

Banking, Finance, and the Minsky's Financial Instability Hypothesis

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Hyman Minsky's Financial Instability Hypothesis and the Accounting Structure of Economy

Abstract: Hyman Minsky's view of the accounting structure of economy is essentially based upon ownership of wealth, cash flows and financial instruments as entitlements to both. Further accounting notions are introduced here that improve on Minsky's financial analysis. From the accounting viewpoint, revenues and expenses, assets and liabilities are organized through economic entities that frame and shape cash transfers through an accruals basis of accounting. Including these ongoing entities and their accruals upgrades Minsky's frame of analysis from both heuristic and theoretical viewpoints. Current international and US accounting standards and practices provide examples concerning leases, repos, special purpose entities, goodwill, depreciation and liquidation values, and mark-to-market valuation of corporate liabilities. Notably, banking and government agencies can then be understood as dynamic holistic connections that layer upon ownership of wealth and entitlements to it, generating a credit-debt economy that fundamentally differs from a "capitalist" economy. Among others, Schumpeter and Keynes originate this collective dynamic understanding of bank borrowing and government borrowing, respectively. Both borrowings can be and have been employed to generate investment, production and consumption that could not have been generated without them. Some implications for economic theory and analysis of financial stability, banking and money are developed.

Keywords: financial instability hypothesis, goodwill and repurchase agreements, Hyman Minsky, Joseph Alois Schumpeter, John Maynard Keynes

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1 Introduction

Hyman Minsky's work has been rediscovered especially in the aftermath of the global financial crisis since 2007, surely for his insightful focus on the intrinsic financial instability of a "capitalist economy." The purpose and scope of this paper is to refine some aspects of the Minsky's financial analysis with a view to the accounting structure of economy.

Minsky's view of this accounting structure is essentially based upon ownership of wealth, cash flows and financial instruments as entitlements to

both. Further accounting notions are introduced here that improve on Minsky's financial analysis. From the accounting viewpoint, those elements are organized in economic entities that frame and shape cash transfers through an accruals basis of accounting. Including these ongoing entities and their accruals upgrades Minsky's frame of analysis from both theoretical and heuristic viewpoints. Notably, banking and government agencies can then be understood as dynamic holistic connections that layer upon ownership of wealth and entitlements to it, generating a credit-debt economy that fundamentally differs from a "capitalist" economy. Among others, Schumpeter and Keynes originate this understanding of bank borrowing and government borrowing, respectively. Both borrowings can be and have been employed to generate investment, production and consumption that could not have been generated without them.

The remainder of the paper is organized in two parts. The first part deals with Minsky's financial analysis and the accounting structure of economy, while the second part further addresses the special collective dynamic role played by bank and government borrowings. Some implications for economic theory and analysis of financial stability, banking and money are developed throughout the paper and summarized in guise of conclusion.

2 Minsky and the accounting structure of economy

2.1 Minsky's financial instability hypothesis and a cash basis of economy

Before entering his analysis of financial instability, Minsky (1986) explains some organizing principles of economy, to establish a constitutive set of elements and relationships between these elements. Through this frame of analysis, Minsky defines his accounting representation of a "capitalist" economy under investigation. Accordingly, a capitalist economy structure comprises capital assets (employed to the pursuit of private incomes and wealth) and a financial system "that makes the indirect ownership of wealth possible" (1986, p. 78). In particular, financial instruments (be them short-term note, bond, deposit, insurance policy or share of stock) are used to "finance control over capital assets," and involve a commitment to pay cash at some time or triggering event, generating indeed a "complex system of money in/money out transactions" (1986). Use of

financial instruments implies that cash is needed to fulfill these commitments. According to Minsky, cash can be obtained: from funds in hand; payments from wages and profits; moneys generated by owned financial contracts; sales of physical and financial assets; borrowing; and creation of cash, the latter being the privilege of government, banks but also money market funds and various broker cash-management accounts (1986, pp. 78–79 and footnote 2).

According to Minsky, the accounting structure of a business firm can then be interpreted drawing upon this web of cash transfers:

A firm's balance sheet, which lists physical and financial assets on one side and liabilities on the other, and its income statement can be interpreted as indicating the sources and uses of cash. (1986, p. 79)

In particular, Minsky defines the income statement as reporting net cash inflow from operations:

The difference between sales revenues and out-of-pocket costs are the grossest of profits. This gross profit is a cash flow; it is earned, so to speak, because of the nature of the firm's markets, capital assets, and organization. (1986)

Elsewhere, he also defines "gross profit" as "gross capital income," which results from "total receipts from operations minus current labor and material costs" (Minsky, 1982, p. 24). Accordingly, this gross capital income is available to pay: principal and interest due on debts; income taxes; and owners' income (1982). According to Minsky (1992, p. 5), "the level of profits remains the key determinant of system behavior."

Moreover, Minsky (1986, p. 79) deals with non-operational cash inflows:

Another type of cash flow to a unit is from financial instruments that it owns; these cash flows represent contract fulfillments by others. In addition to the cash flows originating in gross profits and contract fulfillments, a unit can acquire cash by selling physical or financial assets or pledging assets or future income.

Minsky matches then the asset side with the liability side as follows:

Liabilities, the other side of a firm's balance sheet, are commitments to make payments; the payments are dedicated to both repaying and servicing debt. Cash to meet these payment commitments can be obtained either from the gross profit cash flow, cash on hand, the sale of assets, or borrowing.

This accounting representation provides an accounting-economic foundation of his famous financial instability hypothesis (Table 1). Through a cash basis of accounting, Minsky disentangles three kinds of cash in- and out-flows (since "cash in hands only moves the problem back one step," he said), respectively, pointing to: operations; investment; and asset-disposal together with borrowing.

Table 1: Accounting structure of a business unit on a cash basis of accounting, following Minsky (1982, 1986).

