

Reforming accounting to support the shift towards a sustainable financial system

Nihel Chabrak

*College of Business and Economics, United Arab Emirates University,
Al-Ain, United Arab Emirates*

Abstract

Purpose – Considering the growing importance of finance in shaping corporate and human activities, the purpose of this paper is to focus on the United Nations Environment Programme (UNEP) Inquiry into the Design of a Sustainable Financial System that aims to align the financial system with sustainable development, with a focus on environmental aspects. Following the inquiry call for better disclosure approaches of material information on the “sustainability impacts” of the financial system as one of the areas of improvement to move toward a sustainable financial system, the author argues for a reform of the accounting model to better reflect the compliance of businesses with “quality of growth” imperatives.

Design/methodology/approach – The paper rests on the entity theory of Littleton (1934).

Findings – The new accounting model requires creating a new equity capital account for the entity that is separate from the shareholders equity account. Valuation as well as other related issues on the functioning of this account is briefly explored in the paper. The reform also requires entrusting the responsibility of answering questions related to valuation, capital maintenance and income distribution to the board of directors that should be composed of representatives of the different capitals which have accrued, temporarily or indefinitely, to the business firm.

Research limitations/implications – This paper calls researchers to explore the theoretical avenues proposed in the paper to develop the model in practice.

Practical implications – The implementation of this reform requires a regulatory reform and the redesign of the economic coordination mechanisms which could be challenging in practice.

Social implications – The accounting model proposed in the paper contributes to a new quality of growth, which is a growth based on well-being and inclusiveness.

Originality/value – The paper draws on the UNEP framework, which has not been investigated in other research studies.

Keywords Accounting, Entity, Financial system, Littleton, Quality of growth, UNEP inquiry

Paper type Viewpoint

Introduction

Quality of life is about access for girls and boys to education, and to jobs when they graduate. It is about access for the rural poor to basic medicine when they go to their village clinic. It is about the cleanliness of the air and water and about protecting the precious biodiversity. It is about the dignity the poor might enjoy and the security of their lives. It is about the participation of people along with reformers in the government in implementing an anticorruption program. It is about fighting the vested interests of an economic elite that unduly influences, or even purchases, the policies, regulations, and laws of the state. (James Wolfensohn, President of the World Bank Group, 2000)

Many researchers have contested today’s growth model for not being able to fulfill citizen aspirations and for having accentuated the environmental crisis and human inequalities (Stiglitz *et al.*, 2009). According to the United Nations Environment Programme



(UNEP, 2015b) inquiry, there is growing consensus that the current global economic growth trajectory is unsustainable in the sense that it is contributing to increasing inequality (social and economic exclusion) and that it is happening with disregard for planetary boundaries. Measures of natural capital have declined in 116 out of 140 countries, and at current rates, these trends are expected to further erode global natural wealth by over 10 percent by 2030, causing considerable human harm, threatening development models and damaging irreversibly, in some instances, vital life support systems (UNEP, 2015a). According to Steffen *et al.* (2015), four out of nine “planetary boundaries” have been crossed: climate change, loss of biosphere integrity, land-system change and altered biogeochemical cycles. In 2011, an international team of researchers from Berkley University verified the estimates of wild species extinctions. By integrating current data with paleontological data, they concluded that the sixth mass extinction is upon us (Barnosky *et al.*, 2011). A few years later, in 2014, another influential study by a group of researchers from Stanford University confirmed that the sixth mass extinction is beginning (Dirzo *et al.*, 2014). Humans are the cause, yet they remain almost completely indifferent to it. On the other hand, and as highlighted by Thomas Piketty (2014), western economies led by the USA have been drifting back into levels of inequality not witnessed since the nineteenth century. The deterioration of natural capital and the accentuation of the social divide became symptoms of a global disorder, which makes it more acceptable the conjecture that the growth regime must be overhauled in the direction of “quality of growth,” which is based on the sustainability of conditions for inclusiveness and well-being.

Achieving sustainable development requires action in the real economy and beyond. According to the UNEP (2015b) inquiry, not only the economy needs to be reoriented toward a more environmentally and socially sustainable growth path, but also substantial new investment should be mobilized toward this end. In the *Care for Creation: A Call for Ecological Conversion* (2016), Pope Francis said: “Finance overwhelms the real economy. The lessons of the global financial crisis have not been assimilated, and we are learning all too slowly the lessons of environmental deterioration.” In this paper, I focus on the role of the financial system in helping the achievement of sustainable development and “quality of growth.”

