

# **University-Industry Action Research Networking for Human Capital Management Accounting Leadership Beyond Finance**

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## **Abstract**

Although the Human Resources function is an eminently transversal function of corporate accounting, neither the Human Resources Management nor the other corporate functions have been trained to perform the interaction tasks of their workstation. The compartmentalization of teaching in universities and MBA programs in specialized discipline and units have not solved the problem of real-time integration of Human Resources-Finance processes.

- Putting business disciplines side by side as is normally the case in MBA programs, is not enough to create the cross-cutting interaction dynamic needed to achieve expected financial performance goals.

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

This paper presents the results of the University-Industry Interface established with a faculty member in the Accounting department of the University of San Francisco with Dr. Pascal Lélé, PhD (a seasoned leader in the FinTech industry). This research offers additional professional training to heads of management functions and operational units in order to resolve two problems facing business leadership in the context of the 100% liquidity coverage ratio in which all companies operate since January 2019 for their working capital requirement and investment financing:

- Separately process data from commercial management and financial performance management accounts.
- Providing shareholders and investors with separate plan and programming of profitability and free cash flow in return for fixed wages and variable wages

**Keywords:** ERM Accounting, Cross-Cutting Dynamics, SOX, LCR, HR

## 1. Introduction

It is considered by most economic theorists that the primary purpose of the company's management is to create value or wealth for its shareholders. This indicates that the organizational process run by the Board is collective. Human Capital Management Accounting (HCMA) is the means of organizing and providing the financial performance reports of such socio-economic systems: *“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).

This means that the solution to the problem of business financial performance and growth falls within the remit of Human Resource Management (HRM). The Human Resources (HR) function is eminently cross-cutting given the pyramidal shape of the organization chart. The transversality or cross-cutting skills 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. Additionally, appropriate firm personnel need to have the capacity to use these skills to solve problems regarding financial performance. This involves recording each personnel member's contribution, i.e., those specific interaction tasks to be performed by each management function and each operational unit or business unit, in order to act in real time, with other firm personnel, in the same direction as an organizational team, based on the appropriate Risk Appetite Threshold.

HCMA skills are the means of this accountability of the HR Manager in connection with the other business functions, in order to be able to organize, coordinate, and automate the interactions of the workstations. Additionally, the dashboard of gap analysis provides the non-GAAP reporting data expected, in light of the intent for a high ROI on fixed salaries and an increase in free cash flow expected from variable salaries on a 3-year Financial Performance Plan. We refer to the HCMA FinTech modeling tool known so far (iReporting Human Capital Accounts) which was disclosed by ISACA Journal (ISACA Journal, USA, Vol. 6, 2013 and Vol. 3, 2016):

- HCMA FinTech aligns with the logic of the International financial reporting standards (IFRS) cash flow projections: Cash flow projections should be based on reasonable and supportable assumptions, the most recent budgets and forecasts, and extrapolation for periods beyond budgeted projections. [IAS 36.33] IAS 36 presumes that budgets and forecasts should not go beyond five years.
- HCMA FinTech aligns with the IASB vision of non-GAAP Reporting (Marc Siegel, FASB Member, “For the Investor: The Use of non-GAAP Metric,” 2014 Q4).
- HCMA FinTech also complies with SEC non-GAAP reporting guidance, updated 1/07/2019.

This area of cross-cutting ERM accounting focused on HR assets or Human Capital has very few experts worldwide. Hence, the need for networking of MBA schools to share knowledge and the certification system based on action-research. The following

areas of MBA specialization lack cross-cutting dynamic competence to function as an organizational team (given the pyramid shape of the organization chart): MBA-accounting, MBA-Business Analytics, MBA-Enterprise Resource Planning, MBA-Finance, MBA-Healthcare Management, MBA-uman Resources Management, MBA-International Business and MBA- Operations Management.

