# ACTION-RESEARCH CERTIFYING HCM ACCOUNTING SKILLS TO IMPROVE STRATEGIC AND ORGANIZATIONAL CHANGE

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## ABSTRACT

This paper presents with the Handbook format attached as Practical takeaway, the results of the university-industry action research interface model of Executive Education for leadership beyond finance through Internal Team Certified in Human Capital Management Accounting. The certification is based on the collaboration between a university or MBA School and a company managing the interactions of workshops performing the tasks of collecting, processing and reporting operational risk loss mitigation data based on the required Risk Appetite Threshold. This work shows how, unlike financial accounting, management accounting focused on human resources or Enterprise Risk Management Accounting, is the operating framework to comply with the International Financial Reporting Standards (IFRS) 3R (Business Combinations) and FASB ASC Topic Equivalent: 805-10, which explicitly prohibits its recognition as an intangible asset. It is the problem solving process (PSP) of financial performance integrated into the daily operations of companies to which the consortium of the ODC division of the AOM invites. It is also the condition for adapting organizations to the changing legal environment, in particular the current context of the 100% LCR in which all companies operate since January 2019 for WCR and investment financing.

**Keywords :** ERM Accounting, Cross-Cutting Dynamics – LCR - Human Resources - Expected Loss

## 1 – INTRODUCTION

Human capital management accounting (HCMA) makes it possible to base strategy and organizational change on the dynamic of transversal interaction. This is accomplished when a company operates in real time as an organizational team, on the basis of the risk appetite threshold, to achieve its profitability and objectives, wealth sharing plan, as well as to stimulate growth.
This concept is made operational in order to manage the financial performance objectives planned in return on investment (ROI) of fixed salaries and variable salaries and is the accepted loss i.e., “expected loss” or “risk appetite threshold”.

These expressions are used to mark the difference to the unexpected losses (UL) revealed by the work of ISEOR founders (Henri Savall and Véronique Zardet) under the concept of "hidden costs" (Control hidden costs and performance, Economica; 4th Edition, 2003).

Within the framework of the regulations in force in the context of 100% Liquidity Coverage Ratio (LCR) reporting in which all companies operate since January 2019 for working capital requirements (WCR) and investment financing, the required calculation process of Economic Capital (the amount of capital the firm should have to support any risks it takes on) the HCMA process is the approach which takes into account the predominant impact of human capital on operational risk losses. It is based on potentially recoverable losses (PRL) considering the incentive or motivation put in place through variable wages to reduce losses. PRL is Economic Capital (EC) given the operational risk appetite threshold. Three management constraints appear with the economic capital requirement.

**(1) The requirement for a cross-cutting approach**

The transversality skills necessary to run a business as an organization team, in order to achieve the supra-ordered objectives (the objectives of a firm cannot be achieved by the efforts of a single employee or professional group), means that the know-how in HCMA requires the mastery of a certain number of technical skills and disciplines. This includes the capacity to use these skills for solving financial performance problems. This is accomplished through inputting specific personnel tasks by each management function that contributes to each business unit success. This is required to be done in real time with others in the same direction, as an organizational team based on the firm's risk appetite threshold.

**(2) Complementing the skills of business units with crosscutting skills**

The legal context of financial performance thus defined obliges universities and MBA schools, not only to take human capital into account in the governance report, but to place the management process, no longer in accounting financial, but in management accounting. Non-GAAP accounting, management accounting or cost accounting, is business accounting. Consequently, the strategy and the organizational change are part of an accounting action research perspective in enterprise risk management (ERM) which had not been envisaged until now.

A corporate financial performance management system focused solely on function, area of expertise, or sector of activity, as has been the case up to now, given the compartmentalization of the MBA into areas of specialty, is disconnected from risk management, governance and profitability. Such a system does not have the capacity to consider the cost data of socio-economic indicators, factors or causes of the losses of operational risks which affect the expenditure accounts and the product accounts as well as the risk appetite threshold.

Without considering the risk appetite threshold to program the execution of operations, the internal team can neither plan, nor coordinate, nor manage the forecast data of financial performance of human capital remunerated by fixed

salaries and variable salaries. MBA programs cross-cutting themes have been so far those necessary to contribute to the achievement of the strategic objectives of the student's specialization business unit. When MBA programs are limited to this horizontal dimension of the company, they do not give the graduate the skills to contribute from one's workstation to the financial performance objectives which are those of the vertical dimension driven through the pyramidal shape of the organization chart. MBA and EMBA's Business Units to be complemented by vertical cross-cutting skills are:

*Accounting*
*Business Analytic,*
*Enterprise Resource Planning*
*Finance*
*Healthcare Management*
*Human Resources Management*
*International Business*

### (3) The driving role of the HR function

The challenge of financial performance is not the responsibility of the financial function, which tools are dedicated solely to the balance sheet, or the profit and loss accounts, i.e., management accounts where billed sales and expenses are recorded (including remuneration). The Human Resources (HR) function is eminently cross-cutting.

The challenge is that for company to act in real time as an organizational team, the team must make their decisions based on of the risk appetite threshold to achieve the financial performance objectives. The HR function must include the dynamics to mobilize the organization to achieve its goals. This is the problem of the HR Manager (HRM) cross-cutting interaction linking the Finance, HR and OM functions with the operational Units or cash generating units (CGUs), to plan and program the forecast return on human capital based on the operational risk appetite threshold. This also includes organizing and processing data on socio-economic indicators daily, and providing, on the basis of the analysis of the gaps between what was planned and what is achieved, non-GAAP reports differentiating financial performance from fixed salaries and financial performance variable wages.

Hence the importance of the University-Industry Action Research Interface that has been established in collaboration with Dr Pascal LELE, the R & D Manager and founder of Lelecorp to provide the solution and the program for the certification of skills required by universities and MBA schools.

## 2 - BACKGROUND

Interaction is the key concept by which the HCMA is situated in the extension of the work of ISEOR for the steering and the non-GAAP reporting of financial performance. The HCMA approach considers the risk appetite threshold to run any business in real time, whatever its size, as an organizational team. The organizational process is collective. Interaction occurs when two or more objects have effects upon one another.

Financial performance relies on the interaction of functions in real time based on the risk appetite threshold. Hence, the tasks to be performed by the CFO cannot be executed if the HRM interaction application tool has not transmitted to the CFO application the weighting rates of socioeconomic indicators to be considered for internal financial performance planning calculations. Similarly, operations management's (OM) applications and unit leaders cannot perform their tasks if the CFO application has not executed its own.

The quality of data management must be high. The data processing of HCMA's cross-cutting processes is data intensive. This is the forward looking management approach based upon the historical data of about the past five years. These are the losses expected based on the risk appetite threshold to mitigate the losses distributed to the socio-economic indicators within the reach of all the employees to improve their financial performance by indexing the variable salary to a share of EC. This holistic top-down and bottom-up approach is now possible thanks to iReporting Human Capital Accounts **(**Fintech of Reporting HCM *for HR assets or Human Capital Accounts Reporting) ;* iReporting Human Capital Accounts is IT-directed Investor Relationship Management technology revealed by ISACA Journal, (USA, Vol.6, 2013 and Vol.3, 2016).

Academic structures contain trans-disciplinary intent. However, the compartmentalization of teaching in universities and MBA programs in specialized disciplines and units have so far failed to solve the problem of real-time integration of HR-Finance processes. Putting disciplines side by side in a curriculum is not enough for a trans-disciplinary approach. The cross-cutting key lies in the ability to integrate the management accounting processes (analytical accounting or business accounting), in the logic of the organizational dynamics that comes under the field of psycho-sociology of organizations (occupational psychology), in order to anticipate and to mitigate operating losses or operational risk losses.

These results are based on applied trans-disciplinary research work started in 2003 after the Sarbane's Oxley (SOX) Act and before the Committee of the Sponsoring Organizations of the Treadway Commission (COSO) (2004). This work continued under Basel II by an Accounting approach assimilated then to 'Advanced Measurement Approach' (AMA), that the Bank for International Settlements (BIS) document for the Basel III agreement recommending the accounting approach would highlight. These results have become particularly relevant with the updated laws and regulations for the 100% *LCR Reporting* context.

This process provides the LCR for the reporting institution, as well as details of the calculation. LCR reporting serves as a basis for affected deposit-taking institutions to report information related to the liquidity coverage ratio by currency monitoring tools. Optimizing its management determines investment relationships:The LCR is directly dependent on the time lags between incoming and outgoing cash flows, especially from companies that cannot finance themselves directly on the financial markets.

Besides given the impact of operational risk on liquidity risk and other risks, including market risk, the LCR relies on the capacity of the banks' internal teams and their risk counterparties, i.e., insurance, industries and services, including local authorities, to leverage their HR assets to process and deliver the free cash flow data required for high quality liquid assets (HQLA). The Financial

Stability Institute recalled that in October 2017, per *Basel III liquidity monitoring tools,* regarding a bank's liquid assets: *"All assets in the stock should be unencumbered. Unencumbered means free of legal, regulatory, contractual or other restrictions on the ability of the bank to liquidate, sell, transfer, or assign the asset. An asset in the stock should not be pledged (either explicitly or implicitly) to secure, collateralize or credit-enhance any transaction, nor be designated to cover operational costs (such as rents and salaries).''* (BCBS, 2017).

In addition to the HR provisions of SOX Act of 2002 which have not been meet until now [sections 404 (operational risk control), 302 (Financial reports and internal controls), 409 (feedback in real time)], the laws in force since January 2019 in G20 countries as well as the SEC guidance on non-GAAP reporting updated on July 1, 2019, requires CEOs and Boards of directors to provide shareholders with the human capital management data that was previously lacking in governance reports and financial reporting.

For example, the European Directive of May 2017 states that all EU countries should transpose into their legislation before June 10, 2019: *"The remuneration policy shall contribute to the company's business strategy and long-term interests and sustainability and shall explain how it does so" (Directive 2017*/828/*EU* on *shareholder rights II*).

French ordinance No. 2017-1162 of July 12, 2017 Art L. 225-37-3, which transposed the EU Directive is very explicit on the constraint: the Corporate Governance Report should *"describe, by distinguishing between them, the fixed, variable and exceptional elements that make up these remunerations and benefits and the criteria by which they were calculated, or the circumstances following which they were awarded. Except cases of good faith, payments made and commitments made in violation of the provisions of this paragraph may be canceled*."

The requirement of governance based on the transversal management of human capital makes the financial performance of fixed and variable salaries the problem, not of the financial function, but of the HR function. Recent surveys (*ABV Group - Willis Towers Watson 2019 Survey and Gartner 2019 survey)* have revealed the intention of HR Managers to meet the challenge of HR-Finance:

- 69% reported that the variable portion of compensation and performance pay is levers for improving the effectiveness of remuneration and for 91% of HRMs, cost control remains an imperative.
- For HRMs key business indicators that drive the HR function include:
- Annual performance review (86%),
- Employee commitment (81%),
- Payroll (76%),
- Training (70%),
- Compensation competitiveness (65%) and
- Cost of absenteeism (60%).

## 3 - METHOD

This section develops the following elements:

- *Challenge of modelling non-GAAP EBITDA calculations*
- *Implementation process within LCR context thanks to the work of ISEOR*
- *Why a distribution of the PRLs at 33%/67%?*
- *PSP-focused corporate learning interaction features*

### 3.1. - Challenge of modeling non-GAAP EBITDA calculations

In 2010, the Basel Committee recommended the accounting approach of expected losses (EL):

"*An approach that captures actual losses more transparently and is less procyclical than the current incurred-loss approach*".

Seven years later, the Basel Committee in charge of monitoring the implementation of the Basel III agreement, and recommending corrections as necessary, found that many banks continued to utilize simulation models used before the subprime crisis (BIS, Basel III: Finalizing post-crisis reforms, December 2017).

Why did the Basel Committee regulation on banking supervision require in 2010, six years after the COSO Enterprise Risk Management (ERM) of 2004 and the failure of Basel II, the calculation of the risk appetite threshold as a basis for EL, after taking into account the hidden costs of the malfunctions revealed by the internal database, or the risk register of operational risk incidents, of which the committee had established the typology in June 2005?

The data that are normally registered in business accounting are data related to sales invoices. The accounting rules require that the losses recognized in a financial year must be absorbed in the next exercise. They are EL, as they are revealed by the gap analysis of the management accounts. The history of cumulative gaps also shows that companies do not always absorb EL. Moreover, management of many listed companies does not publish forward-looking data.

From this comes the recommendation (since Basel II) to calculate the VaR by the formula EL + UL for market risk Financial Risk Measures (BCBS, Revisions to the Basel II market risk framework, March 13, 2009). The problem remained for operational risk until the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB) recommended the accounting approach (BCBS, December 2010; rev June 2011).