The boundaries of the financial system are not easy to determine. The financial system has evolved into a network of channels and vehicles to intermediate between savers and borrowers, to enable people to share risks, and to deliver a return to owners of capital as well as a profit to intermediaries (UNEP, 2014). It includes banks, securities markets, pension and mutual funds, insurers, market infrastructures, central banks, as well as regulatory and supervisory authorities (IMF, 2014), which together account for the bulk of the estimated \$273 trillion of financial assets (Group of Thirty, 2013). However, when considering the financial system, we should not neglect the increasingly financialized real economy and hundreds of millions of individuals that have become traders in today’s sprawling financial system (UNEP, 2014). Because of its size and its growing importance in shaping corporate and human activities, it is crucial to examine the externalities and the public goods that are at stake in the design and operation of the financial system.

Established in 2014, UNEP (2015a) Inquiry into the Design of a Sustainable Financial System is concerned with aligning the financial system with sustainable development, with a focus on environmental aspects. The inquiry aims advancing policy options to improve the financial system’s effectiveness in mobilizing capital for sustainable development. It focuses on financial and monetary policies and financial regulations, as well as standards, including credit ratings, stock exchange listing requirements and indices and also on disclosure requirements.

Since accounting is the language (Amernic and Craig, 2004) of measurement (Tinker, 1980), it plays an important role in helping financial agents take informed decisions. The paper echoes the UNEP inquiry call for better disclosure approaches of material information

on the “sustainability impacts” of the financial system, which will help direct investment toward sustainable activities and assets. It will also result in better adjustments of returns to the owners of financial capital to the environmental and social risks and in higher resilience of the financial system.

The traditional accounting model accepts surplus extraction through hidden processes of natural and human capitals depletion and exploitation. Following Atkins *et al.* (2015) call to allow the possibilities of a sustainable world to be explored without the restrictions of existing political, economic and social structures, this paper argues for a reform of the accounting model to give businesses and financial agents clear incitement to temper their relentless pursuit of SVM and to reciprocate by contributing a proportionate share to the collective survival enterprise in return for the benefits they receive (Corning, 2012).

This reform would help financial agents discover the way they perceived and understood their role and open up for them new opportunities to create material prosperity to all without creating unacceptable levels of inequality, and without crossing the ecological boundaries that might endanger the security and well-being of future generations. The proposed accounting model provides measures of a new type of performance that is less focused on simply increasing the production of economic/financial outcome but rather linked to conditions to produce people’s well-being and its sustainability.

The paper is structured as follows: in the first section, I present the UNEP inquiry into the design of the sustainable financial system we need. I start by explaining the concept of sustainable development according to the UNEP and how it resonates with the concepts of “quality of growth” (World Bank, 2000), “quality of life” (Stiglitz *et al.*, 2009) and sustainability in the UN inclusive wealth framework (UNU-IHDP and UNEP, 2012, 2014). Then, I exhibit the definition and purpose of a sustainable financial system according to the UNEP inquiry, and explain why this shift is needed considering the enormous costs and risks on society, and the planet imposed by the dominant view of the purpose of financial agents. Finally, I present how important according to the UNEP inquiry is to come up with improved disclosure of material information on sustainability performance to direct investment toward sustainable activities and assets. I recall the multiple initiatives by the international community, professionals and academicians to produce stand-alone or integrated reports. Considering the purpose of a sustainable financial system that is to bring “quality of growth,” I argue for the need to produce a new set of information that supports the shift toward a sustainable financial system. In the second section, I start explaining the need for new measures of a new performance, which reflects “quality of growth” imperatives. Then, I expose the limits of the traditional accounting model that allows transforming social and environmental externalities into profits levied by the owners of financial capital, and how it consecrates the role of the corporation as instrument to maximize shareholders’ wealth. Afterward, I explain the entity view of accounting, its rationale and the major conceptual reform to help businesses focus on their economic/financial success without crossing environmental boundaries and unacceptable levels of inequality. Finally, I explain the need for an inclusive governance to support this reform.