Asset-side (cash inflow)	Sources of cash from	Resulting financial posture of business unit
Cash in hands	Past transactions	
Gross profits from operations	Operations	Hedge finance
Cash from fulfillment of owned financial contracts	Investment	
Selling physical or financial assets	Asset disposal	Speculative or Ponzi finance
Pledging assets or future income	Borrowing	

This cash basis of accounting enables Minsky to justify his classification of business units relative to their potential financial instability degree:

A unit that expects its cash receipts to exceed its cash payments in each time period is engaged in what we will call hedge finance. On the other hand, an organization from which the contractual flow *out* over a time period exceeds its expected cash flow *in* engaged in either speculative or Ponzi Finance. A unit in a speculative or Ponzi financing posture obtains the cash to satisfy its debtors by selling some assets, rolling over maturing debt, or new borrowing; such units are dependent upon financial market conditions in a more serious way than units whose liability structures can be characterized as hedge financing. (1986, p. 79)

Accordingly, speculative and Ponzi financial postures are characterized by a cash negative unbalance on one or more periods ahead. In particular, a speculative posture is unable to repay forthcoming capital installments (principal repayments) required by its financial commitments through its gross capital income (profits), involving refinancing or securitization of those installments; a Ponzi posture is unable to repay even interest charges dues under those commitments, involving capitalization of interest charges and refinancing/securitization of them together with capital installments (Minsky, 1982, pp. 22–29).

2.2 The accounting structure of economy

Purporting economic analysis of macro-economic structures with a focus on banking, Minsky has surely assumed that his cash accounting representation was simple but not simplistic, sufficient to base his theoretical and heuristic views upon it. As a matter of fact, accounting representation of an economic unit adds further orders that are not properly addressed by a cash basis of accounting. Following Biondi (2010), disconnection between cash transfers and the economic process of an economic entity over time does point to its accruals basis of

accounting. And, notwithstanding a popular confusion between cash, capital and income (profit, in Minsky's term), an accruals-based accounting representation is still generally applied to account for business firms and financial institutions in our economy. This accounting representation rests at the core of the articulation between cash and real (material) dimension, as well as between cash and economic dimension of economy.

An accruals basis of accounting characterizes then the accounting structure of economy. This basis applies through an entity-specific accounting process to recognize revenues and costs, assets and liabilities (accounting elements) that do not depend primarily on cash transfers. In particular, this accounting process displaces cash transfers, cash-receivables and cash-payables throughout economic time and space, time being related here to periods of reference, while space relates to the organization and frontiers of enterprise groups. Past, current and future cash transfers (and receivables) are then attached to revenues and costs, assets and liabilities of every reference period through this accounting process of representation, which is performed at the level of the ongoing accounting entity that has to be accounted for. This accounting representation distinguishes different classes of cash transfers (which may depend on distinctive sorts of transactions) and integrates non-cash events (which occur at transaction or entity levels). Three dimensions can be identified in this accruals-based representation of an economic unit: a cash (financial) dimension (represented with limitations by a cash flow statement); a patrimonial dimension (represented with limitations through a balance sheet statement); and an economic dimension (represented with limitations through an income statement).¹

2.3 Minsky's financial analysis from an accruals basis of accounting

Minsky's focus on a cash basis of accounting seems to generalize upon the level of a single straight cash loan. The latter financial instrument involves cash delivery from a lender to a borrower at a certain point of time, followed by cash payments by borrower to lender over future periods of time. However, even this elementary financial transaction involves borrower's payments that are

¹ In fact, balance sheet statement includes amounts that come from all the three dimensions, while income statement amounts critically depend on the accounting model of reference for the earnings process. Cash flows statement does include both cash and cash-equivalent flows and funds: retained definition for that "equivalence" is then critical to articulate cash-basis and accruals-basis of accounting in a cash flow statement.

distinct between interest charges and capital installments. Interest charges pass through the income statement – as costs (for the borrower) and revenues (for the lender), both accrued to reference periods – while capital installments do not, and are reported as changes in the balance sheet (and the cash flow statement) of both parties. More generally speaking, sophisticated financial transactions can and usually go beyond cash transferring among involved borrowers and lenders, whose respective financial positions may switch over time. These financial transactions enable both parties to take financial-economic positions far beyond the actual cash transfer and its adjustment over time.² Furthermore, financial transactions may involve third parties, generating multilateral financial schemes which constitute a *collective financial system* that evolves over time.

Therefore, the accounting representation of a transaction is not limited to cash transfers. Let take the case of a single straight cash loan. Even its accounting representation on an accruals basis goes beyond any physical delivery of cash. Once lender *promises* to pay, borrower recognizes a loan in its liability-side and a cash-receivable in its asset-side of the balance sheet. As long as borrower commitments become payables, interest charges are recognized in its income statement, while out-flowing capital installments are recognized only in its balance sheet (and statement of cash flows). Furthermore, business “profits” (earnings, in accounting terms) accrued to borrower or lender are not recognized on a cash basis, but on this accruals basis of accounting. Shareholders’ dividends, governmental taxes, and interest charges are all deducted from (paid through) accrued revenues, not cash revenues. Recognition and measurement of all accounting elements (revenues and costs, assets and liabilities) are then required to determine accrued “profits” to a business unit, whose representation derives from all transactions, combinations and events generated or incurred by that accounting entity throughout the period of reference, having considered accountable impacts from past and future periods (Biondi, 2010). As Berle (1938) argues:

A lawyer, advising a dividend policy, must rely on the accountant to tell him whether or not there is surplus justifying the dividend. An accountant can and must show him the way, or the limitation.

Business profit (income) indeed, according to Littleton (1937, pp. 16–17) “is not the result of the simple speculative adventuring of an investment – the prudential casting of bread upon the waters. [It] is more than the change realization of a gain arising out of an ownership now transferred to another:”

² This is typically the case for financial derivatives, whereupon margin calls (if paid in cash) amount for a limited share of the underlying net obligation.

