Routledge Companion to Critical Accounting

Stress testing the adoption of Fair Value Accounting (FVA): Fragility and instability in financialized firms

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1. Introduction

This chapter is about the adoption of Fair Value Accounting (FVA) by the major accounting standards setting agencies specifically the International Accounting Standards Board (IASB) and in the US the Financial Accounting Standards Board (FASB). FVA in contrast to historic costs accounting (HCA) involves a reorientation from the income statement to balance sheet and from historic costs to the disclosure of market values within a reporting entities accounts. Hopwood (2009) observed that the move to fair value accounting (FVA) has been 'hotly debated'. Hopwood's argument was that whilst one strand of the accounting and finance debate encouraged this shift in calculative and reporting practice there are also 'inherent ambiguities' that need to be explored, specifically, how has FVA been 'operationalized in calculative terms' and what are the 'wider consequences'. In this chapter we argue that the adoption of FVA needs to be contextualised within the 'financialized firm' in order to understand its operational impact and wider consequences.

The Financial Accounting Standards Board (FASB) in the US and the International Accounting Standards Board (IASB) now mandate the use of FVA within a range of extant financial reporting standards. This adoption of FVA is the outcome of an on-going reorientation from (HCA) where the balance sheet rather that income statement becomes the focus of attention in terms of providing a 'relevant' and 'faithful representation' of a firm's financial condition to investors. HCA records realised revenues and how changes and movements in revenues and expenses impact upon the financial position of the firm in the balance sheet. FVA, in contrast, reveals how ongoing changes in the market value of assets (traded or estimated) impact upon a reporting entities comprehensive income and reported shareholder equity. The accounting debate about HCA or FVA centres on 'different conceptions of what it is for an accounting estimate to be reliable' (Power, 2010, p. 201).

The monopolising conception, according to Power is now grounded in financial economics: 'with its dominant cultural and technical authority as a style of reasoning spanning academia and practice' (Power, 2010, p.203). Opposing this conception and its acquired legitimacy involves challenging financial economics (Whitley, 1986) and the value relevance and reliability of information disclosed in a reporting entities financial statements (Barth, 2007; Barth and Landsman, 2010).

The IASB and FASB's adoption and consolidation of the balance sheet approach is apparent in a range of accounting standards that permit FVA. However, International Financial Reporting Standards (IFRS) 13 and Financial Accounting Standard (FAS) 157 'Fair Value Measurements' are the cornerstone accounting standards that set out the calculative and reporting principles governing FVA. These standards emphasizing that fair value accounting is a market-based not an entity-specific measurement and that financial statements of the firm should, where possible, reflect the market value of assets employed. Where a market valuation/price is not available then judgements and modelling can be employed to mimic what market participants would have experienced when pricing the asset. Both IFRS 13 and FAS 157 promote the use of a fair value hierarchy that distinguishes between: valuations based on market data obtained from sources independent of the reporting entity (observable inputs) and the reporting entity's own assumptions about market values based on the best information available in the circumstances (unobservable inputs). The notion of unobservable inputs is intended to allow for situations in which there is little, if any, market activity for the asset at the measurement date (IFRS 13[1]: 8 and FAS 157[2], p.3)

In this chapter we argue that it is important to contextualise the adoption of FVA within the 'financialized firm' to assess its operational impact and consequences. We draw upon three key elements from the financialization literature to frame our analysis and arguments about the operational and social consequences of adopting of FVA. Financialization is often deployed to describe the means by which capital market interests exert 'control' over the stewardship of corporate resources. Epstein observing that 'some writers use the term 'financialization' to mean the ascendancy of 'shareholder value' as a mode of corporate governance (see also Palley, 2007); some use it to refer to the growing dominance of capital market financial systems over bank-based financial systems; some follow Hilferding's lead and use the term 'financialization' to refer to the increasing political and economic power of a particular class grouping: the rentier class' (Epstein, 2005:3). Orhangazi uses the term 'financialization' to capture the complex relations between 'financial markets and other aspects of the economy' (Orhangazi, xiv). Krippner (2005) argues that changes in the composition of corporate balance sheets from tangible to financial asset accumulations

[1] http://www.ifrs.org/use-around-the-world/education/fvm/documents/educationfairvaluemeasurement.pdf

[2] http://www.fasb.org/cs/BlobServer?blobkey=id&blobwhere=1175823288587&blobheader=application/pdf&blobcol=urldata&blobtable=MungoBlobs

establishes a situation where: 'Non-financial corporations are beginning to resemble financial corporations – in some cases, *closely* – and we need to take this insight to our studies of corporate behaviour' (Krippner, 2005:201).