The sustainable financial system we need: lessons from the UNEP inquiry

According to the inquiry (2015), sustainable development means wealth creation that supports inclusive development while protecting and restoring natural assets. The UNEP definition of sustainable development is aligned with the definition of “quality of growth.” According to Mlachila *et al.* (2014), good quality growth is one that is strong, stable, sustainable, increases productivity and leads to socially desirable outcomes, such as improved standards of living and poverty alleviation. For the World Bank (2000), “quality of growth” is a development that is about people and their well-being, which involves their

ability to shape their lives. It is also a development that is inclusive of future generations and the Earth they will inherit. This notion of development as well-being means that measures of development must include not only rates of growth, but also the dispersion, composition and sustainability of that growth.

The UNEP (2012, 2014) definition of sustainable development is also aligned with the definition of sustainability introduced in the UN's recent reports about inclusive wealth in continuity of the World Bank report (2006) on the wealth of nations. Sustainability is linked to inclusiveness that requires institutions to play an active role in shaping interrelationships between people, to allow them transform the resources they have into capabilities to make achievements they value in their life. Sustainability is also linked to well-being or "quality of life," which according to Stiglitz *et al.* (2009) has to do with both economic resources, such as income, and with non-economic aspects of peoples' life (what they do and what they can do, how they feel, and the natural environment they live in). To sustain the levels of current well-being over time, stocks of capital that matter for our lives (natural, physical, human and social) should be maintained and this productive base needs to be passed on to future generations to continue producing the same level of well-being (UNU-IHDP and UNEP, 2012).

According to the UNEP (2015a, b, c) inquiry, sustainable development requires changes in the deployment and relative value of financial assets and their relationship to the creation, stewardship and productivity of real wealth. "The purpose of a sustainable financial system might be defined as one that effectively and efficiently finances a sustainable real economy; that is, one that brings material prosperity to all, does not create unacceptable levels of inequality, and operates within ecological boundaries that do not endanger the security and well-being of future generations" (UNEP, 2014, p. 7). "A sustainable financial system is, therefore, one that creates, values, and transacts financial assets, in ways that shape real wealth to serve the long-term needs of an inclusive, environmentally sustainable economy" (UNEP, 2015a, p. 13). A sustainable financial system is one that is not only stable and resilient but also the one that effectively mobilizes the allocation of capital toward a sustainable economy (UNEP, 2015b). It is a system with less "sustainability impacts," which requires achieving in a timely period an accelerated stranding of assets with negative sustainability impacts, and an enhanced valuation of assets delivering zero or positive sustainability impacts. At the same time, the financial system should be sustainable in the face of exogenous shocks induced by the previous factors. This requires higher resilience to sustainability risks by considering appropriate adjustment of financial capital owners' returns to the environmental and social risks (UNEP, 2014) and creating adequate reserves of capital (UNEP, 2015a).

Yet, the dominant view of the purpose or role of financial agents holds that they should always adopt the practices which further their economic bottom line as effectively as possible, which means they should strive to maximize shareholder wealth, since this will contribute to market efficiency and thereby to general societal well-being. This dominant view is rooted in neo-classical economic theory that perceives markets as the result of rational behavior by self-interested agents maximizing their utility (UNEP, 2015c). However, the recent financial crisis demonstrated how profit-maximizing firms in unregulated markets impose extreme and detrimental risks on both the financial system itself and society at large. In fact, the crisis was due to excessive lending to subprime borrowers, massive trade with obscure financial innovations, such as CDOs, and a general lack of adequate capital reserves to cover the very high levels of systemic risk. If these practices could be considered as rational on the individual level since they have led to profit-maximization by individual agents, they have had catastrophic effects on the collective level (UNEP, 2015c). The dominant view of the purpose of financial agents has imposed enormous costs and risks on society because there is often a disconnection, or even a direct conflict, between what maximizes the profits of financial agents and what is best for the society.

