial performance of variable remuneration distinct from that of fixed remuneration as now required by country regulations (**SEC 2018**).

FinTech V2-3b avoids the inefficiency of distributing random amounts or the same reward amounts as the 13th month or exceptional bonus to all employees.

This module allows employees to manage 33% of Potentially Recoverable Losses (PRL) measured by the Incentivized Pay Leverage Effect (IPLE) or the added value of human capital required to calculate the SOX Ratio. The OM function thus avoids the dupe game translated by this well-known Russian joke under the USSR: “As long as the bosses pretend to pay us, we will pretend to work” (Koeplin & Lélé, 2023).

Table 17. Features allowing each employee to plan and manage their variable salary indexed to socio-economic indicators within everyone’s reach.

	Key areas of socioeconomic improvement	Operational Risk Indicators within the reach of each Employee to mitigate losses in real time and improve working conditions	Weighting rate calculated on the medium position
1	Working Conditions (Physical conditions of work)	← Work accident →	Priority level score %
2	Work organization	← Quality defects →	Priority level score %
3	Consultation, Communication and Coordination (3Cs)	← Know-how gaps or Skill gaps (including lack of versatility) →	Priority level score %
4	Integrated training		
5	Working Time Management	← Absenteeism →	Priority level score %
6	Strategic implementation	← Direct productivity gaps (overtime and overconsumption of materials) →	Priority level score %

7. Structural, Regulatory, and Technical Requirements Making These Cross-Cutting Advances in Risk Management Essential

The organization chart of banks and CCRs of all business sectors automated in the pyramid sense of managerial orchestration by FinTech SAF in SaaS mode to manage the company as an organizational team through cross-functional interaction complementing business unit software for OPE25 is like this diagram (Figure 1) from Coca Cola:



Figure 1. Organization chart template automated by FinTech SAF or SOX to manage any company as an organizational team for OPE25 (Source: <https://www.google.com/search?client=firefox-b-d&q=image+of+Coca-Cola%27s+organizational+chart#imgsrc=2LotDQUpyVc4yM>).

1) It is the structural condition to operate all the workstations in the direction of the real-time organization chart based on risk appetite threshold as an organizational team.

2) The articulation of Corporate Accounting FinTech skills of all internal team workstations is essential to meet the “general criteria for identifying, collecting and processing loss data for the OPE—calculation of RWA for risk (OPE25—Standardized operational approach).

The BCBS obliges you to do so by specifying that:

“Any banking or non-banking activity that cannot be easily mapped in the business repository, but which represents an ancillary function to an activity included in the repository, must be attributed to the business line it supports. If more than one business line is supported by the ancillary activity, an objective mapping criterion must be used” (BCBS, 2021c).

The BCBS adds that the measurement system must *“be able to support an allocation of economic capital for operational risk between the businesses so as to create incentives to improve the operational risk management of the businesses” (BCBS, 2021b).*

3) The standardized operational risk approach impacting counterparty credit risk relies on now well-known corporate accounting procedures to connect operating units or cash-generating units (CGUs) to the board’s internal financial performance plan. Administration coordinated by the CEO in conjunction with the CFO:

a) Any discrepancy must be linked to a simple and transparent socio-economic indicator available to all employees to act to mitigate the losses of the factors or causes of operational risk losses impacting the key ESG metrics.

b) For banks in particular, the socio-economic indicators come under the heading “*Other operating expenses*” of the “Service” activity indicator, the typical sub-item “Losses incurred at the series of operational loss events that have not been provisioned/reserved in previous years” (BCBS, 2017b).

c) For insurance companies and therefore for policyholders, the consideration of insurance and other risk transfer mechanisms should not exceed 20% of the operational risk capital required before the recognition of the economic capital generated by risk mitigation techniques (BCBS, 2010).