As is known, the Monte Carlo Simulation privileged the UL-based simulation of market risk, without solving the problem of operational risk. Estimating VaR via Monte Carlo simulations is based on the joint distribution of risk factors is specified and used to generate a large number of risk-factor variation scenarios.

These scenarios are then used to compute the hypothetical results of the portfolio. Last, VaR is determined in the same way as in the historical simulation approach but based on the simulated sample. A measure of financial risk is a measure of the uncertainty of portfolio loss. Several risk measures are defined for the loss of portfolio: EL, Unexpected Loss (UL); Value At Risk (VaR) or EC,

where economic capital (EC) is defined as the 99.95% (VaR – EL) for banks and 95.5 % for insurance.

The accounting management process is the approach which considers the predominant impact of human capital on operational risk losses. It is based on the PRL's, taking into account the incentive or motivation put in place through variable wages to reduce losses. PRL is EC given the operational risk appetite threshold. This is the historical approach which has hitherto been difficult to implement because it requires a large database containing historical data. The quality of data management must be high. The method is also computationally intensive. It is still necessary to know what data to collect and how to organize the interaction of management functions with operational units, business units or CGUs.

### 3.2. - Implementation process within LCR context thanks to the work of ISEOR

This work is an extension, in this specific framework of transversal interaction, of previous work. First is the extraordinary work done by Professor Henri Savall, the team and the international network of the ISEOR to popularize the concept of socio-economic indicators, factors or causes at the origin of operational risk losses (See ISEOR, 2019).

3.2.1. - Extension in the context of the LCR for the ERM accounting is as follows:

a) Losses related to operational risk are overloads of management accounts and non-products (unrealized income);
b) The operational risk losses have a clear impact on product cost, capital, competitiveness, income statement and counterparty risk
c) Human resources have a dominant effect on operational risks. Therefore, operational risks affect the risks of each entity:

    For the insurer, operational risks have an impact on the counterparty risk, market risk, the risk of life underwriting risk, non-life underwriting risk, health underwriting, etc.

    For the bank, operational risks have an impact on market risk, credit risk or counterparty risk, liquidity risk, interest rate risk, country risk, etc.

    For the industry and services, operational risks have an impact the market risk, credit risk or counterparty risk, liquidity risk, interest rate risk, currency risk, etc.

3.2.2. - Taking into account the quantitative and qualitative requirement for the HCMA

The HCMA is a quantitative and qualitative problem solving process (PSP) that considers socio-economic indicators and key factors for improving social conditions. It also takes into account psychosocial risk indicators, factors aggravating the operational risk losses.

The accounting quantification process for socio-economic indicator data is based on the following well-known principles of cost accounting:

- A gap whose cause is difficult to identify is difficult to use
- Employees must be motivated to reduce costs
- Employees must have the means to act to reduce the amount they are charged
- Any discrepancy must be linked to a simple and transparent socio-economic indicator that is accessible to all employees (ISACA Journal, 2013).

3.2.3**. - Expected impact by credit risk counterparties**

Under penalty of an increase in the cost of their insurance, small, medium enterprizes (SMEs), large industries, and services, including local governments and utilities, must align their risk appetite threshold with that of the insurer: The insurer considers the operational risk data associated with a counterparty credit risk (CCR) in the actuarial statements of solvency capital requirement (SCR).

At this level of the financial risk measures process, "EL" = accepted loss or risk appetite threshold. The internal financial performance in free cash flow expected from the variable salary is programmed as follows:

Absolute VaR = EL + UL;

PRLs = Absolute VaR - risk appetite threshold;

Amount paying employees in variable salary = 33% of the PRLs;

Gross amount feeding the bank account in Free Cash Flow = 67% of the PRLs.

The three-year annual plan programming, taking into account the adaptation and gradual improvement of the internal financial performance by the ERMA's results driven learning model, based on the PSPs on the application of cross-cutting interaction of workstations (also called action-research or integrated training in workstation operations) is this:

30% of the PRLs the 1st year;
60% of the PRLs the 2nd year and
100% of the PRLs the 3rd year.

**3.3. - Why a distribution of the PRLs at 33%/67%?**

HCMA technology (FinTech IT-IRM) is built on the psycho-sociological conditions that

make it operational and meets the requirement of ISO 22316:2017 which states that: "*Individual objectives should be aligned with organizational goals. The behavior of all members of an organization must contribute to organizational resilience, and any passive or counterproductive behavior must be avoided*" (ISO, 2017).

3.3.1. - Theoretical basis for employees' mobilization and commitment:

The distribution of the PRLs at 33%/67% is based on social psychology work on "Cognitive dissonance and attitude change." Cognitive dissonance is an influence which manifests itself not on behavior but on attitudes (thoughts): it is

located on an intra-individual level. The individual is influenced by themselves. Attitude is the mental structure which refers to one's position, one's evaluation about any object and which predisposes us to act in a certain way in relation to the object in question. For example, the pressure exerted by the promise of a variable salary (bonus or reward) must be sufficient to change behavior, but weak enough for the individual to feel that he has a freedom of choice.

Cognition plays a fundamental role. We owe to Festinger (1957) the expression "cognitive dissonance":A state we experience when there is a gap between our ideas and our actions. The individual in the presence of cognitions ("knowledge, opinions or beliefs on the environment, on oneself or on one's own behavior") incompatible with each other, experiences a state of unpleasant tension: it is the state of cognitive dissonance. Therefore, this individual will implement unconscious strategies aimed at restoring cognitive balance. These strategies are called "ways to reduce cognitive dissonance". One of the strategies to reduce cognitive dissonance is to modify one's beliefs, attitudes and knowledge to match them with the new cognition; it is called "rationalization process".

3.3.2. - Effect in aligning everyone in the organization to work for the same goal

Experiences in social psychology labs about the reward promised for a change of attitude and opinion, including the commitment of individuals to financial performance goals are more likely to succeed:

First, when the beneficiary has a total perception of how the reward is deducted, e.g., cognition fundamental role: hence the transparency and disclosure of PRLs calculations;

Second, if the motivation is based on a threshold of at least 25% of the total earnings generated by the additional effort requested. Recall: the pressure exerted by the promise of a variable salary (bonus or reward) must be sufficient to change behavior, but weak enough for the individual to feel that he has a freedom of choice.

This is the minimum necessary for the employee to judge that the effort to act on the socio-economic indicators within reach to mitigate operational risk losses in real time is worthwhile. HCMA technology (FinTech IT-IRM) runs on 33% for total, predictable and sustainable engagement of all employees (total workforce).

Laboratory experiments have also shown that the high reward probability, for example at 50/50, creates doubt. The employee who doubts that the supervisor will honor their commitment will not commit or will pretend to exert the necessary effort. This results in stagnant results and the failure of the motivation system. This distribution creates doubt because it does not leave enough room for maneuver to the cognitive dissonance which triggers the change in attitude and the total commitment of the employee to act on the socio-economic indicators, factors or causes of loss of operational risk within its area of power.

It should also be noted that the distribution of the same amount of the reward to all employees cancels the expected effect. The bonus is seen as a supplement to the fixed salary: a random complement that the employer pays to the employee when he/she is satisfied with the net result. This is the case for all premiums paid when the achievement of collective performance objectives of organizations, including turnover, results in the payment of the same amount of

the premium to employees. This is the case when the company pays a thirteenth month's salary. The employee has no means within his reach to act on this performance. Similarly, the company has no means of programming and driving this performance. The premium that is not transparent, predictable, and controllable by a single protagonist (the supervisor) creates the fool's game situation translated by this well known Russian political joke: “So long as the bosses pretend to pay us, we will pretend to work” (The Guardian, 2017).

### 3.4. - PSP-focused corporate learning interaction features

Outside the decision-making vector of the senior management (DG/CEO), which is an independent simulator, the tasks to be performed by the CFO on the Operational HR vector cannot be performed if the application of the HR Director (HRD) has not transmitted the weighting rates of the socio-economic indicators to the CFO application. This is done in order to consider for internal financial planning calculations.

Similarly, OM applications and work unit leaders cannot perform their tasks if the CFO application has not executed its own task. These include planning processes by which the finance function provides the forecasts needed for periodic gap analysis. Measuring the results of the HR financial performance becomes impossible without forecasting the “Expected-Realized” for all operations.

3.4.1. - Learn to identify and know how and when to enter the interaction data required for the FinTech HR module (IT-IRM) of your workstation.

This section is to illustrate the PSP interaction tasks of learning by doing allowing the CEO to automate the synchronization of holistic interaction tasks, top down and bottom up, in the vertical direction of the organization chart, to run in real time as an organizational team based on the risk appetite threshold.

It is a process of worker – machine interaction through the Fintech HR Intranet (IT-IRM) which takes place as follows:

(a) Members of the internal team [Senior Management (CEO) and managers of operational management functions (Finance, HR and OM) in interaction with heads of operational units or CGUs)], start by entering the interaction data required for the Fintech module HR (IT-IRM) from their work station; this according to the periodic data processing plan programmed by the HRM when he/she opened and activated the company account on the server of the Online Analytical Processing Center (OLAP), allowing the company to have on Cloud its HCMA.

(b) The data entered are instantly synchronized, analyzed and real time feedback reporting is provided in the form of a dashboard to measure gaps in financial performance of variable salaries. The variable remuneration of human capital is indexed to the variation in operational risk losses linked to each of the socio-economic indicators. It is the process of treating economic capital or free cash flow that must strengthen the company's cash flow to avoid the risk of bankruptcy and reduce uncertainty about the achievement of profitability objectives.

(c) This dashboard is associated for each period according to the programming carried out by the HRM with a dashboard for monitoring psychosocial risk indicators.

**A - Senior management (CEO's Fintech HR module (IT-IRM) -PSP (Problem Solving Process) interaction tasks to learn by doing:**

*a) Enter the figures of your required historical data.*
*b) Engage the HR asset process from the "average workforce" ratio where the IT-IRM management accounting tool takes over from your financial accounting. (This line of most firms' financial ratios is often blank.)*
*c) Process the financial performance programming data in Free Cash Flow over 3 years.*
*d) Process data on the future financial performance of fixed wages*
*e) Process data of the Future Financial Performance of the Variable Pay (3-Year Financial Surplus Profitability Plan),*
*f) Analyze the impact.*

These simulation tasks are necessary only if the HRM has not yet activated the company intranet account. The CEO then needs this simulation to propose to the board of directors a remuneration policy in accordance with the SEC's non-GAAP Reporting Guidance updated on July 1, 2019 to prohibit the distribution of free cash flow to shareholders or a remuneration policy in accordance with the prescription of the EU directive:

- *'The remuneration policy shall contribute to the company's business strategy and long-term interests and sustainability and shall explain how it does so" (Directive 2017*/828/*EU* on *shareholder rights II*).

This simulation is no longer necessary when the operational management team has executed the learning by doing interaction tasks for each period on the Fintech HR module (IT-IRM) of their workstation.

- The operational PSP interaction started by the Finance function is followed by the HR function to provide weighting data for socio-economic indicators without which the planning and programming of the financial performance of HR assets is impossible.

**B - Finance function/management accounting interaction module for programming HR financial performance:**

a) *Perform calculations for anticipating and mitigating operating losses from data stored in the UL and EL internal databases.*
b) *Execute financial planning based on expected losses taking into account 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 IT-IRM dashboard data from Excel internal reporting for quarterly, semi-annual or annual EBITDA to analyze financial performance gaps to pay variable wages.*

**C - HR function/HCMA module for employee satisfaction and commitment:**

a) *Carry out surveys of anticipation of the deterioration of the social situation to provide motivation data and mobilization of employees.*
b) *Apply the integration of enterprise learning to manage turnover and have knowledge gap data to identify hiring requirements.*
c) *Use the internal dashboard to monitor and support the improvement of employees' financial performance and purchasing power indexed on five socio-economic indicators that are levers on which each employee can act in real time.*
d) Use the *internal dashboard* to take immediate and effective action to address risk based on six key domains of socioeconomic improvement:
    - *Working conditions*
    - *Organization of work*
    - *Consultation, communication, coordination (3C)*
    - *Integrated training*
    - *Working time management and*
    - *Strategic implementation.*

**D - HR function/HCMA module2 for psychosocial risk measurement:**

Conducting periodic surveys of “Psychosocial Risks” to provide alert data on HR dashboards based on six axes:

a) *Work requirements,*
b) *Emotional requirements,*
c) *Autonomy ,*
d) *Margins of maneuver,*
e) *Social and labor relations,*
f) *Different value conflicts,*
g) *Employment and wages insecurity*

**E - OM and operational units or cgus/hcma modules for real-time feedback and reporting**

Organizing operational units and coordinating the capture of daily incidents related to indicators, factors or causes of operational risk losses to provide:

*a) Absenteeism Loss Mitigation Reporting accounts;*
*b) Work accident loss mitigation reporting accounts;*
*c) Quality Deficiency Loss Mitigation Reporting accounts;*
*d) Reporting accounts for mitigation of loss of direct productivity gaps (Overtime and overconsumption of materials);*
*e) Reporting accounts for mitigation of loss of know-how gaps (including lack of versatility).*

Important note: The above are five indicators whose daily data collected by the heads of business units or CGUs dashboards are articulated and weighted to manage the financial performance of HR in real time.