There is growing evidence on the role of finance in the deterioration of natural capital and the accentuation of the social divide. According to UNEP (2014), today's financial system is failing the sustainability test. According to the WEF (2014), despite negative real interest rates in many OECD countries, the gap in financing the needed infrastructure approximates \$1 trillion a year. McKinsey/IFC (2010) estimated a financing gap of \$3.5 trillion to fulfill the SMEs needs. The UN Intergovernmental Committee of Experts on Sustainable Development Financing has estimated the financial resources needed to deliver on the forthcoming set of Sustainable Development Goals. They conclude that while global public and private savings are sufficient, current financing and investment patterns will not deliver investment where it is needed (ICESDF, 2014). According to the UNCTAD (2014), there is \$5–7 trillion annual investment gap to finance the Sustainable Development Goals, including \$2.5 trillion in developing countries. COP 21 Paris agreements require making finance flows consistent with a pathway toward low greenhouse gas emissions and climate-resilient development (http://unfccc.int/paris_agreement/items/9485.php). Quoting the International Energy Agency, the UNEP (2015a) estimated that over the period to 2035, the investment required each year to supply the world's energy and energy efficiency needs will rise toward \$2.5 trillion a year, up from \$1.7 trillion in 2013. In 2011, the Intergovernmental Panel on Climate Change estimates the increase in global investment in low-carbon energy to reach \$1.1 trillion per year between 2010 and 2019, while \$150bn will be needed each year after 2025 to adapt to climate impacts in developing countries alone. At the same time, investment needs to be redirected away from the most polluting and environmentally unsustainable activities. For instance, about \$5.7 trillion reductions in investment in fossil fuel extraction and power generation are needed between 2015 and 2030 (UNEP, 2015a). Finally, many assets should be stranded if environmental risk factors are to be considered.

An improved disclosure of sustainability performance is considered crucial by the inquiry to enhance market practices and to direct investment toward sustainable assets and activities. In fact, functioning well means that equity markets should ensure allocation of capital to its most productive (ideally, sustainable) use, while companies that are listed on exchanges are required to comply with certain standards and to disclose information about their performance on an ongoing basis (UNEP, 2015b). To allow markets to allocate capital not only on the basis of expected company performance and consequent expected returns for shareholders, but also on value judgments about social or environmental performance, the inquiry has acknowledged many international innovative reporting and assessment initiatives aiming to improve sustainability performance disclosure, such as the Principles for Responsible Investment (PRI) and the Sustainable Stock Exchanges Initiative (SSEI).

Backed by the United Nations, The PRI “works to understand the investment implications of environmental, social and governance (ESG) factors and to support its international network of investor signatories in incorporating these factors into their investment and ownership decisions” (www.unpri.org/about). Organized by the UNCTAD, the UN Global Compact, the UN Environment Program Finance Initiative and the PRI, the SSEI “is a peer-to-peer learning platform for exploring how exchanges, in collaboration with investors, regulators, and companies, can enhance corporate transparency – and ultimately performance – on ESG (environmental, social and corporate governance) issues and encourage sustainable investment” (www.sseinitiative.org/about/).

Despite these progressive initiatives, the inquiry regrets that sustainability performance disclosure approaches have proved to be complex and elusive for the existence of multiple provisions that directly or indirectly affect the reporting of complementary information, such as environmental and social requirements and for the lack of reporting guidance on material issues, such as the impact of natural disasters or the potential for asset stranding in high carbon sectors (UNEP, 2015a).

Many reporting approaches have been developed to report on the interaction with the natural and social environments (Chabrak, 2015). Social and environmental reporting came first through the statutory financial statements. However, according to Gray and Bebbington (2001), since financial statements are primarily an economic construct within which environmental and social issues will always be subservient, in accordance with guidelines published by academics, consultants, professional bodies and NGOs, environmental and social information started to be disclosed in voluntary stand-alone reports. Among the initiatives that supported this new form of reporting, the UNEP/SustainAbility “Engaging Stakeholders Project” initiated in 1998, the Global Reporting Initiative’s sustainability reporting guidelines, initiated in 1997 by the US non-profit organizations the Coalition for Environmentally Responsible Economies and the Tellus Institute with the support of the UNEP and the UN’s Global Compact, initiated in 1999.