[Business] Incomes express in money-price [streams] the fruition of the enterpriser's efforts – the ripening harvest as it were from a prior planting carefully cultivated. Quite a different condition this from a mere speculative venturing, even though the outcome of the husbandry may be subject to unpredictable and uncontrollable risks.³ (1937)

Minsky's financial instability hypothesis is based upon a test on the unit capacity to recover cash outflows for investment. Minsky suggests assessing this capacity by generalizing upon the capacity of one business transaction to recover interest charges and capital installments. This test is reshaped under an accruals basis of accounting. Accordingly, this recovery is split in two distinctive parts and considered at the level of the whole business unit, not of each financial position. For the sake of simplicity and in line with Minsky, let us assume here that the income statement recognizes only (accrued) revenues from customers, matching them to (accrued) interest charges after (accrued) wages and material costs.

$$\begin{aligned} \text{Gross revenues from operations} &= \text{Revenues from customers} \\ &\quad - \text{Wages} - \text{Material costs} - \text{Interest charges} \end{aligned}$$

From an accruals accounting perspective, these gross revenues (earnings) from operations are expected to cover tangible and intangible investment depreciation. If net earnings are positive *after* depreciation charges, then a Minsky's covering test is fulfilled on an accruals basis of accounting for the reference period.

$$\begin{aligned} \text{Minsky's test} &= \text{Gross revenues from operations} \\ &\quad - \text{Depreciation charges for tangible and intangible assets} \end{aligned}$$

From this perspective, depreciation recovery assures that all sources of financing (that is, the liability side of balance sheet) which serve depreciable investment are recovered, be them liabilities or equities. This accruals-based test further implies that accounting conventions for asset capitalization and depreciation are relevant to the assessment of the financial structure of an economic unit among hedge, speculative or Ponzi postures.

2.4 Case studies from current accounting practices

The recent drift into financialization has involved a change in the accounting model of reference, leading economic units to recognize and distribute accrued

³ For further analysis, see Biondi (2012c).

earnings (profits) earlier and earlier (Biondi, 2011, providing further references and analysis). This change has reshaped the accruals basis of accounting that is relevant for Minsky's financial analysis.

For instance, under current International and US accounting standards, leases are accounting on an ownership approach that has allowed lessees not to recognize all lease obligations on their balance sheets; this approach is based on what is nowadays considered to be an arbitrary distinction between operating and finance leases (Biondi et al., 2011).⁴ According to the Euromoney's World Leasing Yearbook 2010, leasing activity in 2008 amounted to US\$ 640 billion, while the assets and liabilities arising from many of those contracts are not shown in a lessee's statement of financial position (balance sheet). Franzen, Rodgers and Simin (2009) documented that from 1980 to 2007 off-balance sheet (OBS), lease financing as a percentage of total debt increased a remarkable 745%. If leased assets were brought onto the balance sheet over their 27-year sample period, average debt-to-capital ratios would increase by 50–75%. According to the 2005 SEC Report, undiscounted total non-cancellable future payments required under OBS leases for US companies would be approximately \$1.25 trillion. According to a recent research study by PwC (2009) using a sample of 3,000 companies, reported interest bearing debt in 2008 financial statements would increase by 58% after adjusting for OBS leases. Moreover, under current International and US accounting standards, goodwill is a material intangible asset that is not depreciated but tested for possible impairment losses, similar to financial assets.⁵ Furthermore, depreciation charges on tangible and intangible assets can be computed upon either their initially invested (cash) outflow or their revaluated current values; in computing depreciation patterns, expected liquidation values (at the end of the unit's use of underlying assets) are also excluded from total depreciable amount. Therefore, current International and US accounting conventions on leases, goodwill and liquidation values do not ask accounted entities to fully recover past outflows (expenditures) for investment in their totality through an earnings process, favoring indeed Minsky's speculative or Ponzi financial postures by those entities.

Generally speaking, an accruals basis of accounting decides if a cash inflow is recognized as liability or revenue, and if a cash outflow is recognized as a cost or

⁴ The distinction is alleged to create an accounting loophole that allows a lease to be purposefully structured to achieve operating lease treatment and remain off-balance sheet. As IASB (2010, p. 3) stated, the distinction "also provides opportunities to structure transactions to achieve a particular accounting outcome".

⁵ In contrast, research expenditures point to relevant intangible resources that cannot be capitalized: they pass entirely through the income statement as expenses as they accrued.

an asset. From Minsky's perspective, the first decision is especially sensitive, since a debt transaction may be cleverly transformed in a "paper profit." For instance, current practices of "repos" involving sale and buyback of underlying assets are especially exposed to this regulatory risk.⁶ As Berle (1938) early argued:

A banker may "pad" his position by accepting a year-end deposit, designed to be kept separate and returned to the depositor after New Year's day. A lawyer may advise that the relation of debtor and creditor – banker and depositor – is thereby created: An accountant, if he knows the facts, knows better, and declines to allow the padding.

A similar concern points to transactions with special purpose vehicles, often maintained out of accounting entity perimeter (so-called OBS entities). These vehicles are formally independent but substantially controlled by (and dependent on) their holding companies, while their transactions with the latter have been recognized as arm-length transactions, generating "paper" profits for services granted by holding companies to their de-facto subsidiaries.⁷ As Berle (1938) early explained:

For instance, a lawyer is taught that corporations are separate entities, irrespective of their stock ownership. If therefore X corporation sells its merchandise to Y corporation, which X happens to control as a subsidiary, the lawyer has to regard the transaction as a sale. From his point of view, title did pass from X to Y, and that settles it. The resulting liability is a debt from Y to X; and that settles that. But the accountant can go behind the returns. He does not, because of that fact, have to assume that the resulting debt is an account receivable; or, for that matter, that the sale is a commercial sale, classifiable with other transactions in ordinary course of business. The lawyer may be right about the technicality of the title passing and debt-creation; but the legal christening does not make the transaction a true conversion of inventory into collectible liability. Whereupon a good accountant will segregate the item and separately record or explain it.