- Operating structurally, each indicator driving the others, are taken together in the weighting system.

**4 - RESULTS**

**4.1. - Missing accounts of forward-looking financial performance management to provide to shareholders for compliance of governance reports and financial reporting**

4.1.1 - Human capital accounts

These are the human capital accounts required since January 2019 for governance reports and the HR performance lines for financial reporting of all business sectors in accordance with this legal requirement in line with SOX Act, SEC guidance and the laws of other G20 countries that govern the LCR context 100%:

- *"The remuneration policy shall contribute to the company's business strategy and long-term interests and sustainability and shall explain how it does so" (*Directive 2017/828 / EU, Shareholders' rights II).

Usually the problem is posed as follows: Human capital is a priority of inexhaustible capital of business entity that creates added value, ensures and realizes strategic mission, which is necessary for the survival in global competitive markets (Tetiana Hilorme & al, 2019: Human Capital Cost Accounting in the Company Management System).

The laws in force in the context of the 100% LCR oblige managers to take a more practical approach: considering the total workforce paid by the variable salary (incentive bonus to mitigate losses of operational risk); what is the amount of the economic capital that the entity can generate; and which can be planned over the next three years in free cash flow in order to avoid the cash risk and the risk of bankruptcy?

The missing accounts are the non-GAAP financial performance accounts processed by HCMA which takes over from the history of published financial

reports and unexpected loss data stored in data warehouses. These internal databases (or risk mapping) have been installed by major accounts, including local authorities, under Basel II. SMEs that do not have these risk registers have access to a simulator to reconstruct their unexpected loss histories.

4.1.2. - Required approach

The required approach is VaR. Value-At-Risk represents the maximum potential loss of an investor on the value of an asset or portfolio of financial assets which should only be achieved with a given probability over a given horizon. In other words, it is the worst expected loss over a given time horizon for a certain level of confidence.

In terms of management accounting, Absolute VaR takes into account the UL and EL and the risk appetite threshold in order to recognize the value at risk, the worst expected loss, considering the cost saving capacity over a time horizon given for a certain level of confidence in the processes of mobilizing HR assets through variable pay.

4.1.3. - VAR estimation base (EL + UL) when the risk register of UL data is missing:

**a)** Use the field of operational losses linked to HR that has been known for a long time to estimate the VaR when we do not have access to the risk register for UL incident data.

- Reminder: Operating losses or operational risks are estimated at 89% of the wage bill of the industry and services (local authorities included), and 45% of the payroll of banks and insurers (sector data collected by 40 years of hidden cost analysis confirmed by Basel Committee survey of 89 banks: BCBS, Results of the 2001 Survey).

**b)** VaR estimation base (EL + UL) for a simulation when we do not have access to the risk register for UL data of operational risk incidents:

- Industry and Services (including utilities), 89% of payroll, i.e. $23,825 per person per year;
- Banks and insurance, 45% of payroll per person, or $20,148 per year.

These averages were calculated by Lelecorp from socio-economic analysis data collected for almost 50 years in all sectors of activity on five continents by the network of the Institute of Socio-economics of Companies and Organizations (ISEOR, 2019, ACHIEVEMENTS 1975-2019). They represent the generally accepted cost when estimating the losses from absenteeism/presenteeism (*Forced presence at the workstation either by the presenteeism bonus as in France or by the absence of generalized health insurance as in the US*).

- We must therefore expect a higher VaR when accessing the internal database or risk register.

4.1.4. - Case studies

- Sources of accounts provided: The sectoral case studies of the missing HCM accounts below is based on actual corporate accounts on NASDAQ and BOURSORAMA. The processing is done on Lelecorp's iReporting Human Capital Accounts at *http://www.riskosoftcorp.com/index.php/en/*

Methodological constraint:

The LCR relies on the ability of the Internal Teams of banks and Internal Team of CCRs trained in business accounting or management accounting techniques mobilizing their HR Assets to process and to provide the free cash flow data required for HQLA.

- The methodological requirement is that cash flow and IT strategy governed by ISO/IEC 27 should be aligned with the Principles for Effective Data Aggregation and Risk Reporting (RRDAR) published in January 2013 by the Basel Committee on Banking Supervision (BCBS) for governance and internal risk auditing.

The BCBS clarified in December 2017 the importance of taking into account the historical data of the financial statements that: "The new standardized approach for operational risk determines a bank's operational risk capital requirements based on two components: (i) a measure of a bank's income; and (ii) a measure of a bank's historical losses. Conceptually, it assumes: (i) that operational risk increases at an increasing rate with a bank's income; and (ii) banks which have experienced greater operational risk losses historically are assumed to be more likely to experience operational risk losses in the future". (See Basel Committee on Banking Supervision, High-level summary of Basel III reforms, December 2017).

Also for the case studies of forward-looking free cash flow management data expected to provide shareholders with predictable free cash flow accounts, based on the dynamics of cross-cutting management of their human capital by Banks and their CCRs (insurance companies, industries and services, including local authorities), the starting point for the following simulation is the financial statements management accounts for the last 5 years.

- This is to explain how to read the case studies. What specifically does the reader need to understand about the numbers and which numbers.

**A - Tables of historical data from financial reporting management accounts published**

This involves taking over from the financial accounting tool with the accounting tool for managing the financial performance of human capital. The starting point is the history of management accounts published by financial reporting.

Note that the lines of accounts of the HR data are left blank by the financial reporting of all the sectors.

**Case of a Bank: Five year historical financial reporting accounts**

| **Data of Financial performance management accounts published for the last five years (In thousands USD)** | | | | | |
|---|---|---|---|---|---|
| Year | **2019** | **2018** | **2017** | **2016** | **2015** |
| Net banking income | $16,853,000 | $17,194,000 | $15,853,000 | $16,015,000 | $16,315,000 |
| Net profit | $3,955,000 | $3,971,000 | $2,756,000 | $2,881,000 | -$6,513,000 |
| Net income (group share) | $3,540,000 | $3,516,000 | $2,340,000 | $2,505,000 | -$6,471,000 |
| Financial HR Ratios | Not disclosed | Not disclosed | Not disclosed | Not disclosed | Not disclosed |
| Workforce at end of year | **70,830** | **71,495** | **72,567** | **75,529** | **79,282** |
| Average Workforce | Not disclosed | Not disclosed | Not disclosed | Not disclosed | Not disclosed |

**Case of an Insurer: Five year historical financial reporting accounts**

| **Data of Financial performance management accounts published for the last five years (In thousands USD)** | | | | | |
|---|---|---|---|---|---|
| Year | **2019** | **2018** | **2017** | **2016** | **2015** |
| Gross written premiums | $94,220,000 | $92,309,000 | $86,595,000 | $85,509,000 | $84,592,000 |
| Net profit | $6,193,000 | $5,987,000 | $5,337,000 | $4,786,000 | $4,282,000 |
| Net income (group share) | $5,829,000 | $5,617,000 | $5,024,000 | $4,482,000 | $4,152,000 |
| Financial HR Ratios | Not disclosed | Not disclosed | Not disclosed | Not disclosed | Not disclosed |
| Workforce at end of year | **97,707** | **98,279** | **96,279** | **93,146** | **94,364** |
| Average Workforce | Not disclosed | Not disclosed | Not disclosed | Not disclosed | Not disclosed |

**Case of an Industry: Five year historical financial reporting accounts**

| Data of Financial performance management accounts published for the last five years (In thousands USD) | | | | | |
|---|---|---|---|---|---|
| Year | **2019** | **2018** | **2017** | **2016** | **2015** |
| Turnover | $54,030,000 | $54,676,000 | $53,607,000 | $54,090,000 | $55,446,000 |
| Net profit | $2,149,000 | $1,202,000 | -$555,000 | -$2,218,000 | -$4,925,000 |
| Net income (group share) | $1,730,000 | $899,000 | -$706,000 | -$2,317,000 | -$5,010,000 |
| Financial HR Ratios | Not disclosed | Not disclosed | Not disclosed | Not disclosed | Not disclosed |
| Workforce at end of year | **170,156** | **182,157** | **189,786** | **196,885** | **204,287** |
| Average Workforce | Not disclosed | Not disclosed | Not disclosed | Not disclosed | Not disclosed |

**Case of a Services company: Five year historical financial reporting accounts**

| Data of Financial performance management accounts published for the last five years (In thousands USD) | | | | | |
|---|---|---|---|---|---|
| Year | **2019** | **2018** | **2017** | **2016** | **2015** |
| Turnover | $1, 603 ,000 | $5, 581 ,000 | $5, 454, 000 | $5, 536 ,000 | $5, 649, 000 |
| Net profit | $299, 000 | $$271, 000 | $240 000 | $139 000 | $95 000 |
| Net income (group share) | $265, 000 | $244, 000 | $223, 000 | $126, 000 | -$584, 000 |
| Financial HR Ratios | | | | | |
| Workforce at end of year | **193,149** | **145,560** | **141,243** | **136,792** | **133,886** |
| Average Workforce | Not disclosed | Not disclosed | Not disclosed | Not disclosed | Not disclosed |

**Case of a Local Authority: Five year historical financial reporting accounts**

| Data of Financial performance management accounts published for the last five years | | | | | |
|---|---|---|---|---|---|
| **Year** | **2019** | **2018** | **2017** | **2015** | **2014** |
| **Operating budget** | **$2,166** | **$2,000** | **$2,180** | **$2,100** | **$1,966** |
| **Accounting result (Deficit or budget surplus)** | -$259 | **-$200** | **-$159** | **-$160** | **-$130** |

| | | | | | |
|---|---|---|---|---|---|
| **Financial HR Ratios** | Not | Not | | Not | Not |
| **Workforce at end of year** | **$ 34,12** | **$3 4,100** | **$34,00 0** | **$30 ,300** | **$30 ,000** |
| **Average Workforce** | Not disclosed | Not disclosed | Not disclosed | Not disclosed | Not disclosed |

**B - Projection of forward-looking accounts of the financial performance of human capital**

These are calculations by the CEO to present to the board of directors the project for a policy of orientation of the compensation indexed to financial performance as required by the laws of investor relations which have been updated since January 2019 stipulating in particular that:

- 'The remuneration policy shall contribute to the company's business strategy and long-term interests and sustainability and shall explain how it does so' '(Directive 2017/828 / EU on shareholder rights II)

Projections in human capital management accounting take over from the published financial statements to estimate the data of the future financial performance plan based on the cross-cutting interaction dynamics of holistic governance ensured by the CEO and the Board of Directors:

- On the one hand, the projections correct the uncertainties of the financial statement lines relating to the HR asset, left blank like those above;

- On the other hand, projections provide excess cash or free cash flow data generated by the mitigation of potentially recoverable losses (PRL) of operational risk, strengthening short-term deposits of the liquidity ratio and the ratio one-year liquidity financing future investments based on economic indicators (levers on which each employee can act in real time).

The basis of these projections is the management accounting method which enables the company to generate a variable financial performance through variable salary which supplements and supports the financial performance of fixed salaries.

- These calculations of projection of future performance of human capital reduce the uncertainty on the expected net result and the free cash flow reinforcing the self-financing capacity.