Even if they do not make the environmental and social issues submissive to the neo-classical economic rationale of financial statements (Gray and Bebbington, 2001; Tregidga and Milne, 2006; Spence and Gray, 2008; Milne and Gray, 2013), the stand-alone reports were criticized for not having been able to promote sustainable business practices (Burritt and Schaltegger, 2010; Milne and Gray, 2013) and for having allowed organizations to resist substantive changes (Tregidga *et al.*, 2014), either for their limit in scope or for being disingenuous by consisting largely of spurious claims and unmet commitments or for being used for legitimacy purposes and to secure private interests (Cho *et al.*, 2015) or for making challenging any understanding to what extent an organization’s economic success has been undertaken at the cost of the natural environment and society (Gray and Bebbington, 2001). The limit of this approach could also be explained by its focus on disaggregated data and efficiency measures (Gray and Milne, 2002; Spence, 2009).

As a result, new initiatives developed to advance and align the global mainstream corporate reporting model to equate natural capital with financial capital, such as the Climate Disclosure Standards Board (CDSB), which is an international consortium of business and environmental NGOs that was catalyzed by the World Economic Forum in response to a concern of climate reporting not fully actionable for investors, trustees, directors and managers because of the absence of comparable and comprehensive information that could help them assess the implications for shareholder value of climate-related risks to physical assets and resource inputs or of changes in technology and regulation (www.cdsb.net/our-story). Built on the most widely used reporting approaches, such as CDP, GRI, SASB and IFRS, the CDSB framework supports compliance with regulatory reporting requirements with current and emerging requirements for environmental reporting (e.g. the EU Non-Financial Reporting Directive).

Another initiative by the Sustainability Accounting Standards Board (SASB) foundation established in 2017 is the sustainability accounting standards issued to help public corporations disclose material, decision-useful information to investors in mandatory filings. It has a conceptual framework that provides overview of sustainability accounting, describing its objectives and audience, and explains the framework, which illustrates how the various concepts contained relate to the SASB’s Standards-setting work (www.sasb.org).

Integrating both financial and non-financial reporting is another important initiative. The integrated reporting framework championed by the International Integrated Reporting Committee came to be seen as a solution (Chabrak, 2015). It is an initiative to communicate “about how an organization’s strategy, governance, performance and prospects, in the context of its external environment, lead to the creation of value over the short, medium and long term” (The International Integrated Reporting Council, 2013, p. 7). Although it might enable businesses to bring these elements together through the concept of “connectivity of information,” to best tell an organization’s value creation story, which might lead to increased transparency and accountability on social and environmental impact of business

practices, it is unlikely that this integrated approach on sustainability reporting could effectively incentivize businesses to create the desired social values for sustainability goals and might suffer from potential greenwash as stressed by Burritt and Schaltegger (2010). What would be the impact of revealed environmental and social damages due to increases in shareholder wealth when this is exactly what the corporate purpose is and when the organization performance is framed in that terms and management is rewarded for such an increase? Would these blemishes be seen as unpleasant or unwanted when the viewers are not the representatives of what was damaged (Burritt and Schaltegger, 2010)?

According to the inquiry, the purpose of a sustainable financial system is to bring “quality of growth” that increases material prosperity without having social and environmental cost for the present and future generations. To support the sustainable financial system we need, a new set of information should be produced. It is not simply a matter of improving transparency by disclosing more sustainability information. Although companies that are transparent on sustainability issues might be doing a better job, managing them as public disclosure catalyzes more systematic strategic planning and proactive management of sustainability challenges (UNEP, 2015b) even though this finding has been challenged by many researchers (Tregidga *et al.*, 2014; Cho *et al.*, 2015). To ensure a real corporate behavior change, it is important to release the pressure company managers feel as meeting analyst and investor earnings’ estimates would bring them to sacrifice long-term value creation (Graham *et al.*, 2006). As highlighted by the UNEP (2015b) inquiry, markets recognize sustainability considerations through attaching a number (price) to their expected financial impact. In fact, markets reward firms (through higher share prices and lower cost of capital) only for profit. Any environmental, social or governance impact will be ignored unless it is likely to impact future profitability. So, what we need in terms of accounting and financial reporting is more than an enhanced understanding of corporate socio-environmental interactions through a separate or an integrated set of accounts, accounting should inform on a new concept of performance that reflects “quality of growth.” It should also uncover to what extent economic/ financial success have been undertaken at the cost of the natural environment and society and should allow the possibility to reverse it.