Lazonick (2013) observes that financialization is about the dominance of an ideology based on shareholder value, that is, the 'mode of corporate resource allocation has been legitimized by the ideology, itself a product of the 1980s and 1990s, that a business corporation should be run to "maximize shareholder value" (Lazonick, 2013: 859). Lazonick's argument is that firms, in the US, have become preoccupied with maximising short-run returns on capital and distributing profit to shareholders to maximise their returns at the expense of long-term commitment to innovation and workforce skills for product and process renewal. This, Lazonick argues, is undermining the competitiveness of the US economy because the interests' of shareholders does not align with the broader stakeholder interests and need to sustain competitiveness. For Lazonick, 'the key to the problem is the compensation of US corporate executives with indexed stock options that reward them for stock-price movements that are driven by stock-market speculation and manipulation and that are justified by the ubiquitous ideology that the role of these corporate executives is to "maximize shareholder value" (Lazonick, 2011: 1).

Froud et al (2006) observe that financialization is about how the process of on-going recapitalization of assets in speculative secondary markets conjoins both 'technical' and 'rhetorical' elements (Froud et al, 2006:71). That is, market valuations involve both a 'technical' calculation but also narrative 'rhetorical' component that is often employed to exaggerate performance and transformation (Froud et al, 2000). Both the technical numbers and optimistic narratives combine to generate an 'intangible' aspect to an assets market value and it is this 'intangible' component, incorporated into the valuation of assets, that tends to 'the widest and the freest' (Veblen, 2005:76). The trading of financial assets involves buyers taking speculative positions with the intention to sell on to make a profit in an endless round of recapitalization(s) that exploit a difference between the bid/ask spreads and motivations of complex financial intermediaries. This process of on-going recapitalization is fuelled by leverage whereby the collateral embedded in the value of assets takes on an increasingly 'intangible' form. That is, in a financialized world the capital market takes on added significance in terms of facilitating the 'vendibility' of assets at the expense of maintaining the serviceability of this capital. That is, the underlying current earnings from assets becomes a distant and less relevant factor determining the on-going value of these assets (Haslam et al, 2012).

Employing these various perspectives we can construct an understanding of the 'financialized firm': firstly that non-financial firms increasingly resemble 'financial firms', secondly that earnings distribution is prioritized over profit retention and third, that asset valuations recorded on balance sheet are speculative and volatile. In the following section

we argue that professional bodies and accounting standards setting agencies are actors that have influence over the regulatory process governing corporate behaviour. The accounting project is set out within a general 'conceptual framework' and is one that from the outset prioritises the interests of investors. Zeff (1999) reminds us that the architects of the accounting conceptual framework have consistently taken the view that the financial statements should provide information to inform investors. For example, ASOBAT: defined accounting as: 'the process of identifying, measuring, and communicating economic information to permit informed judgments and decisions by users of the information' [AAA, 1966, p. 1] where the main users are 'investors'

The justification for adopting FVA over HCA is that it enhances the provision of decision useful information to investors and this, in turn, serves to promote capital market efficiency. An alternative perspective generated in this chapter contextualizes the impact of changed financial reporting standards within the 'financialized firm' and uses this framing device to evaluate consequences in terms of firm-level financial fragility and instability. In the next section of this chapter we review the how the shift from HCA to FVA was informed by a motivation to enhance the provision of decision useful information to investors and thereby promote capital market efficiency and a lower the cost of capital (risk). In contrast our object is to set out an alternative framing that locates the shift from HCA to FVA within the financialized firm and employ this perspective to explore operational impacts and possible consequences (Hopwood, 2009).

2. Financial disclosure: Informing investors for capital market efficiency

In its 2013 discussion document 'A Review of the Conceptual Framework for Financial Reporting' the IASB invited readers to provide comments and responses to a series of questions asked. At the outset, whilst this is a discussion paper, it revealed the intentions and priorities of the reform agenda for financial reporting, namely, that the general purpose of financial reporting is to 'provide decision useful information to investors and those providing financial resources to firms' (see Biondi, 2012)

> The objective of general purpose financial reporting is to provide financial information about the reporting entity that is useful to users of financial statements (existing and potential investors, lenders and other creditors) in making decisions about providing resources to the entity (IASB, 2013: 20)

This objective has been a long-standing guiding principle governing the purpose of general purpose financial reporting.

> Financial reporting should provide information that is useful to present and potential Investors and creditors and other users in making rational investment, credit, and similar decisions (FASB, 2008:10)

Although the primary objective is to provide information to investors that is decision useful this can be enhanced where the information provided is comparable, capable of being verified, timely and easy to understand:

> If financial information is to be useful, it must be relevant and faithfully represent what it purports to represent. The usefulness of financial information is enhanced if it is comparable, verifiable, timely and understandable (IASB, 2013: 21)

Accounting standards, we are informed, serve to enhance transparency and inform investors about a firm's financial position and this, in turn, influences capital stack allocations (debt and equity) and decisions about risk and adjustments to a firms cost of capital.