The recognition of "paper profit" is further allowed by including the reduction of value of entity's liabilities in accounting income, under a fair value accounting model that has been favored by US and International regulatory bodies. Whenever credit worthiness or current market prices of those liabilities (such as bonds) decrease, accounting entities are required – under International and US

⁶ According to Schwarcz (2013, p. 13, footnote 63), "Repo lending refers to a transaction in which Party A advances money to Party B in exchange for securities with an agreement, termed a repurchase agreement, that Party B will subsequently repay Party A and get back the securities. One way to view the transaction is as a loan by Party A to Party B collateralized by the securities. Another way to view the transaction is as a purchase of the securities by Party A with a simultaneous agreement by Party B to subsequently buy back the securities." Accounting consequences are distinctive. In particular, in the first way, no profit can be booked, while it can in the second way.

⁷ On the relevance of enterprise analysis of enterprise groups, see Strasser and Blumberg (2011).

accounting standards – to recognize this market value reduction as an increase of their accounting profits, a practice that has generated a relevant share of bank profits in the aftermath of the global financial crisis (Biondi, 2011; Financial Times, 2011). However, on the matter, Paton and Paton (1955, chapter X – “Income determination: Revenue”, p. 298) argued that:

At this point the more general question may be raised as to whether a cancellation or reduction of liabilities, under any circumstances, results in recognizable revenue.

The earning process, as has been explained, consists of the production and marketing of a product, either goods or services, at a price that exceeds the total costs incurred, including losses and taxes. The general effect of the process, evidently, is an increase in assets by the amount of the excess of new assets received over the total drain on assets previously acknowledged. Settlement of any liability at less than the recorded amount is not a transaction that fits into this over-all pattern. [...]

The reference to the “earning process” enables Paton and Paton to articulate financial and economic dimensions of the production process generated by the business firm. Paton and Paton (1955, p. 298) expressly related this accounting understanding to the overarching representation of the business firm:

[...] Viewing the corporation as an entity, a business institution, makes it difficult to conclude that a debt cancellation constitutes revenue. Thinking more narrowly, from the point of view of the stockholders as such, it becomes easier to decide that the elimination of a liability, without disbursement, represents a type of gain. In the case of an outright forgiveness of debt, certainly, the stockholder interest is directly benefited, although it is still possible to regard this benefit as a gift of capital rather than as a revenue.

While current accounting practices require recognizing debt reduction or cancellation as earned income even absent any accomplished transaction, Paton and Paton (1955: *ibidem*) excluded it even in case of accomplished transactions:

[...] where bonds are redeemed at less than book value, and the transaction is on a sound commercial basis, from the point of view of both lender and borrower, the conclusion that the excess of book value over redemption payment is an item of true income is on a very shaky basis. Such a transaction results from underlying changes in the prospects of the borrower, or in interest rates in the market, which have given the outstanding contract a present value of less than the recorded amount. And particularly where the “sourness” of the contract is due to a decline in the fortunes of the borrower the view that income results from the redemption appears to be unjustified. In other words, how can a partial recognition of shrinking values be recorded as a gain?

Another sensitive case of financialized accounting standards concerns goodwill, which is recognized through business combinations that are usually paid by transfer of equity shares issued by the acquiring entity (Baker, Biondi, & Zhang,

2008).⁸ Current International and US accounting standards allow the full capitalization of consideration paid through those shares. In this way, shares are “monetized” (becoming an acceptable means of payment, at least for business combinations),⁹ while any payment in excess of revaluated existing net assets becomes a novel intangible asset in itself: goodwill capitalized value is assumed to last indefinitely as a sort of permanent intangible asset. Impairment is the only required check of this asset through an earnings process. According to available evidence on the last 10 years, at least one-third of US listed companies did not impair goodwill over time (Olante, 2009). If we imagine how many major events occurred in that time lapse in US economy, this accounting choice appears questionable; nevertheless, those companies and their auditors have considered that goodwill has not been impaired, even partially. Historically, however, goodwill was disregarded, especially when a share payment was performed (Baker et al., 2008; Richard, Ding, & Stolowy, 2008). To conclude, concerned with financialized views of accounting driven by some economists’ preconceptions, Littleton (1955 [2011], p. 7) early argued:

[Accountants believe] that income cannot arise directly from new investments or borrowings, or by action of owners in creating an item in their accounts called “goodwill”, or by owner action in re-pricing assets already possessed.

The reason for this view? It is that no service has been rendered by this enterprise in connection with these purely financial actions.

A corollary to this reasoning is seen in this other [accountants’] belief: while economic change, present or prospective, may affect people’s opinion regarding the value of an enterprise or of some of its products or of its securities, yet such opinion is subjective and outside of the reviewable facts within the enterprise in question. For this reason, such opinion cannot logically change the existing ledger-account pattern of objective facts which will indicate the knowable structure of the enterprise.

2.5 Further implications: interdependence in and between economy and finance

As these basic examples show, disconnection between cash basis and accruals basis of accounting points to an articulation between finance and economy that is

⁸ Veblen (1904) had already stigmatized goodwill in his prophetic critique of another epoch of financialization.