Accounting for sustainability: the entity approach

Stiglitz *et al.* (2009) raised the issue of the adequacy of current measures of economic performance to report on well-being and its sustainability: “it has long been clear that GDP is an inadequate metric to gauge wellbeing over time particularly in its economic, environmental, and social dimensions, some aspects of which are often referred to as sustainability” (p. 8). The authors of the report think that when statistics do not capture important phenomena, which have an increasing impact on the well-being of citizens, the measurements which are in that case flawed may lead to distorted decisions “those attempting to guide the economy and our societies are like pilots trying to steering a course without a reliable compass” (p. 9). Talking about the financial crisis, the report considers, as one of the reasons why the crisis took many by surprise, the measurement system and the statistics market participants and government officials were focusing on: “neither the private nor the public accounting systems were able to deliver an early warning, and did not alert us that the seemingly bright growth performance of the world economy between 2004 and 2007 may have been achieved at the expense of future growth. It is also clear that some of the performance was a ‘mirage’, profits that were based on prices that had been inflated by a bubble” (p. 9).

Since what is needed today is not simply any kind of growth, but “quality of growth” and “quality of life,” which requires preserving the full range of factors that make life worth living, including those that are not traded in markets and not captured by monetary measures, we need a plurality of indicators to assess subjective well-being, objective

conditions, opportunities people have and inequalities in human conditions (Stiglitz *et al.*, 2009). We also need a new private accounting system that reflects progress in achieving “quality of growth.”

The reform I propose in this paper resonates with the scientific evidence pointing to the serious ecological crisis and secular stagnation, which is obscured by traditional accounting theory and practices. Traditional accounting contributes to making us perceive costlier, the most effective initiatives in terms of social and environmental value. Therefore, financial agents that aim to maximize profits just have too little to gain from caring about such initiatives. In the traditional accounting model, expense reflects costs and debts, which are direct reduction of the owners’ invested wealth, while any residual income constitutes a direct increase of the proprietary wealth. By doing so, the traditional accounting model consecrates the role of the corporation as solely to create shareholders’ wealth, which allows transforming negative externalities on the social or natural environments into profits levied by investors and perpetuates a structural struggle between the few (shareholders) and all the others (stakeholders) instead of promoting trust and cooperation.

Accounting measurement of corporate performance (income) should reflect the business contribution to social value creation, which considers all the impacted stakeholders (relevant parties) interests. It should make visible and easy to assess the various managerial attitudes and corporate behaviors as well as their social and environmental impact to make a reasoned choice that is aligned with “quality of growth” imperatives. Of course, this cannot be achieved only through adding net externalities to the expenses as it does not clarify how they are valued, against which liability account they are recorded and through which mechanism businesses are forced to contribute effectively to the maintenance of human and natural capitals. According to Paton (1922), bookkeeping texts are saturated with the proprietary viewpoint as the disclosure of proprietor’s capital was the main accounting task, although accounting technique had developed to meet corporate needs. For Paton (1922), the corporation is a distinct entity and personality. As such, the corporation is functionally separate from its owners and creditors. Instead of the dominant proprietary view on corporate reporting (Biondi, 2012), the proposed accounting model espouses the entity theory of accounting (Littleton, 1934) to make businesses perceive their quintessential reason to exist beyond the prevalent extractive SVM purpose.

The corporation is legally distinct from its owners and managers. In fact, according to the corporate law, when owners fill articles of incorporation, a new legal person that is totally separate from its shareholders is born (Blair and Stout, 1999). For Lang and Littleton (1935), “the corporation is an important institution of modern society, created it is true by law, and having no personality separate from those who supply its capital or carry out its avowed purposes. But it is hardly a fiction. Just as a family is more than the sum of its several members, and a home is more than a house, so a corporation is more than a mere aggregate of associated members. It is because it is something more that we may say with truth that the corporation is an entity” (p. 414).

For Paton (1922), capital is the sum of property active in the business, whether contributed by owners or creditors. Therefore, the right side of the balance sheet represents equities in assets and the left side represents assets’ market values. Both assets and liabilities are those of the entity, which reports to its shareholders and creditors like any trustee who might account for his stewardship or resources entrusted to him. For Littleton (1934), the liability side of the balance sheet comprises different kinds of liabilities, including those provided by shareholders: “those who supply the capital for modern corporations are not to be classified, as was the case long ago for single enterprises, into creditors and owners each with its different legal status. They are all suppliers of capital and they are all claimants against earnings and residual assets according to the terms of their respective contracts. They have more common than antagonistic interests” (p. 147). For Schumpeter (1926), the capital of a firm

is as much a liability as all the other debts. The role of all is to provide means of production. That is why, it is called “capital,” the total of all the items on the liability side. In such a perspective, “entity theory moves the accounting basis from the balance sheet as a collection of properties, obligations and claims, towards financial and economic flows, which are expected to be more useful and reliable to grasp the inner congeries of enterprise groups over time” (Biondi, 2012; p. 9).