8. Accounting Process Avoiding the Financial Mathematics of Putting the Cart before the Horse

This is essential to recall at what stage of Enterprise Risk Management financial mathematics should intervene. The mathematical approach to risk management (statistics and probabilities) used for the OPE30 expired on December 31, 2022. This decision by the Basel Committee obliges banks and CCRs to integrate prior to stochastic calculations, the “General criteria on loss data identification, collection and treatment” prescribed by BCBS in December 2017 in conjunction with the indispensable Corporate Accounting FinTech recommended a few months earlier by the FSB:

“All businesses are subject to operational risk, which can arise from information systems, human error, management failures and external influences (...). Some operational risks could be reduced with FinTech developments, as legacy systems are modernized and processes are streamlined” (Financial Stability Board, 2017).

This process of Corporate Accounting FinTech (also called IT-IRM) under the OPE25 standard now allows mathematical software for analyzing financial data to have real data from the economic capital accounts and the SOX ratio of banks and CRRs. The diagram below (Figure 2) illustrates the articulation of enterprise

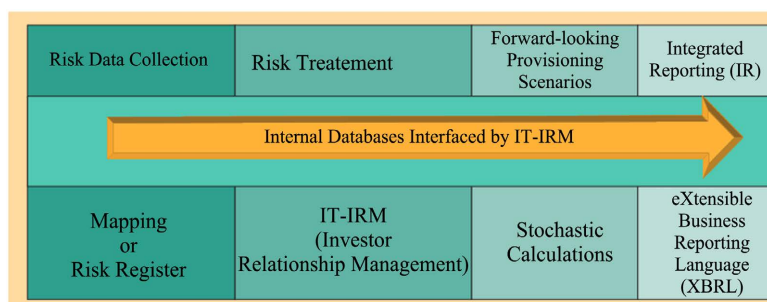


Figure 2. Corporate accounting FinTech process feeding stochastic computing machines with real customer data (Sources: Screenshot from our article “Strengthening Value and Risk Culture Using a Real-time Logical Tool”, Grima et al., 2016:

<https://primo-europe.eu/wp-content/uploads/2016/05/Article-Exclusive-in-ISACA-Journal-Strengthening-Value-and-Risk-Culture-May-2016-.pdf>.)

risk management software machines reducing the margin of error and the uncertainty of stochastic calculations that can lead to disasters such as that of the subprime crisis.

9. Corporate Accounting Global Fintech Action Research and Popularization Network

9.1. Networking Conferences of 2020

- The 2020 World Finance Conference (Malta);
- The Society for Interdisciplinary Business Research (SIBR) 2020 conferences in OSAKA, SEOUL, and SYDNEY;
- The 2020 management conference in Berlin (Germany);
- The 2020 international conference of Lyon-France in conjunction with the Academy of Management (AOM).

9.2. Networking Publications

- The Journal of Corporate Accounting and Finance, “Human capital management accounting issues for SOX compliance with Basel III final framework operational risk standards, USA, published on July 05, 2022, with the University of San Francisco and HCM Accounting Academy (Innovation Hub of LELE-HCM ACCOUNTING INDUSTRY INC.).
- The book (449 pages) “Recent Developments in Asian Economics—International Symposia in Economic Theory and Econometrics” published in UK (Emerald Publishing) on March 1, 2021, with 54 universities coordinated by Harvard University (USA), the Center for Financial Stability (USA) and the Accounting Department of the University of San Francisco (USA).
- The accompanying articles of Basel III of banks, as well as Solvency II and NAIC of insurance companies in 2013, 2014 and 2016 with ISACA Journal by academics from the FinTech SAF network of EU universities (Malta, UK, Germany) and US (New Jersey, and Georgia).

10. Conclusion

We see how the requirement of economic capital accounts to be provided using the FinTech of Corporate Accounting affects all aspects of access to credit, including the working capital requirement (WCR) and the financing of investments, in particular the stock market and the main aspects of the insurance industry:

- Trade credit insurance;
- Investment insurance;
- General Insurance;
- Inward Reinsurance (Financial Risk);
- Export credit insurance;
- Comprehensive Trade Credit Insurance;
- Investment Insurance for equity investors;

- Etc.

The OPE25 issue is the economic capital accounts and the SOX ratio of predictability (forward-looking management) of variable salaries that banks and CCR should now provide for WCR and investment financing.