**Bank case**

| | | |
|---|---|---|
| 1 | Current average workforce (a) | 73,941 |
| 2 | Current average net income (group share) (b) | $1,086,000,000 |
| 3 | Current contribution per employee to average net income (Group share) = (b) / (a) | $14,687 |
| 4 | Estimated Absolute VaR (EL + UL) | $1,444,436,190 |

| | | | | | |
|---|---|---|---|---|---|
| 5 | Potentially Recoverable Losses (PRL) = Absolute VaR - Risk Appetite Threshold calibrated at 0.02% for a 99.98% PRL | | | | $1,444,147,303 |
| 6 | Free Gross Cash Flow per employee at the new risk appetite threshold on a 3-year plan | N : 30 % | N+1 : 60 % | N+2 : 100 % | |
| | | $5,859 | $11,719 | $19,531 | |
| 7 | Cash surplus of the cross-cutting dynamics of the organization on plan of 3 years for 67% of the PRLs | | | | $967,578,693 |
| 8 | Earnings bonus for employees mobilized by the cross-cutting dynamics of the organization on a 3-year plan for 33% of PRLs | | | | $476,568,610 |
| 9 | Measurement Data of the Future Financial Performance of Fixed Wages (Average of the last five years in millions) | | | | $16,446,000,000 |

**Case of an insurer**

| | | | | | |
|---|---|---|---|---|---|
| 1 | Current average workforce (a) | | | | 95,955 |
| 2 | Current average net income (group share) (b) | | | | $5,020,800,000 |
| 3 | Current contribution per employee to average net income (Group share) = (b) / (a) | | | | $**52,325** |
| 4 | Estimated Absolute VaR (EL + UL) | | | | $1,992,538,851 |
| 5 | Potentially Recoverable Losses (PRL) = Absolute VaR - Risk Appetite Threshold calibrated at 0.5% for a 95.5% PRL (Strategic management rate based on ORSA: Enterprise risk management accounting) | | | | $1,902,874,603 |
| 6 | Free Gross Cash Flow per employee at the new risk appetite threshold on a 3-year plan | N : 30 % | N+1 : 60 % | N+2 : 100 % | |
| | | **$5,949** | **$11,899** | **$19,831** | |
| 7 | Cash surplus of the cross-cutting dynamics of the organization on plan of 3 years for 67% of the PRLs | | | | $**1,274,925,984** |
| 8 | Earnings bonus for employees mobilized by the cross-cutting dynamics of the organization on a 3-year plan for 33% of PRLs | | | | $**627,948,619** |
| 9 | Measurement Data of the Future Financial Performance of Fixed Wages (Average of the last five years in millions) | | | | $**88,645,000,000** |

**Case of an industry**

| | | |
|---|---|---|
| 1 | | 188,654 |

| | | | | | |
|---|---|---|---|---|---|
| | Current average workforce (a) | | | | |
| 2 | Current average net income (group share) (b) | | | | -$1,080,800,000 |
| 3 | Current contribution per employee to average net income (Group share) = (b) / (a) | | | | -$5,729 |
| 4 | Estimated Absolute VaR (EL + UL) | | | | $4,103,141,784 |
| 5 | Potentially Recoverable Losses (PRL) = Absolute VaR - Risk Appetite Threshold calibrated at 0.5% for a 95.5% PRL (Alignment with the insurer's ORSA) | | | | $3,918,500,404 |
| 6 | Free Gross Cash Flow <u>per employee</u> at the new risk appetite threshold on a 3-year plan | N : 30 % | N+1 : 60 % | N+2 : 100 % | |
| | | **$6,231** | **$12,463** | **$20,771** | |
| 7 | Cash surplus of the cross-cutting dynamics of the organization on plan of 3 years for 67% of the PRLs | | | | **$2,625,395,270** |
| 8 | Earnings bonus for employees mobilized by the cross-cutting dynamics of the organization on a 3-year plan for 33% of PRLs | | | | $1,293,105,133 |
| 9 | Measurement Data of the Future Financial Performance of Fixed Wages (Average of the last five years in millions) | | | | **$54,369,800,000** |

**Case of a service company**

| | | | | | |
|---|---|---|---|---|---|
| 1 | Current average workforce (a) | | | | 150,126 |
| 2 | Current average net income (group share) (b) | | | | $54,800,000 |
| 3 | Current contribution per employee to average net income (Group share) = (b) / (a) | | | | $3,650,267,109 |
| 4 | Estimated Absolute VaR (EL + UL) | | | | $4,657,594,986 |
| 5 | Potentially Recoverable Losses (PRL) = Absolute VaR - Risk Appetite Threshold calibrated at 0.05% for a 95.5% PRL (Alignment with the insurer's ORSA) | | | | $4,448,003,212 |
| 6 | Free Gross Cash Flow <u>per employee</u> at the new risk appetite threshold on a 3-year plan | N : 30 % | N+1 : 60 % | N +2 : 100 % | |
| | | $8,889 | $17,777 | $29,628 | |
| 7 | Cash surplus of the cross-cutting dynamics of the organization on plan of 3 years for 67% of the PRLs | | | | $2,980,162,152 |
| 8 | Earnings bonus for employees mobilized by the cross-cutting dynamics of the organization on a 3-year plan for 33% of PRLs | | | | $1,467,841,060 |

| | | |
|---|---|---|
| 9 | Measurement Data of the Future Financial Performance of Fixed Wages (Average of the last five years in millions) | $4,764,600,000 |

**Case of a Local Authority:**

| | | | | | |
|---|---|---|---|---|---|
| 1 | Current average workforce (a) | | | | 32,506 |
| 2 | Current average net income (group share) (b) | | | | -$181,600,000 |
| 3 | Current contribution per employee to average net income (Group share) = (b) / (a) | | | | -$5,587 |
| 4 | Estimated Absolute VaR (EL + UL) | | | | $822,986,706 |
| 5 | Potentially Recoverable Losses (PRL) = Absolute VaR - Risk Appetite Threshold calibrated at 0.5% for a 95.5% PRL (Alignment with the insurer's ORSA) | | | | $785,952,304 |
| 6 | Free Gross Cash Flow per employee at the new risk appetite threshold on a 3-year plan | N : 30 % | N+1 : 60 % | N +2 : 100 % | |
| | | $7,254 | $14,507 | $24,179 | |
| 7 | Cash surplus of the cross-cutting dynamics of the organization on plan of 3 years for 67% of the PRLs | | | | $526,588,044 |
| 8 | Earnings bonus for employees mobilized by the cross-cutting dynamics of the organization on a 3-year plan for 33% of PRLs | | | | $259,364,260 |
| 9 | Measurement Data of the Future Financial Performance of Fixed Wages (Average of the last five years in millions) | | | | **-$181,600,000** |

## 5 - DISCUSSION

### 5.1. - Gaps filled in governance reports and financial reporting with HCMA.

HCMA gaps to be filled by banks and their CCRs are known to all. The problem is evident in financial ratios published in firm's financial statements, specifically the line "Average workforce" by listed and unlisted public companies. These companies are subject to the board's disclosure legal obligation to the shareholders and the public:

- The Annual Workforce and the Average Workforce, especially the last three to five years, are rarely reported or calculated (see financial ratio data published in USD by NYSE, Stock Analysis on Net, MarketWatch or NASDAQ).
- When the Annual Workforce and the Average Workforce are reported, as is the case for certain profit and loss accounts published in Euros by BOURSORAMA, the financial accounting software does not have the technological process to analyze these HR asset data for management of future cash flows in the method required by the law. More specifically, it is unable to guarantee the investor's quarterly earnings based on motivated HR assets calculated using variable salaries through a profit-sharing agreement. At this point, this projected outcome, which could strengthen the purchasing power of employees, has not been met.

It should be noted that US companies, particularly Dow Jones firms, have introduced as part of their financial reporting data, a new addition, titled HR Efficiency. The HR efficiency analysis figures that are now included in the Dow Jones data are Income/Employee and Revenue per Employee.

This process adds elements which by their nature cannot be added: the fixed salary and the variable salary.

The fixed salary is a cost, a remuneration of the human capital known from the start of the financial year and which does not change during the 12 months of the year. The targeted financial performance is the achievement of a turnover which is at least in the average of the historical performance of the last 5 years. The accounting area which systematically records these costs, like all invoiced expenses, is financial accounting.The variable salary is directly linked to the variable costs of the organization. It is a bonus (a reward) which varies in proportion to the saving performance of variable operating costs, in particular the reduction (or mitigation) of losses of operational risk.

The accounting area that measures this performance is analytical accounting or management accounting in the aspect of variable costs, i.e., direct costing. Management accounting is an internal company operating accounting. Its purpose is to inform those responsible for the costs and profitability of a service or product.

### 5.2. - HCMA artificial intelligence approach practice test based on real business data

There are 2 categories of HR software on the market:

- Software for managing the horizontal functioning of the HR function and
- Human capital costs and financial performance software
-

5.2.1. - The software for managing the horizontal functioning of the HR function falls into two categories (the category which provides the general functionalities of HR services and the ERPs of the HR function).

**a)** General category software provides applications for HR operations of:

- Candidate tracking
- Compensation management
- Employee profiles
- Integration
- Performance management
- Time and attendance (See Capterra's Human Resource Software Directory: https://www.capterra.com/sem-compare/human-resource-software?gclid=EAIaIQobChMIyby5ir7g6AIVArTVCh2bOQwUEAAYAiAAEgJfmvDBwE

b) ERPs that provide applications for Finance, HR and Planning.
Example:

- Enterprise resource planning (ERP) for the changing world of finance, HR, and planning of workday (https://www.workday.com/)
- Software to connect people and drive performance (Talentia's future-ready Finance and HR software to engage talents, boost agility and harness the power of technology).

**B - Human capital costs and financial performance software**

In the area of human capital costs and financial performance, the most well-known software is the Horivert hidden cost process driven with expert software SEGESE from ISEOR and the HCMA processes conducted with Lelecorp's Fintech HR (IT-IRM).

Historically the second is part of the relay of the first in the regulatory context in force. The action research interface model for solving the financial performance problems of human capital providing non-GAAP reporting data results from the relay, within the framework of the laws and regulations of sound practices finalizing post-crisis reforms (Basel III), of

- the qualitative socioeconomic "Horivert" approach piloted since the 1960s by the International Research center (ISEOR: SOCIO-ECONOMIC INSTITUTE OF FIRMS AND ORGANIZATION)
  by
- the HCMA approach patented from 2003, built and automated under Basel II on the so-called Advanced Measurement Approach (AMA), tested from 2008 by Lelecorp.

5.2.2. - Qualitative socio-economic approach (HORIVERT/ISEOR)

This is a hidden cost diagnostic approach called Horivert (Horizontal and Vertical):

- An architecture of socio-economic innovative actions designed to be efficient and to irrigate and fertilize the enterprise or the organization throughout

**a) The logic of clusters**

A concerted training program within the enterprise makes it possible for its management team and its staff to quickly adapt the management tools proposed to their department and to the entire organization.

Groups are constituted in the form of **clusters** and which follow the actual architecture of management teams, each group being composed of an executive and his/her direct collaborators. In small and medium sized firms (SME) of less than 50 persons, a single cluster is set up.

**b) Two simultaneous comprehensive actions**

Initially the intervention comprises two simultaneous actions:

- a **horizontal** action of methodological support involving the management teams and the staff
- a **vertical** action, in at least two basic units (service, agency, workshop), involving operatives (workers, employee) and the supervisors of those unit

This simultaneous horizontal and vertical action makes it possible to ensure a better integration of the socio-economic intervention in the company strategy, and to solve operational and strategic dysfunctions which are often interconnected.

Within enterprises of up to 50 active members (small and medium sized firms), the action is integrative: it combines the horizontal action with the vertical one, the latter then involving all the personnel, including the CEO.

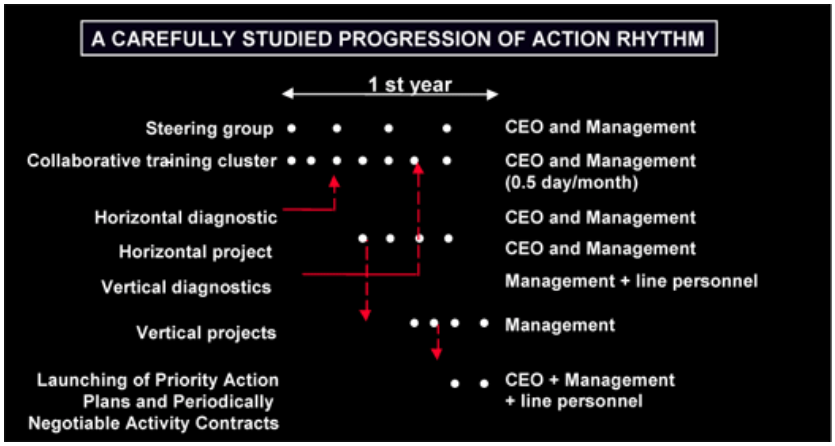
- Horivert : the enterprise is totally irrigated


- A carefully designed action pace: the chronobiological process.