For Biondi (2012), the rationale behind the entity model is related to the idea that “the business firm is active and productive, but is so because it is managed and organized, not because it is ‘owned.’ Its business income generation depends, not on wealth of resources passively held (or claims on that wealth actively traded), but on the managed system dealing with the flow of interaction and coordination involved: that is, on dynamics and process. Stop the dynamics, and the income generation disappears” (p. 7). Therefore, any business needs to preserve all forms of capitals – financial, human, social and natural capitals for its going concern. As explained by Lang and Littleton (1935), “if the corporation is an entity, then neither it nor its assets can be completely identified with either a part (common stockholders) or the whole (all security holders) of its constituent membership. The corporation is more than an expanded proprietorship owing debts to its bondholders [...] it would be sounder to see in the corporation a social instrument which serves all who supply it with capital, labor, or sales” (p. 414).

Because Paton (1922) considered that both creditors and stockholders have similar status as equity holders, and that financial statements should be directed impartially to them, the accounting reform I propose requires creating a new equity account for the entity that would contain three sub accounts for the financial, human and natural capitals, which have accrued, temporarily or indefinitely, to the business firm. Shareholders equity account is only a sub account and should be separated from the entity equity account. Shareholders’ equity contains all the residual interests accrued to shareholders and account for their outstanding claims against the business firm.

The recognition of these forms of capitals is conditioned by the possibility of their valuation. Academicians and international organizations were not able to solve the problem of valuation for the absence of market prices for various forms of human and natural services and for the difficulty in determining their marginal social value, which depends on the extent of non-substitutability between the various components of social wealth (Stiglitz *et al.*, 2009). To overcome the valuation challenge, following Rambaud and Richard (2015), I propose that the reformed accounting model focuses on answering the following question: how much does it cost a business to conserve the various capitals to ensure workability and continue operating as a going concern?

I argued for a valuation to be determined consensually in the board of directors composed of stakeholders (relevant parties) who are the spokespersons of the different forms of capital. To facilitate the valuation process, the spokespersons might refer to information on stocks availability and substitutability conditions prepared by international, regional and national agencies and experts from civil society. When the non-substitutability is absolute, the social value of a corresponding stock of capital may go to infinity, because its availability has reached the minimum under which the ecosystem would collapse altogether. Then, the reconstitution of the stock is entirely in the hand of public policy acting under normative target, interdiction of further degradation and reinvesting with public financing.

Besides creating the new equity capital account, the reform I propose suggests extending Paton (1922) call for a more economic concept of profit measurement considering the entity theory and consequently shareholders’ funds are to be remunerated in the same way the other forms of capitals are so. For Paton (1922), revenues and expenses are not simply increases or decreases in stockholders’ equity. Revenues are compensation for the services

provided by the firm, while expenses represent the cost of obtaining such revenues. Therefore, a new income should be calculated and accrued to the entity equity account and not to the owners or creditors (Paton, 1922). As defended by Lang and Littleton (1935), good accounting should be pushed into all corporate operations instead of being focused on measurement of investors income: "It is a mistake to create, however innocently, the impression that the correct measurement of investor income (a sort of interest-return at best) is a more basic problem than the correct measurement of corporate income (the resultant of an interplay of cause and effect, expense and revenue. This seeming exaltation of investor income, however, is mainly an incidental result of setting very close limits to a specified piece of research. With a broader canvas the larger picture would emerge – the picture of income in general" (p. 414). This "income" is what belongs to the entity and not to the shareholders. It represents what is available to be re-invested in the business, or to be distributed to all recipients – the relevant parties including the shareholders, and which allocation is to be decided by the board of directors. No distribution rule to be imposed outside the consensual agreement between the relevant parties. In this accounting model, as suggested by Paton (1922), interest payments and dividends should be considered as distributions of profit rather than being considered as expenses in the first case and owners' withdrawals of capital in the second case, which distributions should be decided by the board of directors.