⁹ Interestingly, European Central Bank (ECB) currently accepts debt instruments issued by corporate issuers as collaterals for its loans, under general conditions of acceptable market listing and eligible credit-standard assessment.

relevant to the financial analysis purported by Minsky. One single financial position may be hedged, speculative or Ponzi according to its relative degree of expected (or actual) exposure to future cash outflows for principal installments and interest charges. However, the same reasoning does not hold for a whole business unit throughout time. From an economic perspective, it is possible (and usual, and sometimes necessary) that a business unit takes speculative or Ponzi postures at some point of time. Whichever business entity that invests in capital equipment may require a cash inflow from other sources than cash-in-hands and cash from operations or owned investments. This position-taking is an integral part of the process of investment through financing by loan or equity. Furthermore, since cash outflows are gone (be them invested or not) and not necessarily recovered in cash at the same rhythm as other incipient cash needs, that same business unit may require *refinancing* of taken investment positions (that are immobilizations) for sake of ongoing cash balances, quite independently from its economic solvency and performance. Therefore, speculative or Ponzi postures can be considered as a fact and a necessity for some entities at some point of time at least. Minsky's financial analysis seems grounded on a single cash-based transaction as baseline, going further to generalize it to hedged units that are expected to be independent from and then insulated by the whole financial system they belong to. This hypothetical or ideal "hedge" status does not fit actual conditions of working for economic units, especially banks and governments. Minsky's analysis of financial structure of economy should then be considered as morphological, not as a normative imperative. Hedge, speculative or Ponzi postures are possible conditions of existence, not ideals to be attained (or avoided) by economic units. All together, these conditions point to a factual state of interdependence that characterizes the working of economic units in economy and finance. A continued solidarity occurs within and among economic units throughout space and time. This solidarity cannot be avoided but requires coordination, management and control through institutional design and policy strategies. In this context, accounting representation of economic entities is called to enable management and control of economic dimension and its articulation with cash dimension of ongoing entities, bridging economic solvency and financial liquidity among entity and systemic levels (Biondi & Fantacci, 2012).

2.6 From "capitalist" to credit-debt economy

Once accepted this interdependent state of economic and financial affairs, an investigation of systemic financial instability may be undermined by a balance sheet accounting approach, since its stock method of accounting relies upon the

permanence of owners' capital, in financially nominal or real terms. This approach points then to an ideal independence or insulation of accounted entity from outside, based upon permanence of its own husbandry (or owners' net worth). It suffers from an outdated ownership view of economy inherited from classical economic thought (Berle, 1965). However, already Pareto (1906: Proemio, p. VI, our translation) argues that:

E' comodo discorrere di capitali, ma cio' si deve solo fare dopo che si é definite chiaramente a quali cose reali corrisponde quel termine; ed inoltre é utilissimo il mostrare come tutta la teoria dei fenomeni economici possa essere istituita senza avere bisogno di ricorrere al termine ed al concetto di capitale.

It is convenient to speak about capitals, but this must be done only after having clearly defined those real things which correspond to that term; and it is further very useful to show how the whole theory of economic phenomena can be instituted without having recourse to the term and concept of capital.

An ownership approach focusing on capital is ultimately inconsistent with actual interdependent working of corporate groups and financial institutions, even though such an approach somewhat survives through existing representations and institutions (Biondi, 2012b). In an interdependent economic context, Minsky's analysis may be better served by an entity approach (applying a flow method of accounting) where shareholders equity is committed by outside investors to an autonomous entity which performs dividends distribution, share issuance *and repurchase*,¹⁰ and tax payments. While Minsky insists on capital assets and ownership of them, he fully acknowledges that both debts and equity shares are financial instruments allowing *control* on those capital assets. An entity approach would recommend considering both instruments as bundles of financial and extra-financial links to the whole enterprise entity that underwrite them, not only to entity capital assets (Biondi, 2005; Biondi et al., 2007).

From this perspective, a credit-debt economy (an accounting economy, shall we say) fundamentally differs from a "capitalist" economy. Through the logical introduction of entities, money and accounting in the financial-economic scene, financial foundations do upgrade from capital (ownership) to credit-debt (relationships) (Biondi, 2010). Entities organize the economic process through other people's money, and deal with other people's interests. Independence or insulation of individual interests, including individual financial interests, becomes unattainable at least: protection of individual and general interests critically

¹⁰ Open market operations performed by issuing corporations on their own shares are material and should deserve further attention; see Biondi (2012b) for further analysis.

depend therefore on coordination devices, including the institutional frame that shapes the working of entities and their interdependence at the systemic level (Table 2).

Table 2: Distinctive features of “capitalist” (in Minsky’s word) and debt-credit economies.

	“Capitalist” economy	Debt-credit economy
<i>Unit of analysis</i>	Ownership of capital (wealth)	Entity
<i>Accounting representation</i>	Static view (stock method) of accounting	Dynamic view (flow method) of accounting
<i>Organizing principle</i>	Individual interest	Coordination
<i>Money basis</i>	Capital	Credit-debt
<i>Economic purpose</i>	Capital development	Satisfaction of needs

In sum, through a cash basis of accounting, Minsky’s financial analysis purports to understand the endogenous financial instability of a capitalist economy. Our institutional economic perspective has introduced an accruals-basis of accounting, pointing to the endogenous interconnection of finance and economy, but also to some special features of a credit-debt economy that goes beyond its “capitalist” structure. These features shall be further analyzed in the following.

3 Taking debt seriously: insights from Keynes and Schumpeter

3.1 Leaving a Shakespearian representation of debt

A consequence of Minsky’s financial analysis may be to infer that debt financing (through speculative or Ponzi postures) is potentially evil, while hedge financing is not. This normative position would state that investment *should* be financed by cash available from operations or owned investments, being debt further understood as an entitlement to debtor’s belongings, which are expected to cover for it. This view imagines quite a Shakespearian economic scene where borrowing and lending threaten the owner’s patrimony (its “hedge of husbandry,” in Polonius’s words), while debts make debtors “slaves,” repaying their obligations in “real” terms, through their own “pound of flesh.”