## **2. IMRaD (Introduction, Methods, Results and Discussion)**

### **2.1/Methods**

This work crosses the documented research and studies of financial accounting accounts (GAAP Reporting Case) published in order to identify the data gaps in human capital accounting and additionally process this data to generate non-GAAP reporting. This paper shows the missing data that is now provided to stakeholders in order to make an investment decision taking into account the foreseeable impact of human capital on profitability, as well as free cash flow, given the total workforce and its impact on the mitigation of operational risk losses. This internal financial performance dashboard is taken by the finance function to fill the current financial accounting gaps in human resources.

### **2.2/Skill Gaps to be Filled**

Although the HR function is aware of its cross-cutting mission, neither HR managers, nor other corporate functions, are trained to perform the interaction tasks of HCMA of their workstation in order to act in real time as an organizational team based on the operational risk appetite threshold.

The compartmentalization of teaching in universities and MBA programs in disciplines and specialized units have not solved the problem of real-time integration of HR-Finance processes. Putting business disciplines side by side, as is normally the case in MBA programs, is not enough to create the cross-cutting interaction dynamic needed for firms to achieve expected financial performance goals. As a result, few graduates today have the cross-cutting or vertical skills required to act, in real time, from their workstation in accordance with the pyramid shape of the organization chart as an organization team based on the risk appetite threshold to create value.

This issue is now linked with the obligation to comply with laws which now require CEOs and Boards of directors to provide shareholders with the Human Capital Management data that was previously lacking in governance reports and financial reporting.

### **2.3/ HRM's Perspectives on Financial Management Issues**

- 69% reported that the variable portion of compensation and performance pay are 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%).

(References: ABV Group - Willis Towers Watson 2019 Survey and Gartner 2019 survey)

## **2.4/ Findings/Results**

### **2.4.1/Specific Knowledge and Skills Required For HCMA Reporting?**

Making this area of HR operational competence truly functional in the vertical cross-cutting direction, as required by the pyramidal shape of the organization chart, is an important challenge in finalizing post-crisis reforms (Basel III).

- The difficulty to overcome is that this area of responsibility of the HR function falls within the framework of action research. There are many definitions of action research. In this paper “action research” means problem solving process (PSP) in the sense of group dynamics or the dynamics of economic organizations according to the tradition dating back to Kurt Lewin (1946).

Non-GAAP reporting is the real-time feedback dashboard. It provides management accounting accounts for the interaction of workstations through gap analysis. It indicates the variable remuneration paid each quarter in return for the result obtained as free cash flow.

- Transparency and traceability are essential conditions for the audit of non-GAAP reporting by financial analysts for the HR efficiency lines and financial ratios provided for in the income statements to inform the public as well as shareholders and investors of the dynamics of human capital of a firm and the variability of the impact on its financial performance.

It is non-GAAP reporting that measures the quality of management, explains and justifies the compensation of both managers and their employees, therefore the compensation of the total workforce.

### **2.4.2/ How Does the Human Capital Organization Team Achieve Financial Performance Based on the Mitigation of Operational Risk Losses?**

Three elements provide the answer:

- One observation: the cart before the horse;
- The arithmetic of operational management and
- The modeling of the financial performance of human capital.

### **A/ The Cart Before the Horse: A Mistake that is at the Root of the Last Financial Crisis**

As is known, the Monte Carlo Simulation privileged the UL-based simulation of market risk, without solving the problem of operational risk. Estimating Variable at Risk (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:

- Expected Loss (EL); Unexpected Loss (UL); VaR or Economic Capital (EC); where EC is defined as the 99.95% (VaR – EL) for banks and 95.5 % for insurance and risk counterparties under own risk and solvency assessment (ORSA). ORSA operational declination makes it a key strategic tool that must be comprehended by the organization as a tool for steering the activity according to the risks. This means that insurance risk counterparty companies must align their risk appetite threshold with that of the insurer (95.5%).