Finally, to support this shift, a governance reform is required. In fact, the hegemony of market thinking should be countered by institutional reforms and mandatory legal arrangements to extend democracy to corporations' boards. Corning (2011) was right in calling for a form of a co-determination to make corporations more socially and environmentally responsible. However, he did not make clear how power would be shared between stakeholders and even less how the new profit will be calculated. Moreover, instead of requiring relevant parties to be involved in decision making, Corning seems suggesting that top management would be "compelled to consult" other stakeholders. As suggested by Greenfield (2006), a drastic legal reform to promote stakeholder governance and to amend powers within the board is needed. The corporation should be considered as an institution, which has a separate existence and legal personality. The purpose of this institution cannot be limited to serve the unique interests of the shareholders who provide only one form of capital for the institution to function. The interests of the providers of other forms of capital have to be considered by the institution for its going concern. For instance, the board should be entrusted the responsibility of maintaining the different forms of capital to preserve the conditions for "quality of life." Inclusive governance acknowledges complementarity and cooperation between different forms of capital to fulfill the institution long-term goals. The composition of the board reflects this complementarity by giving voice to the representatives of the various forms of capitals in use. These relevant parties are those who have real incentives in preserving these forms of capitals to continue generating conditions for "quality of growth." By granting the relevant parties the proper rights of access to run businesses and by strengthening these rights into a sense of ownership, complementarity, connectedness and autonomy, businesses priorities shift from fulfilling shareholders financial claims to producing long-term economic success in the limit of environmental boundaries and social imperatives.

Conclusion

The society we want is not only economically efficient but also socially and environmentally sustainable. In the dominant paradigm of shareholder value maximization, the hand of finance has no regard for broader society. Financial agents are not different from other agents. We all have social responsibilities that ultimately stem from our social relations with others. Therefore, we should all be equally devoted to fulfilling our social obligations toward

each other and toward the planet. Financial agents cannot specialize in financial concerns that sometimes depart from such responsibilities. There is very little room for finance to be finance as usual.

To help financial agents play a more responsible role, instead of having to monitor considerable clashes between increasing shareholders wealth and preserving social benefits and to take appropriate action when such clashes occur, the entity accounting model is proposed to improve disclosure approaches and to give better understanding of which businesses are maintaining the fundamental conditions for their going concern and “quality of growth” by sustaining the different forms of capital they use. Therefore, financial agents can easily base their investment decisions to support progressive companies while excluding others who are not succeeding in respecting the “quality of growth” imperatives. In this way, the financial agents will fulfill their financial concerns while being able to contribute to social and environmental goals by reducing their “sustainability impacts” as required by the UNEP inquiry. I call future research studies to extend the understanding of “quality of life” and “quality of growth” imperatives and to think about other reforms (e.g. Legal) to be made to sustain the accounting reform suggested in this paper.

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About the author

Nihel Chabrak is Professor of Accounting at the College of Business and Economics. Professor Chabrak has been publishing in international journals. She was the guest editor for three *Critical Perspectives on Accounting Journal* special issues. She is serving in the editorial board of *Critical Perspectives on Accounting*, *Accounting Accountability and Auditing Journal*, *the Accounting Forum*, *Advances in Public Interest in Accounting Journal*, *Accounting, Economics and Law: A Convivium*,

Journal of Capital Markets Studies, *PSU Research Review: An International Journal* and *Journal of Economics and Administrative Sciences*. She is a member of Cambridge Editorial Board working on the *Elements in Corporate Governance* series. Professor Chabrak is the co-founder and organizer of the International CSAF Conference (Tunisia, 2009; the UAE, 2013). She is leading a research project on “Promoting Social Responsibility and Sustainability using a model of integrity – Evidence from the UAE, Australia, Italy and Turkey.” She is leading the GEM UAE team and has been the principal author of the GEM national reports 2016–2017 and 2017–2018. She is also co-author of the GEM MENA report 2016–2017. Finally, she is Principal Investigator in a research project on The Relationship Between Entrepreneurship and Happiness (well-being) and in another research project on Quality of Life in the UAE. Nihel Chabrak can be contacted at: nihel.chabrak@uaeu.ac.ae