POLONIUS	Neither a borrower nor a lender be, For loan oft loses both itself and friend, And borrowing dulls the edge of husbandry. <i>Hamlet, Act 1, scene 3, 75–77</i>
BASSANIO to SHYLOCK	For thy three thousand ducats here is six.
SHYLOCK	If every ducat in six thousand ducats Were in six parts, and every part a ducat, I would not draw them. I would have my bond.
DUKE	How shalt thou hope for mercy, rendering none?
SHYLOCK	What judgment shall I dread, doing no wrong? You have among you many a purchased slave, Which — like your asses and your dogs and mules — You use in abject and in slavish parts Because you bought them. Shall I say to you, “Let them be free! Marry them to your heirs! Why sweat they under burdens? Let their beds Be made as soft as yours and let their palates Be seasoned with such viands”? You will answer, “The slaves are ours.” So do I answer you. The pound of flesh which I demand of him Is dearly bought. ‘Tis mine and I will have it. If you deny me, fie upon your law — There is no force in the decrees of Venice. I stand for judgment. Answer, shall I have it?

The Merchant of Venice, Act 4, scene 1, Venice. A court of justice, 85–100

The poet reassures us that a Venetian judge has eventually found a way out such a dismal view on debt. Even modern institutional structure of economy has quite moved away from that Shakespearian world, to establish debts and credits as essentially monetary phenomena.¹¹ As Schumpeter (1946, Part III, chapter 4, p. 717) argues:

Even today, textbooks on Money, Currency, and Banking are more likely than not to begin with an analysis of a state of things in which legal-tender “money” is the only means of paying and lending. The huge system of credits and debits, of claims and debts, by which capitalist society carries on its daily business of production and consumption is then built up step by step by introducing claims to money or credit instruments that act as substitutes for legal tender and are allowed indeed to affect its functioning in many ways but not to oust it from its fundamental role in the theoretical picture of the financial structure. Even when there is very little left of this fundamental role in practice, everything that happens in

¹¹ This is not to say that they do not have any impact on economic “reality,” money being far away to be a veil.

the sphere of currency, credit, and banking is construed from it, just as the case of money itself is construed from barter.

Historically, this method of building up the analysis of money, currency, and banking is readily understandable: from the fourteenth and fifteenth centuries on (and even in the Greco-Roman world) the gold or silver or copper coin was the familiar thing. The credit structure – which moreover was incessantly developing – was the thing to be explored and to be analyzed. The legal constructions, too – remember that most economists who were not businessmen were jurists – were geared to a sharp distinction between money as the only genuine and ultimate means of payment and the credit instrument that embodied a claim to money. But logically, it is by no means clear that the most useful method is to start from the coin – even if, making a concession to realism, we add inconvertible government paper – in order to proceed to the credit transactions of reality. It may be more useful to start from these in the first place, to look upon capitalist finance as a clearing system that cancels claims and debts and carries forward the differences – so that “money” payments come in only as a special case without any particularly fundamental importance. In other words: practically and analytically, a credit theory of money is possibly preferable to a monetary theory of credit.

In our analysis, a first logical upgrade is accomplished through an accounting representation of those debts and credits, which layers upon the cash basis of economy. A second step shall be accomplished by understanding the special role played by banking and government borrowings in this respect.

In the same vein as Minsky, diverse scholars such as Simons, Einaudi, Keynes and Schumpeter were worried about potential backlashes involved by a disconnection between finance and economy.¹² One issue is raised by (cash) hoarding generated by accumulation of individual income and wealth; while hoarding by institutions (both corporate groups and financial institutions) cannot but amplify this phenomenon and its shortcomings. Following Schumpeter, “hedge finance” belongs to the stationary circular flow of economy, preventing the dynamic forces of entrepreneurial action, enterprise activity and economic development to perform. Therefore, banking (through fractional-reserve or currency issuance) is required to introduce a dynamic leverage on that hedged flow bound to ownership and wealth. Following Keynes, (cash) hoarding fundamentally threatens the overall economic process of economy, requiring public deficit spending to dynamically consume hoarded wealth. From both perspectives, debt introduces a dynamic holistic dimension that enables use of resources beyond and above the economic structure bound to existing wealth and entitlements to it.¹³ For Schumpeter, bank debt enables dynamic entrepreneurial activity

¹² On Simons, Keynes and Einaudi, see, respectively, Fantacci (2013), Moe (2013) and I. Biondi (1976).

¹³ Both perspectives involve an upgrading of money theory that goes beyond the purpose and scope of this paper. Cf. Biondi (2010) for a first treatment of this advance.

through an enterprise entity. For Keynes, government debt enables redistributive consumption of private wealth in the general interest. In both cases, debt enables a redistribution of wealth, performed at a collective dynamic level, reshaping allocation of resources without direct levy of that wealth at the individual level.

3.2 Taking Schumpeter's point: dynamic holistic credit to enterprise entity

Schumpeter (1926, German ed. p. 147; English ed., p. 101, translation provided by Biondi 2008) argues that bank borrowing creates ex nihilo *purchasing power* deemed to finance novel productive combination of resources:

It is perfectly clear that purchasing power (Kaufkraft) is created (geschaffen) to which (...) no new goods (Güter) correspond before.¹⁴

From this it further follows that in real life the total credit (die Summe des Kredits) must be greater than it could be if there were only fully covered credit. The credit construction (Kreditgebäude) projects not only beyond the existing monetary basis (Geldbasis),¹⁵ but also beyond the existing goods basis (Güterbasis).

This path-breaking financing bank credit – which goes beyond existing wealth – pays for the fundamental working of enterprise entities (*Gründungskredit*), serving dynamic entrepreneurial economic functions. Schumpeter (1926 German ed. p. 153; English ed. p. 103) clearly distinguished this special class of liabilities from another cash-equivalent class that refers to commercial credits and debts and is labeled “working credit” (*Betriebskredit*). Schumpeter (1946, part IV chapter 7, p. 1114) puts this bank credit action in connection with ex nihilo money creation¹⁶:

if the owners of [...] bags wish to use them, they have to recover them from the borrowers who must then go without them. This is not so with our depositors and their gold coins. They lend nothing in the sense of giving up the use of their money. They continue to

¹⁴ That is, without preexisting existence of goods.

¹⁵ That is, the current monetary basis, or, according to the monetary theory of that time, the gold standard.