### **B/HCM Accounting Calculation Upstream of Stochastic Calculations**

Companies don't just passively record market results (profit and loss) without reacting to improve their future financial performance. The difficulty so far has been to show their shareholders and investors how they will do so. Usually the first response is to reduce the payroll.

- This section shows how to use the HCMA process based on emerging technologies, in order to take an extraordinary advantage in terms of competitiveness and programmed growth over what some have called “secret weapon” (HR should not be a “support function” but a “driving force”: D. Blomstrom, 2019).

The accounting management 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) 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.

Coordination of cross-cutting interactions of HCMA, by the HR manager, with the support of the University-Industry Research-Action interface, for the PSP linking in real time, on the basis of the Risk Appetite Threshold, the HR Functions, Finances, and OM to the Operational Units, is the means of planning and programming the financial performance objectives of fixed salaries and variable salaries, remunerating shareholders and strengthening EC, thus protecting the company from financial crises and bankruptcies.

The accounting process which takes over from the history of published financial accounting reports (sales, expenditures, and operational profit accounts) and the risk register (internal incident or malfunction database) in order to process financial performance data variable wages and provide the non-GAPP results to be taken into account by the stochastic calculation tools to reduce their margin of error was highlighted in 2013 and 2016 by a group of researchers and academics (ISACA Journal, USA, Vol.6, 2013 and Vol.3, 2016):

- 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.

### **C/ Planning of the Annual HR Financial Performance Dynamics Over a 3-Year Cycle**

Financial performance based on action research by peer-to-peer learning, through means of mitigating operational risk losses linked to socioeconomic indicators (factors or causes of these losses), is a gradual process programmed over three years:

- In the 1st year, the organizational team (total workforce or HC) will be able to invest efforts corresponding only to a loss mitigation performance OpRisk at 30% of the total PRLs (this is the employee awareness phase).
- The 2nd year the organizational team will be able to invest efforts corresponding to an OpRisk loss mitigation performance at 60% of the total PRLs (this is the deepening phase).
- In the 3rd year, the organizational team will be able to invest efforts corresponding to an OpRisk loss mitigation performance at 100% of the total PRLs (this is the optimal financial performance phase of cost savings or total quality).

This financial performance programming cycle based on variable wages will be the same every year due to the arrival of new employees, departures and the effect of Peter's impasse (everyone tends to go higher level of incompetence). It is the human equivalent of Impairment of Assets, i.e., gradual decline in cognition. The Federal Reserve Board has published an interesting study on the subject: see "Dementia Risk and Financial Decision Making by Older Households: The Impact of Information," September 20, 2013).

#### **2.4.3/ 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).

#### **A/Theoretical Basis for Employees Mobilization and Commitment**

The distribution of the PRLs at 33%/67% is based on the 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 himself. Attitude is the

mental structure which refers to our position, our evaluation with regard to 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. Festinger (1957) coined the expression “cognitive dissonance.” This means 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.”

### **B/Effect in Aligning Everyone in the Organization to Work for the Same Goal**

Experiences in social psychology labs referring to 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 (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 reward 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 to 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 their 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 her or 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).

#### 2.4.4/Missing HCM Accounts to be provided for Corporate Reporting Compliance

##### Bank case:

Non-GAAP financial performance accounts processed by the HCM accounting **taking over from the history of published financial reports and risk register:**

- This is internal database installed by large accounts under Basel II. SMEs that do not have such an OpRisk UL incident database estimate their forward-looking management data by simulation based on socio-economic indicators.

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 <u>per employee</u> 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:**

Non-GAAP financial performance accounts processed by the HCM accounting **taking over from the history of published financial reports and risk register:**

- This is internal database installed by large accounts under Basel II. SMEs that do not have such an OpRisk UL incident database estimate their forward-looking management data by simulation based on socio-economic indicators.

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 <u>per employee</u> 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:**

Non-GAAP financial performance accounts processed by the HCM accounting **taking over from the history of published financial reports and risk register:**

- This is internal database installed by large accounts under Basel II. SMEs that do not have such an OpRisk UL incident database estimate their forward-looking management data by simulation based on socio-economic indicators.