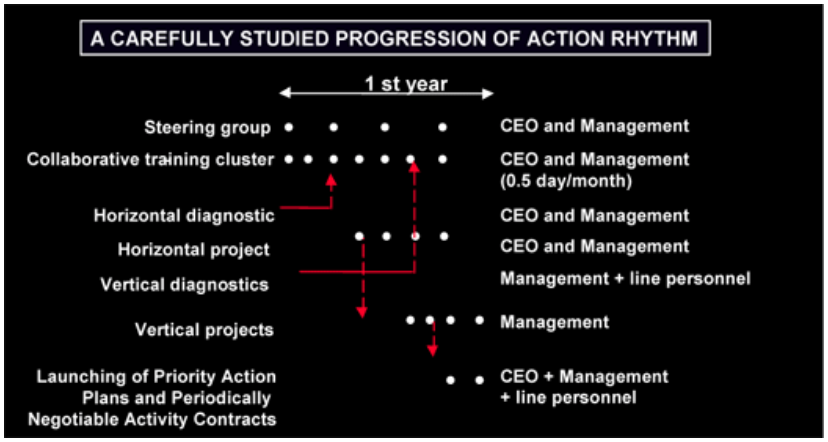
The socio-economic intervention is adapted to the specific biological rhythms of the company activity. Those rhythms must be modulated enough to impact a real impulse to action, but **compatible** with the company activity and living pulsations, so that its members might assume as well the normal activity in their

field as the implementation of improvement actions and the new management practices.

**c) The implantation year is thus schematized:**




* The period of setting-up is shorter (6 months) for the organizations of less than 20 persons




**d) Computerization**

The software system called “Expert Socio-Economic Management System” (SEGESE) is a system dedicated to diagnostic experts. Its development started in 1987 is not finished:

‘’The SEGESE software in the course of development’’

Source of the description extract: *http://ns3040652.ip-164-132-163.eu/SiteIseor/ISEOR_ANGLAIS/horivert-AN.asp*

5.2.3/ HCM accounting approach

**A) Beforehand, solving the HCMA IT typology question**

The mythological and technological advance of Lelecorp compared to what has been done until now, especially since 1973 with the first work of conception of socio-economic management by ISEOR, is that Lelecorp started by positioning and solving the Typology Question of HCMA IT within the framework of social psychology as an interaction science which is the basis of the group dynamics on which the management of planned financial performance is based.The same is true for adapting or bringing organizations into compliance with a changing legal context (Filing in France in 2003 and extension in the USA in 2005, of the Patent of Methodology of management accounting computing focused on the impact of human capital on operational risk losses).

- Through this positioning, Lelecorp at the same time solved in the context of HCM cross-cutting accounting the problem of integrating the problem of Integrative Business and Economics Research.

Once we have admitted that interdisciplinary business studies can be defined as a problem-solving process [Jerry Gaff and James Ratcliff, 1997: See The Society of Interdisciplinary Business Research (SIBR) "INTERDISCIPLINARITY PARADIGM" *https://sibresearch.org/index.html* ], we have subscribed to disciplinary integration within the framework of interaction governed by two scientific vectors:

- On the one hand, in management accounting as a system for building and measuring financial performance on the basis of human capital, the business "driving force" (D. Blomstrom, 2018).
- On the other hand, “Action Research” understood as a Problem Solving Process (PSP) in the sense of group dynamics or dynamics of economic organizations according to the tradition going back to Kurt Lewin (1946).

Social psychology provides the framework for the articulation of four main business disciplines: finance, accounting, HR and operations management to process data from the financial performance accounts of HR assets that were missing until now in governance reports and financial reporting.

**B) Taking over from the ISEOR trend of ‘hidden costs’**

The HCMA approach is part of the interdisciplinary research and construction of the computer system, Fintech HR technology of cross-cutting interaction, by Dr. Pascal Lélé, to consider and account for operational risk losses. HCMA modeling redefines, specifies and integrates, as factors or causes of operational risk loss, the socio-economic indicators identified by ISEOR.

- So although the HCMA and the hidden cost trend have 5 socio-economic indicators in common, the “staff turnover” indicator which leads to the calculation of the turnover rate in the sociological approach from which ISEOR derives, has been redefined in the psycho-sociological approach, i.e., Dynamics of small groups or primary groups and Dynamics of organizations, from which the HCMA derives, to be understood as the indicator of knowledge gap to include it in on-the-job training, the development of versatility and Peter’s dead end: “*In a hierarchy every*

*employee tends to rise to a level of incompetence*" (Peter Principle, Investopedia, *https://www.investopedia.com/terms/p/peter-principle.asp* ).

The HCMA process aims to articulate the ERM recommended by COSO with the loss mitigation required from the Basel II agreement following COSO 2. The anticipated and patented accounting approach by Dr. Pascal Lélé (filing in France in 2003 with extension to the USA in 2005) was recommended by the Basel III agreement following the subprime crisis to motivate the HR of operational units and functions in order to act in any company as a team organizational.

**C) Articulating the COSO ERM to non-GAAP oprisk loss mitigation reporting**

In 2002, the American Congress, in response to the financial and accounting scandals that included a number of firms, e.g. Enron, Worldcom, etc., promulgated the SOX Act. This law obliges companies calling on public savings to assess their internal control and to publish their conclusions in the requested statements. In addition, the Act requires the use of a conceptual framework, with the approach favored the adoption of COSO as a benchmark. Many countries have adapted similar laws since 2003 (See in France, the LSF law "Financial Security Law").

The COSO (Internal Control - Integrated Framework) standard is based on the following basic principles:

- Internal control is a management accounting process: it is a means, not an end; it is not confined to a collection of procedures but requires the involvement of all employees (human capital) at each level of the organization.
- Internal control must provide reasonable (but not absolute) assurance of law-abiding management and leadership. Internal control is adapted to the actual achievement of the planned financial performance objectives (the HCMA is a 3-year planning model).

The HCMA articulates the COSO standard which defines internal control as a process implemented by managers at all levels of the company and intended to provide reasonable assurance as to the achievement of the following three objectives:

- Effectiveness and efficiency of operations,
- The reliability of financial information,
- Compliance with laws and regulations.

With the LCR at 100%, compliance in the USA as in other G20 countries has become binding and enforceable in court in the event of damage. The SOX Act aims to improve the accuracy and reliability of financial publications of public companies, whether listed or unlisted. Therefore, the implications of the SOX Act for information systems governed by sections 404 (operational risk control), 302 (Financial reports and internal controls), 409 (feedback in real time) and 802 (criminal requirements for falsification of documents) cannot be separated from the provisions relating to the management of HR Assets as specified, in particular by paragraph 6 of Article 9a (new) of the EU Directive of May 17, 2017 ("Rights of Shareholders II").

## 6 - WHAT DO WE LEARN BY DOING AT OUR WORKSTATION WITH FINTECH FOCUSED ON HCMA?

- Supports of gestures and action tasks of cross-cutting action to be executed to achieve financial performance improving the LCR, or EC, of the company concomitantly to the improvement in the purchasing power of employees by the variable salary, on the basis of a weighting system for the 5 socio-economic indicators.

### 6.1. - Supporting and articulating the collective responsibility of the board of directors

Business management now rests, not on the CEO, but on a collective responsibility of the board of directors for its tasks such as:

- Establishing the organization's mission and purpose.
- Executive director-selecting, supporting, reviewing.
- Organizational planning.
- Monitoring and managing financial resources.
- Assessing and developing skills.
- Serve on committees.
- Recruiting new board members.
- Spread the word about the organization.
- Providing a fair return to the shareholders and
- Retaining a sufficient part of the company's earnings to permit a sustained level of reinvestment in new or replacement assets, research and development.

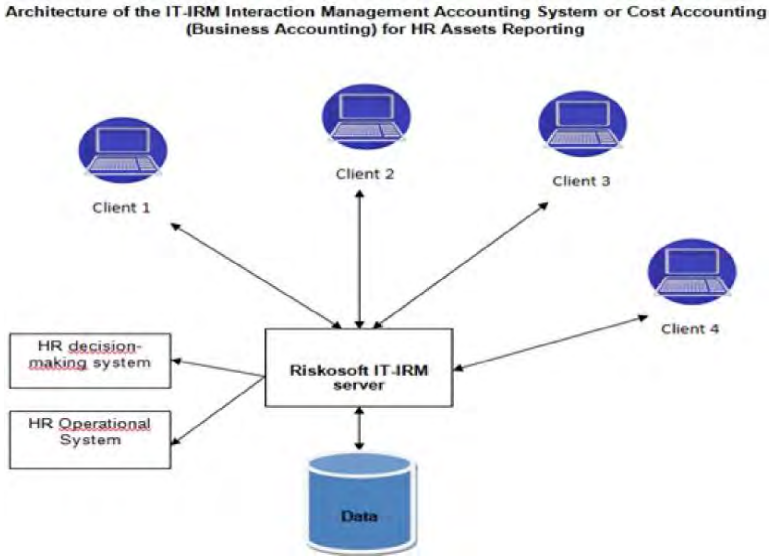
The "Principles of sound management and monitoring of liquidity risk" issues by the Basel Committee on Banking Supervision (BCBS) in 2008 that have been transposed into the G20 laws as the European Directive of May 2017 to bring companies into compliance with the LCR at 100% to finalize post-crisis reforms (Basel III) require that the company has two vectors to cope with these missions.

6.1.1. - Structured decision making vector of the board of directors on HR assets:

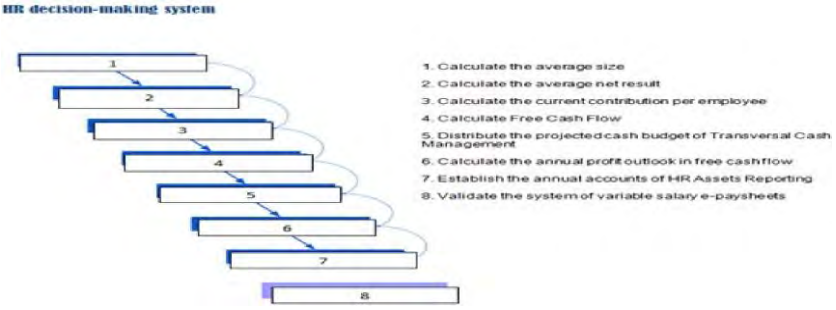
It is the responsibility of senior management to manage liquidity risk, to develop a strategy, to set policies and practices that are appropriate to the set level of risk tolerance, and to ensure that bank (and risk counterparties) has sufficient liquidity.

- Senior management should carefully monitor the entity's liquidity indicators and report regularly to the board on this topic. It is the responsibility of the board of directors to review, at minimum annually, and approve the liquidity risk management strategy, policies and practices, to ensure that the senior management manages this risk (Principle 3).

**A - Overview of the internal financial performance piloting technology (Figure 1):**




**B - CEO's scheme for HR asset decision making (Figure 2)**



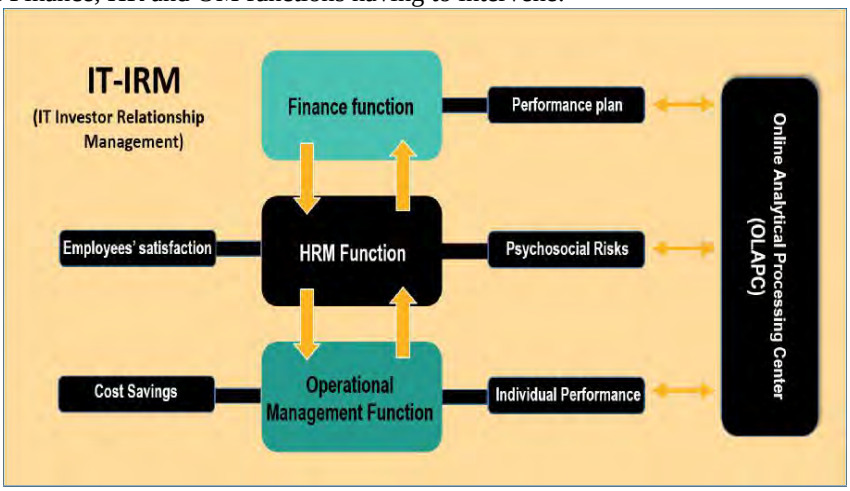

6.1.2 - Operational management vector:

All entities should, for each of its important business lines (concerning the activities of balance sheet and off-balance sheet), take into account the costs, benefits and risks related to liquidity in all the process of pricing, result measurement and approval of new products, so that risk-taking incentives are matched for each line of business with the liquidity risk exposures that this line of business creates for the whole (Principle 4).