¹⁶ Schumpeter (1946, part iv, chapter 7, pp. 1114–1115 footnote 5) tributes Keynes (1930) to have re-expound and defend at length the doctrine on “the deposit-creating bank loan and its role in the financing of investment without any previous saving up of the sums thus lent” in the *Treatise* (chap. 2), while criticizing him to have practically withdrawn that doctrine from “the analytic scheme of the *General Theory*, where it is again the saving public that holds the scene.”

spend, paying by check instead of by coin. And while they go on spending just as if they had kept their coins, the borrowers likewise spend “the same money at the same time.” Evidently this phenomenon is peculiar to money and has no analogue in the world of commodities. No claim to sheep increases the number of sheep. But a deposit, though legally only a claim to legal-tender money, serves within very wide limits the same purposes that this money itself would serve. Banks do not, of course, “create” legal-tender money and still less do they “create” machines. They do, however, something – it is perhaps easier to see this in the case of the issue of banknotes – which, in its economic effects, comes pretty near to creating legal-tender money and which may lead to the creation of “real capital” that could not have been created without this practice. But this alters the analytic situation profoundly and makes it highly inadvisable to construe bank credit on the model of existing funds’ being withdrawn from previous uses by an entirely imaginary act of saving and then lent out by their owners. It is much more realistic to say that the banks “create credit,” that is, that they create deposits in their act of lending, than to say that they lend the deposits that have been entrusted to them. And the reason for insisting on this is that depositors should not be invested with the insignia of a role which they do not play. The theory to which economists clung so tenaciously makes them out to be savers when they neither save nor intend to do so; it attributes to them an influence on the “supply of credit” which they do not have. The theory of “credit creation” not only recognizes patent facts without obscuring them by artificial constructions; it also brings out the peculiar mechanism of saving and investment that is characteristic of fullfledged capitalist society and the true role of banks in capitalist evolution. With less qualification than has to be added in most cases, this theory therefore constitutes definite advance in analysis.

On the asset-side of the balance-sheet, this special class of bank credit may be matched to somehow irreversible immobilizations generated by the ongoing business activity over time, implying a degree or threshold of irreversibility of that investment which is then framed in the dynamics of the whole enterprise entity over time and space (Biondi, 2008 and 2010). At the aggregate level, this analysis attributes utmost importance to factionary-reserve or issuance banking, which introduces a dynamic holistic dimension *uncovered* by existing wealth and entitlements to it. Banks appear to be somewhat aware of such dimension, as showed by respondents quoted by US FASB (1987, p. 22 and footnote 14):

Banks [footnote 14: For convenience and because most of the controversy over funds statements for financial institutions has focused on commercial banks, this section uses the term banks. Most of the points discussed, however, apply also to thrifts and other kinds of financial institutions] generally have contended that the nature of their business and the resulting nature of their cash flows are significantly different from the cash flows of nonfinancial enterprises and that those differences render information about a bank’s cash flows virtually meaningless. Banks who responded to the Exposure Draft generally said that their cash flows are much more complex and interrelated than those of other enterprises and that a bank’s cash flows are much larger in relation to net income and net assets than are the cash flows of a nonfinancial enterprise. They commented that a bank creates money through its lending activities. That, they said, makes cash the “product” of a

bank's earning activities, just as finished goods are the product of a manufacturer's earning activities. Accordingly, banks often asserted that a statement of cash flows for a bank is analogous to a combined statement of cash and inventory flows for a nonfinancial company.

Together with related immobilizations, this dynamic holistic dimension further involves a need for *refinancing* asset and debt positions over time, since economic and financial systems remain open and indeterminate throughout time and space. In turn, this paves the way to bridging money and accounting as coordination devices of economy and finance, as Schumpeter (1946, part IV chapter 7, p. 1117) argues for:

The theory of money creation does not necessarily [confuse] legal-tender money with the bookkeeping items that reflect contractual relations concerning this legal-tender money.

3.3 Taking Keynes's point: dynamic holistic credit to government spending

From a Keynesian perspective, public policies of deficit spending and consequent public borrowing perform a special redistributive function within the whole economic system.¹⁷ They deem to awaken "sleeping" hoarding, especially cash hoarding, by creating supplementary consumption from holdings (savings) kept by households and firms.¹⁸ State borrowing generates then a special economic function of consumption based on continuously refinanced financial borrowing, where its financial liabilities as a non-business entity play a special role as capitals that are going to be spent (functionally speaking, a sinking of capital).¹⁹ In this context, (cumulated) current accounting loss – as reported by governmental income statement and determined on an accruals basis – means that (cumulated) current consumption (determined by expenses of the period) has been bigger than (cumulated) current contributions (determined by net sovereign revenues of the

¹⁷ To be sure, this redistributive effect is not limited to public deficit and borrowing. We stress here an overall redistribution (and stabilization) purpose achieved by governments through fiscal policy as well as budgetary (and related borrowing) policy.

¹⁸ As a matter of fact, this supplementary consumption may also be funded through creation of bank money or currency issuance. For the sake of simplicity, we further assume that government spending is consumption because its use does not pursue a lucrative motive, even though it may be used to foster production and purchase capital assets (investment).

¹⁹ Indeed those entitlements would deserve a different label than public "debt."

period).²⁰ The state has then employed borrowing to finance current consumption, performing an unusual redistribution of income and wealth.

Let take the example of UK governmental accounts on accruals basis (Biondi, 2013). According to whole of governmental accounts at the financial year 2009–2010, cumulated accounting loss of UK government amount to –1 211.8 billion £.²¹ This amount has been spent by issuing and renewing (refinancing) public debt over time. Furthermore, accounting consolidation of the Bank of England does result in offsetting a material share of governmental gilts currently held by UK central bank, without any loss to the private sector, and with a significant impact on net governmental debt outstanding.²² This consolidation makes open market operations on gilts (debts) generating a joint adjustment in both money and gilt (debt) outstanding. Similar findings hold for major economies and jurisdictions.