> When the standards are applied rigorously and consistently, capital market participants will have higher quality information and can make better decisions. Thus markets allocate funds more efficiently and firms can achieve a lower cost of capital
>
> (Tarca, C, 2012:1)[3]

2.1 Arguments for the re-orientation from historic cost to FVA

The reorientation in financial reporting from HCA to FVA was justified because it would enhance transparency and improve the quality of information disclosed to investors thereby influencing capital allocation decisions and reducing the cost of capital (risk). The US Chartered Financial Analysts (CFA) institute observing that: 'We believe fair value measures are most relevant because they reflect the reality upon which the economic world operates: transactions take place at fair value' (CFA, 2010: 1[4]). The debate about the costs and benefits of historic or fair value accounting has been long-standing in both Europe and the US. In 1966, the American Accounting Association committee tasked with developing 'an integrated statement of basic accounting theory' released its report: A Statement of Basic Accounting Theory (ASOBAT). Emerson et al (2010) observing that:

> ASOBAT is extremely pertinent to any discussion of fair value reporting, both through its emphasis on relevance, as well as through the inclusion of a proposal that would allow entities to provide multiple measures of transactional information. This "dual-reporting" proposal was seen as an effort to transition the industry away

[3] http://www.ifrs.org/use-around-the-world/documents/case-for-global-accounting-standards-arguments-and-evidence.pdf

[4] https://www.cfainstitute.org/ethics/Documents/fair_value_as_measurement_basis.pdf

from historical cost toward the more relevant measure of fair value (Emerson et al, 2010:79).

Littleton (2011) makes a general observation that economists seek to capitalize future earnings expectations into current asset valuations but that accountants have been generally predisposed to measure costs actually incurred by an enterprise before the current date. Economists consider that it is important for a business enterprise to periodically recalibrate balance sheet valuations on the basis of changes to the market value of assets employed or the expected future earnings from these assets. Accountants, according to Littleton, find expected earnings unacceptable for most accounting uses because they are unwilling to 'cut loose their thinking and their service from the provable objectivity of accounts kept and financial statements made in terms of costs actually incurred by this enterprise before the current date' (Littleton, 2011, pp. 4–5).

It is the case that with HCA the purchase cost of an asset at the transaction date will correspond to the market value of that asset. However, the difference between HCA and FVA is not what do with the initial recorded measurement but what happens with subsequent measurement of balance sheet assets. The difference between HCA and FVA centres on whether the information disclosed in a reporting entities financial statements are subject to contemporary re-valuations (Edwards & Bell, 1964, Chambers, 1965; 1966, Morgan, 1988) to reflect current 'economic realities' where economic theory 'guides accounting practice' (Baker & Schulte, 2016). In this regard FVA favours the recalibration of asset values informed by on-going changes to market values or, in the absence of market values, expectations about changes to the future discounted earnings capacity of assets held on balance sheet.

Ditchev and Penman (2007) also review the differences between these alternative and competing approaches to doing financial reporting, a balance sheet approach (FVA) and income statement approach (HCA). The balance sheet-based approach is focussed on the appropriate valuation of assets and liabilities as the primary goal of financial reporting, with the 'determination of other accounting variables considered secondary and derivative' (Ditchev & Penman, 2007, p.4). The income statement approach is focussed on the determination of revenues, expenses and the timing and magnitude of the revenue and expense amounts and residual earnings where 'balance sheet accounts and amounts are secondary and derivative' (Ditchev & Penman, 2007, p.4; Ronen, 2008). For an HCA perspective changes in the balance sheet drop out as a residual adjustment in periodic accruals. During the 1970s the FASB concluded, after considerable debate, that the balance sheet approach should inform standard-setting and general financial reporting (Ditchev & Penman, 2007). Penman (1973) summarises the difference between the income statement and balance sheet approach to accounting in terms of the way in which assets are conceptualised: either as representing a 'service-potential asset-in-use' or 'asset-in-

exchange' (Penman, 1973:216). That is, the firm can either sacrifice or transform assets to generate revenues and profits or accumulate and recapitalize assets to capture realized or unrealized holding gains that inflate earnings (Dichev & Penman, 2007, p.10).