The difficulty to overcome is that, although the Human Resources function is an eminently transversal function of corporate accounting, neither the Human Resources Managers nor the other corporate functions have been trained to perform the interaction tasks of their workstation to act in real time as an organizational team based on the operational risk appetite threshold. The compartmentalization of teaching in universities and MBA programs in specialized disciplines has not solved the problem of real-time integration of HR-Finance processes.

As a result, few graduates today have the cross-cutting or vertical skills required to act, in real time, from their workstation in accordance with the pyramid shape of the organization chart as an organization team based on the risk appetite threshold to create value.

Hence the interest and urgency of certifying and equipping business teams with the requirements of Operational Risk Capital (ORC). The 2020 International and Inter-University Conferences and related publications above have recognized that the HR-Finance expertise required for this cross-cutting skill is particularly rare worldwide. Also, the only certification program is the one offered on its website by HCM Accounting Academy with the Department of Accounting at the University of San Francisco. Universities and MBA Schools as well as training in companies are invited to connect to this on <http://www.hcm-accounting.com/> (See in particular The Journal of Corporate Accounting & Finance, 05 July 2022, and the book “Recent Developments in Asian Economics—International Symposia in Economic Theory and Econometrics” published in UK (Emerald Publishing) on March 1, 2021).

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- BCBS (2010). *Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems*. https://www.bis.org/publ/bcbs189_dec2010.htm
- BCBS (2017a). *The Basel Framework*. https://www.bis.org/basel_framework
- BCBS (2017b). *Basel III: Finalising Post-Crisis Reforms*. <https://www.bis.org/bcbs/publ/d424.htm>
- BCBS (2020). *Guide for Supervisors Integrating Climate-Related and Environmental Risks into Prudential Supervision*. https://www.ngfs.net/sites/default/files/medias/documents/ngfs_guide_for_supervisors.pdf
- BCBS (2021a). *Progress Report on Adoption of the Basel Regulatory Framework*. <https://www.bis.org/bcbs/publ/d525.htm>

- BCBS (2021b). <https://www.bis.org/press/p211109.htm>
- BCBS (2021c). <https://www.hcm-accounting.com>
- BCBS, (2019). *Overview of Pillar 2 Supervisory Review Practices and Approaches*. <https://www.bis.org/bcbs/publ/d465.htm>
- EUR-LEX. (2017). *European Directive (EU) 2017/828 of the European Parliament and of the Council of 17 May 2017 Amending Directive 2007/36/EC as Regards the Encouragement of Long-Term Shareholder Engagement (“Shareholder Rights II”)*. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32017L0828>
- European Directive Article 9a, of the May 17, 2017. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017L0828&rid=5>
- Financial Stability Board (2017). *Financial Stability Implications from FinTech*. <https://www.fsb.org/2017/06/financial-stability-implications-from-fintech>
- Grima, S., Klein, R. W., Zhao, R., Bezzina, F., & Lélé, P. (2016). Strengthening Value and Risk Culture Using a Real-Time Logical Tool. *ISACA Journal*, 3. <https://www.isaca.org/resources/isaca-journal/issues/2016/volume-3/strengthening-value-and-risk-culture-using-a-real-time-logical-tool#14>
- Koeplin, J. P., & Lélé, P. (2023). Loss Control Case Reports to OPE25 on FinTech for SOX Ratio to Consider for Solvency and Insurance Underwriting. *Journal of Corporate Accounting & Finance*. <https://onlinelibrary.wiley.com/doi/10.1002/jcaf.22617>
- SEC (2018). *Non-GAAP Financial Measures of April 4, 2018*. <https://www.sec.gov/corpfin/non-gaap-financial-measures>