**A - Cross-cutting features of the vertical axis (Figure 3)**

These are the computer supports of the vertical axis which had been missing until now. They complement the information technology (IT) dedicated to business units (horizontal axis) so that the company can run in real time as an organizational team based on the risk appetite threshold and specific interaction tasks performed by each workstation. The combination by the OLAP data

processing server automatically synchronizes these processes into an organizational whole without the heads of command (the executive) or the heads of the Finance, HR and OM functions having to intervene:

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Note that this is only possible because the top-down and bottom-up holistic governance interaction architecture that synchronizes the entire organization is connected to the OLAP (*Online Analytical Processing*) server that processes the HR financial performance data in real time based on the socio-economic indicators at the reach of all employees.

This structure meets the International Regulations of Sound Cash Management Practices ISO 22316: 2017 (Security and Resilience - Organizational Resilience) that has been in effect since March 2017 which requires the following:

- “Individual objectives should be aligned with organizational goals. The behavior of all members of an organization must contribute to organizational resilience, and any passive or counterproductive behavior must be avoided.”

It also complies with laws, which like the European directive require Forward Looking Accounts validating the compensation policies implemented by the boards of directors:

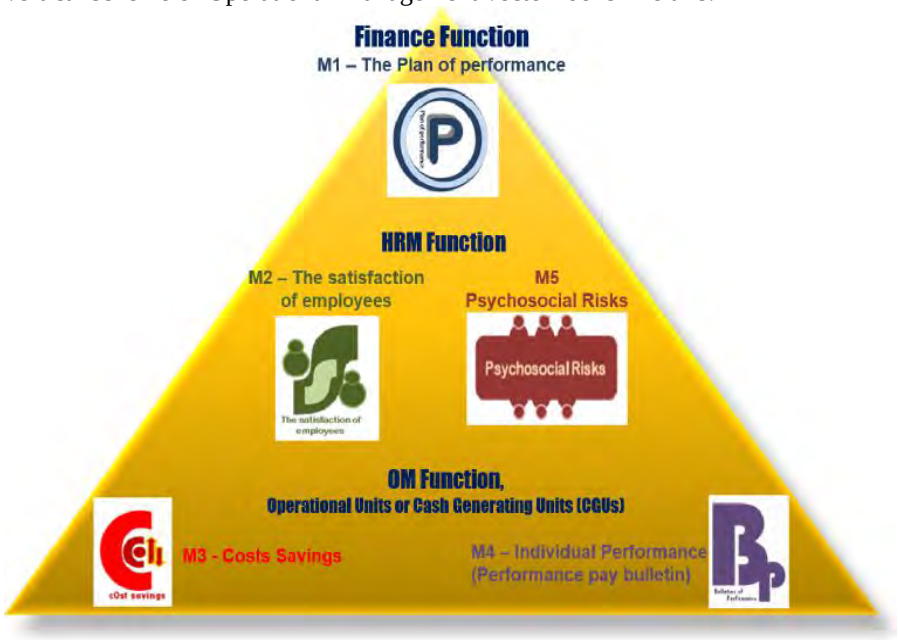
- “The remuneration policy shall contribute to the company’s business strategy and long-term interests and sustainability and shall explain how it does so”(Directive 2017/828 / EU on shareholder rights II).

This structure also meets the ISO 31000: 2009 COSO which states that: “There is synergy and linkage among

components, forming an integrated system that reacts dynamically to changing conditions. The internal control system is intertwined with the entity's operating activities and exists for fundamental business reasons. Internal control is most effective when controls are built into the entity’s infrastructure and are a part of the essence of the enterprise. “Built in” controls support quality and empowerment initiatives, avoid unnecessary costs and enable quick response to changing conditions.”

**B - Diagram of a company for which the driving axis (vertical axis) of HR financial performance is equipped (Figure 4)**

Viewed from the pyramidal angle of the organization chart of companies, the vertical scheme of Operational Management vector looks like this:

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This shows to what extent the usual claims of great managers or management gurus are pure fiction and will remain a fiction if the organization does not have the capacity to mobilize its total workforce or human capital in real time.

Without cross-cutting interaction processes, 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.

**C - Where does the pyramidal shape of the organization chart take its capacity to run as an organizational team?**

From the point of view of organizational dynamics or the social psychology of organizations, i.e., work psychology relating to organizational change, the impact of LCR on the WCR and the financing of future investments makes the interactions of the CFO function with the other functions (HR and OM) and the operational units or CGUs evolve, from the control stage management, i.e., budget execution control, at the control and driven stage of the value creation

based on HR assets taking into account the free cash flow, i.e., cost saving, expected from the mitigation of operational risk losses.

The effect would be static and unachievable if there was not the driven effect of the variable salary or bonus which based on the share of PRLs motivates and mobilizes as much as possible the commitment of the total workforce, i.e., human capital to best achieve the financial performance objectives programmed on a three-year plan for each business unit or line of business, taking into account, on the one hand, its resource consumption, and on the other hand, operational risk indicators on which each employee can act in real time. The effect would also be null if there was Fintech IT-IRM Intranet support that synchronizes the overall dynamics of the organization, automates and provides modules for each workstation to know and execute its cross-cutting tasks, including collecting loss incidents, processing socio-economic indicator data, and providing the expected internal reporting to evaluate and make decisions to maintain or change the direction of piloting in real time.

- The company can thus overcome the handicaps related to the SOX Act requirements for HR assets that have not been met since 2002: sections 404 (operational risk control), 302 (Financial reports and internal controls) and 409 (feedback in real time).

**D - Thinking human resources from the point of view of financial management**

Without the risk appetite threshold integrated into all workstations, and the motor effect or motor drive effect provided by the premium or variable wage, indexed by the weighting system on socio-economic indicators, collective energy disperses through business units or lines of business. Paying a variable salary under these horizontal operating conditions is useless: the financial performance is generated by the fixed salary. The premium that is paid is simply added as part of the fixed salary.

Based on the hiring contract and the seniority, the fixed salary is important for the comfort, the safety of the personnel and their retirement. It is the basic element of the stability and sustainability of human capital. However, as such, it generates a turnover that is also stable, stagnant and standard. This financial performance does not change. It ignores growth: from one year to the next, and the differences are small. Turnover and profit revolve around the behavior-based average and generally accepted dysfunctions. The standard professional behavior generates a financial performance also standard, i.e., average. The net result can even be negative considering the dysfunctions while the premiums have been paid (see typology of operational risk incidents of the Basel Committee).

- The risk appetite threshold now forces the leadership or the Internal Team to think of HR from the point of view of financial management to secure cash flow and avoid the risk of bankruptcy.

The competitive advantage that the company obtains as an organizational team when the employees are stimulated by the bonus indexed on the socio-economic indicators for mitigating losses of operational risk is the same as in all collective games (American football or Rugby):

- Overall Commitment

- Optimum of the commitment of the individual
- Quest for perfection in execution
- Clear vision of the value creation objective.

**E - Concomitant improvement in financial performance and working conditions (Figure 5)**

This is based on the articulation system of the five socio-economic indicators causes of risks giving to all employees the ability to mitigate operational risk losses, improve EBITDA, and measuring in real time, i.e., week, month, quarter, the scope of its efforts on variable pay given the risk appetite threshold. Employees, during periodic interviews with their supervisors, can measure the impact on the key areas of improvement of their working conditions.

- This figure schematizes the decentralized corporate dialog to business lines and business units by the PSP, which combines corporate training with action research. Action research in social psychology of organizations or work psychology is the group study that combines theory, i.e., seminars and practice, i.e., learning by doing workshops. This is done in order to overcome by interactions between peers, i.e., blended learning, the difficulties of internal financial performance, strengthen the consensus, while developing knowledge strengthening the corporate culture to progress collectively as an organizational team.

| Key Domains of Socioeconomic Improvement | | Operational Risk Indicators on Which Every Employee Can Act in Real Time to Reduce Losses and Contribute to Improvement of the Working Conditions | | | Weighting Rate Calculated on the Median Position |
|---|---|---|---|---|---|
| 1 | Working conditions | ← | Work accident | → | Priority level score |
| 2 | Organization of work | ← | Quality defects | → | Priority level score |
| 3 | Consultation, Communication, Coordination (3C) | ← | skills 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 additional operational costs) | → | Priority level score |

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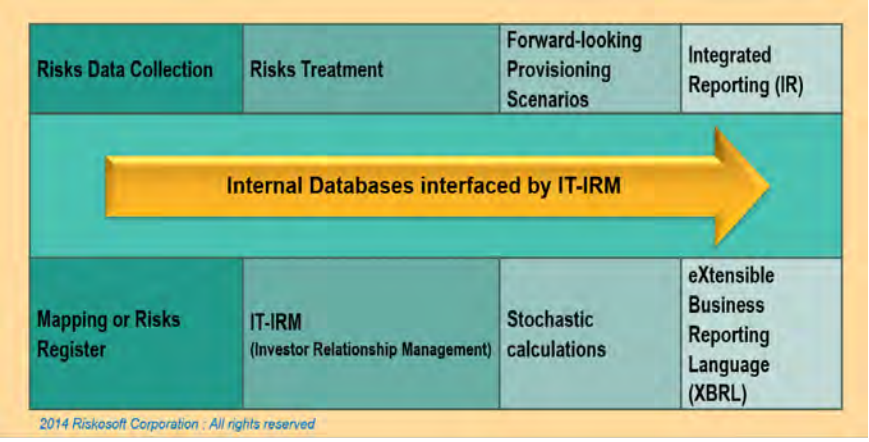
This system of artificial intelligence (AI), which continually adapts the company to change and competitiveness adjusts and automates the cross-functional interaction of the Finance, HR and OM functions with the operating units or the CGUs. This operation focuses the measurement of internal financial performance on socio-economic indicators mitigating operational risk losses. The system considers the degree of disability of persons and Peter's principle as a retirement approach guided by the knowledge gap indicator, including the lack of versatility.

**F - Reconciliation of operational management and stochastic forecasts (Figure 6)**

- Holistic governance articulated by FinTech IT-IRM technology

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FinTech IT-IRM has anticipated and addressed the lack of costing tools for operational risk loss required for Integrated Reporting (IR). It is part of the so-called "communicative interactions" exchanges: all parts of a system are linked and interdependent. Until now, analysts has been moving directly from the data collection system for unexpected loss incidents, i.e., risk register or risk mapping, to the business intelligence or financial mathematics tool for stochastic calculations. They are actuarial models that predict the risk capital that the investor, including the insurer, must have in owned funds to cover operational risk losses and those of the counterparty risk, i.e., the client. The business intelligence model establishes prospective funding scenarios based on statistics and probabilities.

The vacuum filled by the IT¬IRM as shown in figure above, is the operational gap: the capacity that each entity has to anticipate and mitigate by internal measures the operational risk losses in particular to have free cash flow taking into account the threshold of risk appetite. The calculation of risk capital is false and prejudicial to both the client and the insurer. It's primarily against the law since it does not consider the risk mitigation data.

- Economic capital is the amount of capital that a company should have to bear the risks it takes.

The Basel III Agreement, which is transposed by the laws of the G20 countries (US Dodd-Frank Act of 2010, the OSFI Act of Canada of Dec. 2012, EU Legislative Acts No. 575/2013, etc.), based on the BCBS coordination, responsible for their compliance with the agreement signed in Seoul in 2010, prescribes:

- Risk measurement must be translated into capital requirements based on the quality of the measurement and management system. EC calculations are based on the expected loss

accounting approach (Basel III: “Forward looking provisioning”, http://www.bis.org/publ/bcbs189.pdf).

The following requirements are in all G20 laws coordinated by the BCBS:

(a) The operational risk is a significant risk that the institution must cover with own funds (Basel III: paragraph 52, EU Legislative Acts N ° 575/2013 of June 26, 2013).

(b) Institutions shall consider all relevant information for the allocation of credit lines to the different categories of debtors. This information must be up-to-date and allow them to predict the future performance of the exhibition (Basel III: Article171-2, EU Legislative Acts No 575/2013).

Fintech HR IT-IRM responds to the concern of business intelligence tool publishers. Business intelligence is part of the broader architecture of an information system, but it does not replace the interaction system of day-to-day management of return on investments:

- “A decision-making system does not replace the operational systems that make the business work, but it comes to integrate**,** extracting data ... A decision-making platform is the key element for analysis and simulation” (SAS Academic/The power to know).

**B - Convergence towards the psycho-sociological logic of HCMA**

The “Principles of sound management and monitoring of liquidity risk” issued by the BCBS in 2008 that have been incorporated into the updated G20 laws and SEC guidance for LCR non-GAAP reporting is the cause of this convergence towards cross-cutting processes equipped by Fintech HR (IT-IRM).

The system articulates the three essential axes below:

**Balance sheet management**: Every entity should have a rigorous process to identify and measure, monitor and control liquidity risk. This process should include a secure mechanism for a full projection of cash flows in relation to assets, liabilities and off-balance sheet items in various appropriate time horizons (Principle 5).