In one phrase, this governmental consumption has been permitted, among others, by a sinking withdrawal of financial capitals that have been continuously borrowed over time. For an individual lender, this withdrawal is a lending that will be remunerated with interest and reimbursed over time; however, for the whole system it acts as a consumption of those “sleeping capitals,” performing “the euthanasia of the rentier, of the functionless investor” advocated in the *General Theory* (Keynes, 1936, p. 376). Keynes’s concerns seems to be here with hoarding more than interest rate, while the payment of interest results to be a “necessary evil” to enable that consumption of hoarded cash (wealth). As Perroux (1949, pp. 96–97) argues:

L'État ou la collectivité publique emprunteuse aurait, en versant les arrérages de la dette l'avantage de ne pas la rembourser sur-le-champ. Le service rendu par le prêteur consisterait, après s'être dessaisi d'une somme d'argent, à n'en point exiger la restitution. L'observation est-elle juste? Elle ne saurait alors être cantonnée au domaine des emprunts publics. Pour être logique l'évaluateur devrait conclure que l'intérêt versé par les entreprises privées à leurs obligataires n'est pas le signe d'un produit au sens habituel

²⁰ The meaning of this net result critically depends on the accounting model of reference, which frames and shape recognition and measurement of both revenues and expenses. Accruals basis can take distinctive meanings for both business and non-business entities, see Biondi (2012a) for further details.

²¹ Taking a peculiar ownership perspective (Biondi, 2013), the UK Treasury defines this net result as “the difference between what the governmental owned and what it owed at the end of the financial year.”

²² According to current central banking practice, interest charges on gilts held by central banks are generally paid back to Treasuries, resulting to sterilize both interest and capital debt outstanding held by central banks.

mais simplement le prix que l'emprunteur paye au prêteur pour ne pas avoir à le rembourser.

A borrowing government or public administration would take, by paying rents on debt, advantage to do not reimburse it straightaway. Lenders would then provide a service in having transferred a money amount without asking for its reimbursement at all. Is this observation right? It shall not be limited to public borrowing. It is logical to conclude, from the national evaluation viewpoint, that interests paid by private enterprises to their bondholders are not evidence of a typical financial service, but simply the price paid by the borrower to the lender for avoiding reimbursement.²³

Two messages are clearly delivered by this perspective. First, limitation or reduction of deficit-spending (and related public borrowing) imply reducing consumption of sleeping hoarding (that ought to be awakened otherwise), and consequently, less redistribution of income and wealth at the aggregate level. This is especially dysfunctional when income and wealth distributions are highly unequal and skewed. Second, money should be no longer considered as a measure (or a reserve) of value, but as a coordination device:

The Individualistic Capitalism of to-day, precisely because it entrusts saving to the individual investor and production to the individual employer, presumes a stable measuring-rod of value, and cannot be efficient – perhaps cannot survive – without one.

For these grave causes we must free ourselves from the deep distrust which exists against allowing the regulation of the standard of value to be the subject of deliberate decision. We can no longer afford to leave it in the category of which the distinguishing characteristics are possessed in different degrees by the weather, the birth-rate, and the Constitution, – matters which are settled by natural causes, or are the resultant of the separate action of many individuals acting independently, or require a Revolution to change them. (Keynes, 1923 [1931], pp. 103–104)

4 In guise of conclusion

In the aftermath of the global financial crisis, we can fairly say that not only are we all in the same boat on an ocean of liquid debt, but we are all *seasick*. By

²³ This functional viewpoint raises a new issue underlying the financialization process: if the latter does not reduce the aggregate creation of debt, all the pressure on public debt reduction shall result in shifting purchasing power creation from the public to the private sphere, reinforcing the centrality of banking and finance in coordinating and controlling economy and society.

taking Keynes's and Schumpeter's points a step forward, debt acquires an holistic and dynamic dimension that points to the working of economy and finance as interdependent wholes (systems). This makes debt at least partly irreducible to the lower order dimension of wealth and entitlements to it. As collective agencies at that upper order, therefore, banking and Government stand in a special state of not being able structurally to repay their loans, while being still responsible for having other people's loans repaid, *or forgiven*. Both banking and governmental borrowing can be and have been employed to generate investment, production and consumption that could not have been generated without this practice. Both agencies perform collective action through a special holistic dynamic economic activity that reallocates resources without directly levying them from individual patrimonies. Both actions consistently point to general interest missions that have been embedded in those agencies through various institutional configurations over time. The accounting representation is an integral part of the institutional framework that is designed to manage and control those actions. Indeed the ways banks and governments are accounted for are of the utmost importance, since accounting conventions establish what revenues and costs, assets and liabilities are, framing and shaping the allocation of resources through economy and society.

From this accounting-economic perspective, financial stability and instability depend not only (and that much) on solvency and liquidity by each banking or public sector entity, but especially on collective dynamic sustainability under regulations of both financial and economic systems. For instance, in a world of *ex nihilo* money (through both fiat money and credit lines), neither equity, provisional or prudential reserves can insulate the holder from the whole system: they act as regulatory devices, not pieces of gold stocked in a vault (were gold ever been a stable measuring-rod of value, once upon a time). In a world of *ex nihilo* money, accounting representation of accrued profits becomes especially sensitive for banking and financial institutions in general, since every banking process embeds a danger to be cleverly transformed in predatory lending (at the transaction level), and a private and powerful mode of *seignorage* (at the aggregate level). In such a world, overall financial stability and pursuit of economic performance may require creation, rescheduling *and cancellation* of debt over time, according to the overarching needs of the ongoing economic process of the whole economy. Indeed, those needs may involve both accumulation and de-cumulation of "capital," making a credit-debt economy fundamentally different from a "capitalist" economy, in Minsky's words. Therefore, the overall purpose of finance rests in supporting economy in its pursuit of satisfaction of individual and collective needs, not necessarily limited to or dependent upon its capital development.

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