Appendix

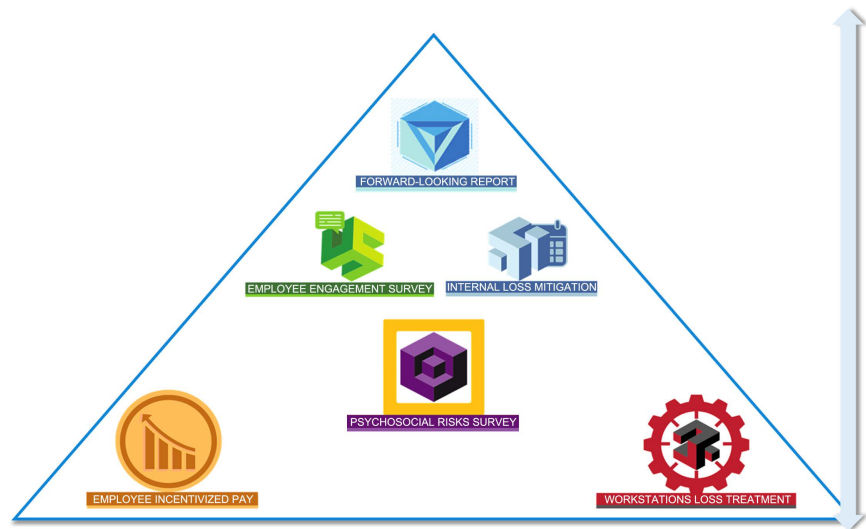


Figure A1. The architecture of cross-cutting interaction FinTech tools: all rights reserved.

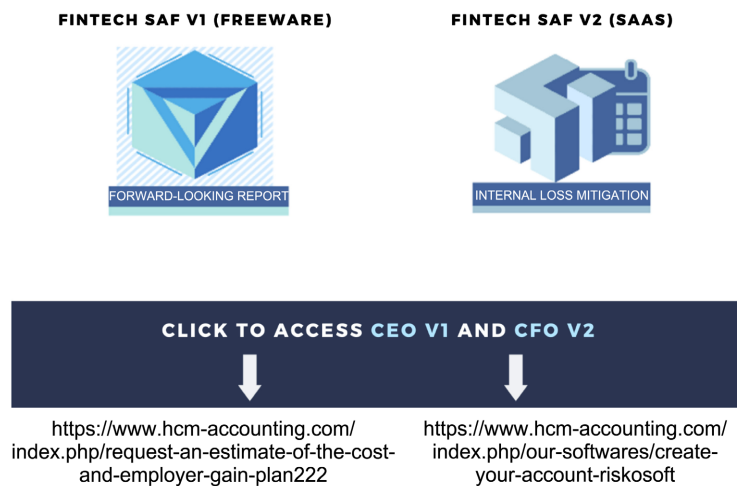


Figure A2. FinTech SAF V1 & V2—Platforms for driving cross-cutting interactions for the use of the CEO and CFO.

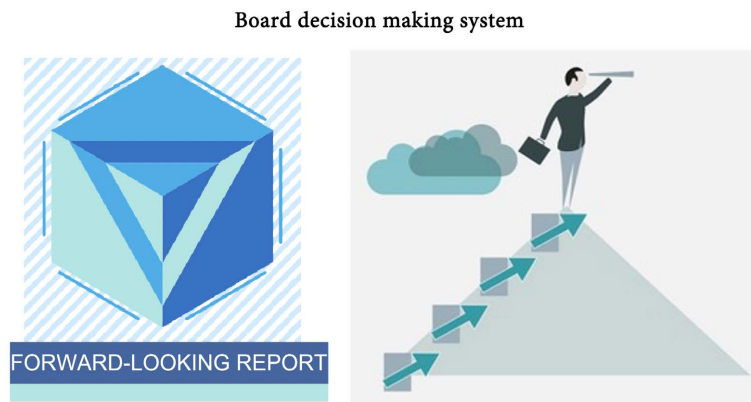


Figure A3. CEO holistic interactions guidance tasks for the board.

CFO's FinTech SAF
(Internal Loss Mitigation)



Figure A4. CFO's FinTech SAF platform V2-1.



Figure A5. HRD's FinTech SAF platform V2-2a for periodic Employee engagement surveys.



Figure A6. HRD's platform V2-2b for periodic psychosocial risks surveys.



Figure A7. OM’s FinTech SAF Platform V2-3a for Real-Time Workstations Loss Treatment (Compliant with “General criteria on loss data identification, collection and treatment”, BCBS, 2017).



Figure A8. OM’s FinTech Platform V2-3b—Real-time Internal Financial Performance Measurement for Employee Incentivized Pay at the reach of all employees.