**Forward-looking management:** Under normal conditions, forward-looking measures should identify the needs that may arise from projected cash outflows as compared to usual sources of financing. In stressful conditions, forward-looking measures should identify funding gaps across a range of horizons and serve as a basis for liquidity risk limits and early warning indicators. Given the critical role of assumptions in the projection of future cash flows, an entity should ensure that its assumptions are acceptable and appropriate, documented and periodically reviewed and approved (Principle 5).

**The insurer's Own Risk and Solvency Assessment (ORSA) goes in the same direction:** it is a forward decision-making tool. ORSA is an internal risk and solvency assessment process for the organization (or the group). It must illustrate the ability of the organization or group to identify and measure and manage the elements likely to modify its solvency or financial situation. Also, its operational variation makes it a leading strategic tool.

## 7 - WHAT DISTINGUISHES THE PRACTICE OF HCMA FROM THE HORIVERT APPROACH?

Horivert and HCMA are two complementary approaches. One is an external business advisory system; the other is an internal business system. HCMA IT has the functionality to complete the computerization of the Horivert approach in the context of non-GAAP reporting governed by applicable laws such as the European directive of May 2017 in force for all member states from 2019 and SEC Guidance for non-GAAP reporting updated on July 1, 2019.

Specifically:

- Horivert is an expert approach dedicated to the training of consultants and diagnostic interventions focused on raising awareness among managers of hidden costs and potential financial performance which can be exploited with the assistance of approved socio-economic consultants.
- HCMA approach is a management accounting system or corporate accounting for the executive education of leadership beyond finance (or reporting of financial statements) based on action research focused on PSP of financial performance of HR assets.

### 7.1. - HCMA approach starts where Horivert stops:

- The diagnosis of hidden costs.

7.1.1. - Methodological and technological handicaps of the Horivert approach

The SEGESE software (incomplete) used by consultants has many handicaps now corrected by Fintech HR (IT-IRM). These include:

a) SEGESE only measures unexpected losses from malfunctions or incidents of operational risk loss known as unexpected loss or UL.

b) SEGESE presents an incomplete diagnosis, since it ignores the expected losses (EL). There are three categories of expected losses:

- The first category of expected losses is that which we know from the differences in the management accounts provided by the financial statements.
- The second category of EL is the loss of incidents or malfunctions that ISEOR has aptly called “hidden costs”. No longer hidden or unexpected as soon as they have been revealed, the “Horivert” diagnosis, they become the expected category 2 losses.
- The third category of expected losses is the accepted cost of the risk appetite threshold. It is the accepted amount that must be covered by equity since it is not absorbed by economic capital. This amount is defined by the Absolute VaR - PRL.

c) **After the diagnosis of the Horivert approach, the company “manages”.**

SEGESE does not have the functionality to procede from diagnosis to application, in particular, the reduction of diagnosed costs. The Horivert approach is an approach to improving internal financial performance to be implemented by the company. This approach may require the help of the expert consultant. This non-computerized approach is long and can only be implemented by a very small minority of companies:

- This is in contradiction with the "time factor" as the main source of diagnosed potential cost savings.
- While the socio-economic methodology is international and 40 countries on 4 continents have trusted ISEOR, only 1,854 client companies and partners have worked with ISEOR since 1973 (*http://www.iseor-consulting.com/pdf/chiffres-cles-mai2017.pdf*)

The market to serve in the context of the 100% LCR for companies with at least 10 employees is 26 million (more precisely 26,166,668) companies. These are banking CCR entities whose WCR and the financing of investments depend on their capacity to contribute to banks' HQLA thanks to their EC. The Financial Stability Institute recalled in October 2017 that:

- "*All assets in the stock should be unencumbered. Unencumbered means free of legal, regulatory, contractual or other restrictions on the ability of the bank to liquidate, sell, transfer, or assign the asset. An asset in the stock should not be pledged (either explicitly or implicitly) to secure, collateralize or credit-enhance any transaction, nor be designated to cover operational costs (such as rents and salaries).*" (FSI, Occasional Paper No 14 , Basel III liquidity monitoring tools, October 2017)

The market to serve is distributed as follows:

- UNITED-STATES: 2,893,013
- EUROPE INCLUDING RUSSIA: 2,654,537
- CANADA: 116,798
- ASIA – PACIFIC: 11,435,590
- LATIN AMERICA: 8,530,239
- AFRICA & MIDDLE EAST: 536,491

(Source: Market study of the HCMA certificate carried out by Lelecorp, *https://drive.google.com/open?id=1IYFyqqYu3dYd69jBHhptQvk6X4nL-tK*)

d) **The Horivert consultant does in 6 months for organizations of less than 20 people (*http://ns3040652.ip-164-132-163.eu/SiteIseor/horivert.asp*) what Fintech HR (IT-IRM) does instantly for the diagnosis and in 3 months for the reporting of the financial performance of a quarter (EC generated and variable salary).**

- Integrated into operational activity, Fintech HR manages cross-cutting interactions to mitigate operational risk loss in real time and provides feedback on the financial performance of HR assets in any company, regardless of the number of employees and the location of the company activity (including internationally).

e) **Horivert seems out of time:**

The Horivert approach ignores the changes in the regulatory framework for performance management and financial reporting started in 2002 with the SOX Act. This framework has been marked since then by the evolution of the laws on internal control and the rules of sound management practices under Basel II, Basel III and regulations such as the LCR Reporting finalizing post-crisis reforms (Basel

III). Like the ORSA, LCR is a management accounting or business accounting approach, supported by the HCMA:

- The ORSA must illustrate the insurer's ability to identify, to measure and manage items that may change its solvency or financial position. Also, its operational declination makes it a key strategic tool that must be apprehended by the organization as a tool for steering the activity according to the risks.

f) **Disability of siloed analysis which the Horivert approach stumbles**

Many firms thus far have failed to have solved the computerization problem, as well as analyze and manage all the socio-economic indicators of operational risk loss. These include absenteeism, work accidents, quality defects, direct productivity gaps, and knowledge gaps, including lack of versatility. Additionally, firms have sought to avoid the perverse effects of piloting "silos" of mitigating operational risk losses that have long appeared as the Rubicon of the Horivert approach. Under these conditions the tendency is to bring the intervention of the specialized consultant "socio-economy" on the most worrying indicator, absenteeism. For instance, in France this has led to the introduction of "presenteeism bonuses", the perverse effect of which is as disastrous as the absence of health insurance which in the United States compels presenteeism, i.e., forced presence at the workplace.

The aggravating effect is highlighted in the economies of the United States and Japan. A year-long telephone survey of 29,000 working adults dubbed the "American Productivity Audit," calculated the cost of presenteeism in the U.S. to be more than $150 billion a year (https://www.britannica.com/topic/American-Medical-Association). Most studies confirm that presenteeism is far costlier than illness-related absenteeism or disability. The American Medical Association has found that on-the-job productivity losses, resulting from depression and pain, was roughly three times greater than the absence-related productivity losses attributed to these conditions. The Health and Productivity Toolkit (2006) has calculated that the average annual cost, per employee, resulting from presenteeism was $155.92.6 Even more alarming, in Japan, presenteeism can be fatal. One in five Japanese workers is at risk of dying due to overwork (See: *https://www.scmp.com/week-asia/business/article/2039064/karoshi-crisis-why-are-japanese-working-themselves-death*)

With Fintech HR technology, the above five socio-economic indicators whose daily data collected by the heads of business units or CGUs dashboards are articulated and weighted to manage the financial performance of HR in real time.

- Operating structurally, each indicator driving the others, are taken together in the weighting system.

7.1.2. - Historical benchmarks of the legal context in which the HCMA approach operates

- A context of evolution of financial statements characterized since 2002, with SOX Act by the requirement to model non-GAAP processes for processing economic capital data linked to the impact of human capital on the mitigation of operational risk losses.

The framework of Lelecorp's work is marked by the evolution of structured data from financial statements from 2005 CEBS (Committee of European Banking Supervisors or CEBS and choice XBRL (eXtensible Business Reporting Language), the computer language based on XML, generally used to describe financial data. The XBRL format which had been promoted by its creators since 1999 is now widely used worldwide. In Europe, it is used in particular for the transfer of data between banks and insurance companies and their supervisors and, in many countries, to transfer annual accounts and tax data; from 2021, the annual reports of listed companies in Europe will also be transferred to XBRL (Inline XBRL technology).

Two reporting modes for financial statements:

- BCBS mode called COREP, COmmon [prudential ratios] REPorting framework. It is the prudential regulatory reporting resulting from the Basel II and Basel III reforms in Europe which fixes the content and presentation of prudential banking reporting (solvency, leverage and liquidity).
- IFRS mode called FINREP, FINancial REPorting framework. This mode was created to complement the COREP for consolidated IFRS accounting reporting for all business sectors, including banks. It sets the content and presentation of the consolidated financial reporting within the framework of IFRS standards for more than 100 countries which adhere to IFRS standards.

Lelecorp’s work aims to process and provide non-GAAP reporting data for economic capital generated by the mitigation of operational risk losses (losses on which the human factor or human capital has a preponderant effect).

- As required by the laws in force in the context of the LCR at 100% since January 2019 and the update of July 1, 2019 of the guidance of the SEC's non-GAAP reporting, this reporting is necessary to provide stakeholders financial performance data of human capital remunerated by fixed salaries and variable salaries in order to complete the governance reports and the financial statements of banks and their risk counterparties (Insurance, industries and services, including local authorities).

**7.2. - Experimentation and global popularization**

The FinTech HR asset software system was submitted to the World Computer Audit Association (ISACA) for validation of its compliance with ISO/IEC 27001 (Information Security Management Systems, ISMS) by IT security professionals, especially IT managers.

- This followed the popularization by the World IT Audit Association with the help of the interdisciplinary expertise of academics and researchers from 2 US universities (Georgia and New Jersey) and 3 EU universities (Cambridge, Frankfurt and Malta): See ISACA Journal, USA, Vol.6, 2013 and Vol.3, 2016**.**

Experimental development tests were carried out in 2008-2010 using data from 52 companies. The results were published in Switzerland in a book edited by Peter Lang (International Academic Publisher) in banking and industry volumes under the title "After the subprime crisis, the new corporate social partnership":

- **Volume 1 - Banks**, Peter Lang, Switzerland, 2010, 356 pages: https://books.google.fr/books/about/Apr%C3%A8slacrisedessubprimeslenouveau.html?id=eBONP e9mDmkC&rediresc=y

- **Volume 2 - Industries**, Lang, Peter, Switzerland, 2009, 379 pages: *https://www.morawa.at/detail/ISBN-9783034303392/Lele-Pascal/Apr%C3%A8s-la-crise-des-subprimes--Le-nouveau-partenariat-social*

The book reports, firstly, on the theoretical framework of HCMA, and secondly, on the data processing process which initiates from the diagnosis to the planning of EC data, from annual and quarterly execution of non-GAAP reporting of economic capital data generated by the mitigation of losses linked to the 5 socio-economic indicators, factors or causes of operational risk losses. Aiming at the comparative analysis of the interaction dynamics impacting the sector financial performance

- The volume "Banks" (French Edition: 1st Edition) presents the case study of the financial performance data of the human capital of the financial sector of two international banking groups and a global insurance group;
- The volume "Industry" (French Edition: 1st Edition) presents the case study of the financial performance data of the human capital of two automotive groups (one from the European Union and one from the USA) and an automobile equipment supplier.

The Banks volume is prefaced by Professor E. Fragnière:

- Professor-researcher attached to the CRAG (Center of Applied Research in Management) of the HEG and co-founder of the training in risk management at the HEG and at HEC of the University of Geneva, Emmanuel Fragnière is also Lecturer at the School of Management from the University of Bath in England.

The industry volume is prefaced by Professor D. Bertaux, University of Brussels

**7.3. - What is found in the hcma application testing reference book?**

- The book being in French, here is an example the structure of the industry volume translated into English.