1	Current average workforce (a)				188,654
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

**2.4.5/ MBA Networking Learning Goals and Outcomes**

- Organizing the HCMA training processes and non-GAAP data processing interactions.
- Taking charge of Educational material (Handbook format with training tools)
- Issuing the Certificate in Corporate Finance Focused on Human Resources Assets (CFFHRA)

**A/ Training Process**

(a) Seminars to acquire basis concepts of Cross-Cutting ERM Accounting (ERMA): organizational team knowledge for financial objectives based on the risk appetite threshold.

(b) Workshops based on the problem-solving process:

- Senior Management workshop: processing HR decision making data to implement a remuneration forward looking policy that contributes to the company's business strategy and long-term interests and sustainability and explains how it does so.
- Finance Function Workshop: calculations for anticipating and mitigating operating losses and executing financial planning based on expected losses taking into account the risk appetite threshold.
- HR function workshop: learn how to carry out surveys of anticipation of the deterioration of the social situation to provide motivation data and mobilization

of employees and learn how to conduct surveys measuring employees' satisfaction and psychosocial risks.

- Workshop for OM and Operational Unit Heads: learn how to organize the capture of daily incidents related to indicators, factors or causes of operational risk loss.

### **B/ Certification Process**

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.

The Certificate is issued to the members of the Internal Team on the basis of:

- The summary of the seminar provided by each of the trainees and
- The free cash flow reporting of the 1st quarter:
  - A letter or e-mail from the HRD confirms the contribution of the trainees to the reporting without sending it to the program coordinator.

### **C/ Impact on Academics Research and Publications**

Students and researchers can now use the data on corporate financial performance (Operational Risk Loss Mitigation) which was not available until now.

- (a) MBA and EMBA students have elements for a dissertation (monograph) reporting on the contribution experience of their business unit to the achievement of the transversal objectives of a company.
- (b) Researchers, including PhD students as well as academics, can report on PSP research-action research and conduct financial performance studies of a company or group of companies (comparative studies) at the local, national and international level.

## **3. Conclusion**

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 (knowledge, finance and labor) for income and better life prospects. This feeling is reinforced and persists as long as 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 other 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.

- HCMA's reference pattern on Fintech IT directed Investor Relationship Management (“iReporting HCM Accounts”) is the IFRS (more than 100 countries use IFRS). Many US GAAP topics are comparable to it (See RSM, 2020: U.S. GAAP vs. IFRS comparisons series). HCMA on “iReporting HCM Accounts” adapts and integrates the approach recommended by IAS 36 -

Impairment of Assets: Impairment loss, Carrying amount, Fair value, Identifying an asset that may be impaired, Indications of impairment, External sources (the forward-looking approach begins with the analysis of published income statements, especially on the stock market), Internal sources (Corporate functions, business units, Risks register, Socio-economic indicators), Determining recoverable amount (Potential Recoverable Loss), Value in use (Cash flow projections and reporting of periodic results in free cash flow).

Without changing anything in the structure of management programs, the Certificate in Corporate Finance Focused on Human Resources Assets complements the existing certifications programs by the transversal dimension currently lacking. This is the case of the relationships of this certificate with:

- HR certificates and HR tools, notably the Rutgers University's program run by Dave Ferio and support software such as HR Costing.com as.
- Professional graduate certificates in Corporate Finance designed for professionals currently working in the financial services industry or who are responsible for making financial decisions:
  - the Harvard Extension Corporate Finance Certificate for the foundational knowledge and tools needed for corporate financial analysis and decision making;
  - the Columbia Corporate Finance Certificate to make sound financial and investment decisions,
  - the International Certificate in Corporate Finance issue by HEC Paris, etc. (See the listing of 20 best graduate certificates in financial management online for 2019 in Best College Reviews).

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