**First part**

- Qualitative data for monitoring operational performance management

**Second part**

- Accounting for OPR losses and restatement of economic profit and remuneration

1- Diagnosis of gross losses and the contribution of business lines / CGUs
1-1/ Analysis of cash flows for the past five years
1-2/ Calculation of unexpected losses
1-3/ Calculation of expected losses
1-4/ Calculation of gross loss (VaR)

1-5/ Mapping of gross losses to events and business lines (CGU)
2- Programming data for future profitability and financing costs in variable salaries (1st plan of 3 years)
2-1/ Potentially recoverable losses
2-2/ Distribution of insurance to business lines and calculation of the total quality margin
2–3/ Recovery plan for potentially recoverable losses
2-4/ Plan for variation of turnover and shared added value
2-5/ Plan for variation of regulatory capital over the period of the 1st plan
2-6- Plan for variation of the social accounts and cost of risk over the period
3- Internal practices to reduce anticipated losses in real time
3-1/ Case of a car manufacturer in the EU: annual objectives of controlling the costs of generic Oprisk Losses indicators
3-2/ Case of a US Manufacturer: annual objectives of controlling the costs of generic Oprisk Losses indicators
3-3/ Case of an automotive supplier in the EU: annual targets for controlling the costs of generic indicators
4-Variation of MPAR's annual N + 1 plan into quarterly plans
4-1/ State of the budget N + 1
4-2/ Variation of the annual N + 1 plan into quarterly cost reduction plans
4-3/ Declination of quarterly plans into monthly N + 1 objectives
5- Variation of the annual MPAR plan of N + 2 into a plan of quarterly objectives
5-1/ Budget of the annual N + 2 plan
5-2/ Variation of the annual N + 1 plan into quarterly cost reduction plans
5-3/ Declination of N + 2 quarterly plans into monthly objectives
6- Variation of the annual MPAR plan of N + 3 into a quarterly plan of objectives
6-1/ Budget of the annual N + 3 plan
6-2/ Declination of the annual N + 3 plan into quarterly cost reduction objectives
6-3/ Declination of the N + 3 quarterly plan into monthly objectives

**Third part**

- Financial Performance Measurement Dashboards (Risk Adjusted Performance or MPAR)

III-1 / N + 1: Quarterly dashboards (US automotive group / "Production" business line)
1- 1st quarter / N + 1: Dashboards of MPAR application on 5 generic indicators of losses
1-1 / Recovery of absenteeism-related losses
1-2 / Recovery of losses related to quality defects
1-3 / Recovery of losses related to accidents (Safety) at work
1-4 / Recovery of losses related to direct productivity differences
1-5 / Recovery of losses related to know-how differences
1-6 / REPORTING FINREP and COREP OF THE 1st QUARTER N + 1
2- 2nd quarter / N + 1: Dashboards of MPAR application on 5 generic loss indicators
2-1 / Recovery of absenteeism-related losses
2-2 / Recovery of losses related to quality defects
2-3 / Recovery of work-related accident (Safety) losses
2-4 / Recovery of losses linked to direct productivity differences

2-5 / Recovery of losses linked to know-how differences
2-6 / REPORTING FINREP and COREP OF THE 2nd QUARTER N + 1
3- 3rd quarter / N + 1: Dashboards of MPAR application on 5 generic loss indicators
3-1 / Recovery of absenteeism-related losses
3-2 / Recovery of losses related to quality defects
3-3 / Recovery of work-related accident (Safety) losses
3-4 / Recovery of losses linked to direct productivity differences
3-5 / Recovery of losses linked to know-how differences
3-6 / REPORTING FINREP and COREP OF THE 3rd QUARTER N + 1
4- 4th quarter / N + 1: MPAR dashboards application on 5 generic loss indicators
4-1 / Recovery of absenteeism-related losses
4-2 / Recovery of losses related to quality defects
4-3 / Recovery of losses related to accidents (Safety) at work
4-4 / Recovery of losses linked to direct productivity differences
4-5 / Recovery of losses related to know-how differences
4-6 / REPORTING FINREP and COREP OF THE 4th QUARTER N + 1
III-2 / ANNUAL SYNTHETIC REPORTING of the 3 GROUPS OF THE AUTOMOTIVE INDUSTRY
III-2-1 / Annual summary reporting N + 1 to N + 3: EU automotive group
1- Annual synthetic reporting of the EU automotive group in N + 1
1-1 / Summary of annual loss reduction performance
1-2 / Annual scorecard of generic indicators by business line
1-3 / HRM / Annual scorecard of activity line staff by generic indicator
1-4 / Annual scorecard of loss events of the initial typology by business line
1-5 / Annual efficiency ratio of business lines
1-6 / FINREP annual report (EC reporting in annex to Financial reporting)
1-7 / ANNUAL REMUNERATION: evaluation, rating and allocation of the Bonus
1-8 / Annual bulletin of the global efficiency salary or Bonus (Employee model 1 / production line)
1-9 / COREP annual report (EC reporting annexed to Common reporting)
2- Annual synthetic reporting of the EU automotive group in N + 2
2-1 / Summary of annual loss reduction performance
2-2 / Annual scorecard of generic indicators by business line
2-3 / HRM / Annual scorecard of activity line staff by generic indicator
2-4 / Annual scorecard of loss events of the initial typology by business line
2-5 / Annual efficiency ratio of business lines
2-6 / FINREP annual report (EC reporting annexed to Financial reporting)
2-7 / ANNUAL REMUNERATION: evaluation, rating and allocation of the Bonus.
2-8 / Annual bulletin of the global efficiency salary or Bonus (Employee model 1 / production line)
2-9 / COREP annual report (EC reporting annexed to Common reporting)
3- Annual synthetic reporting of the EU automotive group in N + 3
3-1 / Summary of annual loss reduction performance
3-2 / Annual scorecard of generic indicators by business line
3-3 / HRM / Annual scorecard of activity line staff by generic indicator
3-4 / Annual scorecard of loss events of the initial typology by business line

3-5 / Annual efficiency ratio of business lines
3-6 / FINREP annual report (EC reporting in annex to Financial reporting)
3-7 / ANNUAL REMUNERATION: evaluation, rating and allocation of the Bonus
3-8 / Annual bulletin of the global efficiency salary or Bonus (Employee model 1 / production line)
3-9 / COREP annual report (EC reporting annexed to Common reporting)
II-2-2 / Annual summary reporting N + 1 to N + 3: automotive group USA
1- Annual synthetic reporting of the USA automobile group in N + 1
1-1 / Summary of annual loss reduction performance
1-2 / Annual scorecard of generic indicators by business line
1-3 / HRM / Annual scorecard of activity line staff by generic indicator
1-4 / Annual scorecard of loss events of the initial typology by business line
1-5 / Annual efficiency ratio of business lines
1-6 / FINREP annual report (EC reporting in annex to Financial reporting)
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1-8 / Annual bulletin of the global efficiency salary or Bonus (Employee model 1 / production line)
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2-6 / FINREP annual report (EC reporting annexed to Financial reporting)
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2-8 / Annual bulletin of the global efficiency salary or Bonus (Employee model 1 / production line)
2-9 / COREP annual report (Common reporting)
3- Annual summary reporting of the USA automobile group in N + 3
3-1 / Summary of annual loss reduction performance
3-2 / Annual scorecard of generic indicators by business line
3-3 / HRM / Annual scorecard of activity line staff by generic indicator
3-4 / Annual scorecard of loss events of the initial typology by business line
3-5 / Annual efficiency ratio of business lines
3-6 / FINREP annual report (EC reporting in annex to Financial reporting)
3-7 / ANNUAL REMUNERATION: evaluation, rating and allocation of the Bonus
3-8 / Annual bulletin of the global efficiency salary or Bonus (Employee model 1 / production line)
3-9 / COREP annual report (EC reporting annexed to Common reporting)
III- III-2-3 / Annual summary reporting N + 1 to N + 3: EU automotive supplier
1- Annual synthetic reporting of the CEE automotive supplier group in N + 1
1-1 / Summary of annual loss reduction performance
1-2 / Annual scorecard of generic indicators by business line
1-3 / HRM / Annual scorecard of activity line staff by generic indicator

1-4 / Annual scorecard of loss events of the initial typology by business line
1-5 / Annual efficiency ratio of business lines
1-6 / FINREP annual report (EC reporting in annex to Financial reporting)
1-7 / ANNUAL REMUNERATION: evaluation, rating and allocation of the Bonus
1-8 / Annual bulletin of the global efficiency salary or Bonus (Employee model 1 / production line)
1-9 / COREP annual report (EC reporting annexed to Common reporting)
2- Annual synthetic reporting of the EU automotive equipment group in N + 2
2-1 / Summary of annual loss reduction performance
2-2 / Annual scorecard of generic indicators by business line
2-3 / HRM / Annual scorecard of activity line staff by generic indicator
2-4 / Annual scorecard of loss events of the initial typology by business line
-5 / Annual efficiency ratio of business lines
2-6 / FINREP annual report (EC reporting annexed to Financial reporting)
2-7 / ANNUAL REMUNERATION: evaluation, rating and allocation of the Bonus
2-8 / Annual bulletin of the global efficiency salary or Bonus (Employee model 1 / production line)
2-9 / COREP annual report (EC reporting annexed to Common Reporting)
3- Annual synthetic reporting of the EEC automotive supplier group in N + 3
3-1 / Summary of annual loss reduction performance
3-2 / Annual scorecard of generic indicators by business line
3-3 / HRM / Annual scorecard of activity line staff by generic indicator
3-4 / Annual scorecard of loss events of the initial typology by business line
3-5 / Annual efficiency ratio of business lines
3-6 / FINREP annual report (EC reporting in annex to Financial reporting)
3-7 / ANNUAL REMUNERATION: evaluation, rating and allocation of the Bonus
3-8 / Annual bulletin of the global efficiency salary or Bonus (Employee model 1 / production line)
3-9 / COREP annual report (EC reporting annexed to Common reporting)
Conclusion of the book / Summary table of the comparative competitiveness of the 3 industrial groups

## 8 - CONCLUSION

The financial performance process driven by every employer with an HR manager is collective. This encourages the implementation of the Executive Education program certifying the skills for cross-cutting leadership beyond Finance to provide shareholders with the Human Capital Management data that was previously lacking in Governance reports and financial reporting.

Before preparing the financial statements, there is the management of the financial performance of HR assets, which is based on the cross-cutting action interaction dynamics of organizations. It is to this action that the Interdisciplinary Business & Economics Research is invited. This is also the condition of the resilient organization under the ISO 22316: 2017 standard (Security and Resilience - Organizational Resilience).

The established University-Industry interface for HCMA certification networking on the basis of the annexed handbook is based on a research activity that has taken time (almost 20 years). Although the IT system was built, tested and validated, Lelecorp had the patience to promote popularization which supported both the Basel Committee on Banking Supervision (BCBS) and G20 legislators that the accounting approach for operational risk was possible and that the IT support problem was solved. The update of SEC guidance on non-GAAP reporting and the laws on the reporting of human capital data were then more precise and more restrictive than had been the SOX act of 2002 whose sections relating to HR and management of financial performance have not been met [sections 404 (operational risk control), 302 (Financial reports and internal controls), 409 (feedback in real time)].

The shortcomings of the qualitative model implemented for 40 years by the socio-economic trend under "Horivert" show to what extent cross-cutting or transdisciplinary expertise, combining in addition the methodological and technological capacities, experienced and validated by the scientific community and global technology is rare.

The corporate partnership combines through cross-cutting processes elements of financial stability, security, personal well-being of employees, and social stability, to also include the effects of the LCR. This is based on the feeling of belonging to a collective by which people associate their investments, i.e., knowledge, finance and labor, for income and better life prospects. This feeling is reinforced and persists if the interests and the personal expectations of all employees are satisfied or are likely to be satisfied.

Without forecasting the "Expected – Realized" for all operations, measuring the results of the HR financial performance becomes impossible. It is also that which gives HR and managers the awareness of the whole, more specifically, the PRLs and the forecast gains that improve the purchasing power of the employees while generating free cash flow which puts the business sheltered from cash flow and bankruptcy risk.

Stakeholders in the HCM accounting Problem Solving Process are as follow:The HRM, the operational management team, the employers and the CEO as "*practitioners researchers*" (This is their daily work and the priority they wish to give to their actions as indicated by the surveys of the needs).

Trainers as "*teachers researchers.*"(This includes Academic and administrative program-level deans, directors and faculties. Consultants, Financial analysts and Actuaries as "*advisers and analyst-researchers*". They use non-GAAP reporting data for Investor Relations.

The certification is based on the collaboration between the university or MBA school and a company managing the interactions of workshops performing the tasks of collecting, processing and reporting operational risk loss mitigation data based on the required Risk Appetite Threshold.

We have provided this link as a Practical takeaway the Certification Handbook Format for Networking of Action-Research certifying HCMA skills to improve strategic and organizational change within the framework of the laws in force (copy and paste on Google Chrome):

*https://drive.google.com/open?id=1Pam7iOn-LVV1l4KbVJH3VTjeiykCv0kC*

The handbook may be appropriated with its logo and copyright by each university and MBA school to issue the certificate. The certification seminar will be based on this paper.

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