IFRS 13 and FAS 157 are, as we have noted, the cornerstone accounting standards that outline the principles and techniques governing the process of FVA. Both IFRS 13 and FAS157 employ a fair value hierarchy that prioritizes the inputs that should be used to construct the fair value of an asset. Level one input's are based on observable market data, level two inputs are those other than quoted market data and level three valuations are where the reporting entity can employ judgements and modelling. These judgements are based on best estimates about the behaviour of market participants and how they would price the asset or liability, specifically assumptions about future cash flows and cost of capital employed to discount expected cash flows. Whether market prices or estimates are being employed there is a speculative element attached to valuing assets at their fair value. The challenge for accountants is to estimate fair values accurately and this involves reducing the scope for discretion. Where identical assets trade in liquid markets this information provides a reliable valuation but discretion and judgment are often required where asset values have to be estimated or modelled (Ryan, 2008; Baker & Schulte, 2016).

> The recognition and measurement of some items in financial statements are based on estimates, judgements and models rather than exact depictions. As a result of the uncertainties inherent in business activities, certain items in financial statements cannot be measured precisely but can only be estimated. Estimation involves judgements based on the latest available reliable information (EU Directive 2013/34: para 22)
>
> To a large extent, financial reports are based on estimates, judgements and models rather than exact depictions. The Conceptual Framework establishes the concepts that underlie those estimates, judgements and models[5] IASB, 2013:196.

These judgements about the valuation of assets should be on the basis of how investors, creditors and other lenders would assess the contribution of an asset or liability.

> The IASB believes that the relevance of a particular measurement will depend on how investors, creditors and other lenders are likely to assess how an asset or a liability of that type will contribute to the entity's future cash flows.
> (IASB, 2013: 108)

[5] http://www.ifrs.org/Current-Projects/IASB-Projects/Conceptual-Framework/Discussion-Paper-July-2013/Documents/Discussion-Paper-Conceptual-Framework-July-2013.pdf

There is a general understanding that 'investors' are interested in knowing the current market value of a firm's assets and liabilities and net worth rather than the historic cost of a firms balance sheet. Gigler et al (2013) suggest that : 'While the arguments supporting fair value accounting are not based on any formal analytical models that we are aware of, the intuition underlying its support seems to be the following. The current market values of a firm's assets and liabilities are much more descriptive of a firm's financial position/wealth than their historical acquisition cost' Gigler et al (2013:2)[6]. In terms of informing investors it is argued that 'fair value' information provides valuations that reflect the fundamental performance of the firm and this contributes to informing investors and makes the capital market more 'efficient'. This logic surrounding the use of fair values to adjust information recorded in financial statements and disclosures has, according to Gigler et al become 'obvious and compelling' and thus a proliferation of accounting standards deal with the mechanics of fair value accounting for: financial instruments, tangible and intangible assets, property, biological assets and business combinations.

The adoption of FVA by the FASB and IASB was primarily justified in terms of informing 'investors' so as to enhance capital market efficiency and thereby reduce the cost of capital. A comprehensive review of the academic evidence on financial reporting and its impact on capital market efficiency carried out by The Institute of Chartered Accountants in England and Wales (ICAEW, 2014) concluded that: 'It is not possible, however, to draw indisputable conclusions on the overall effects of mandatory IFRS adoption based on the available research. Different researchers arrive at different conclusions' (ICAEW, 2014:6).

In the next section we argue that the adoption of FVA can be contextualized within an alternative framework of analysis that we describe as the 'financialized firm'. This framing is employed to evaluate and reveal contradictions and ambiguities that can arise from the adoption of FVA in terms of firm-level financial fragility and stability.

2.2 Installing FVA in the financialized firm

Our argument in this section is that the adoption of new forms of accounting disclosure need to be stress tested within the context of the 'financialized firm'. Krippner (2005) observes that that non-financial firms increasingly resemble financial firms in terms of the structure of their balance sheets and it is important to understand how this impacts on corporate behaviour. Our argument is that the adoption of FVA allows firms to adjust the value of their assets to a market value informed by active market prices or judgements and modelling about market values. The outcome is that the asset structure of a firm's balance sheet blends both assets at 'cost' and increasingly assets at a market valuation. Thus asset values recorded on balance sheet of non-financial firms increasingly resemble that of

[6] http://laef.ucsb.edu/pages/conferences/aae13/papers/kanodia.pdf

financial firms that trade in financial instruments. FVA adjustments to a firms assets are essentially speculative values extracted from active secondary markets that trade assets or estimates and modelling that mimic these speculative market conditions. Thus asset values recorded on a firm's balance sheet have the potential to become unstable because they are increasingly connected to stock and bond prices, securitized asset prices, property market conditions and other volatile capital markets.

FVA adjusts the reported value of a firms assets but these line items are not isolated but interconnected by virtue of double-entry book-keeping that adjusts assets in line with liabilities. We could envisage a relatively immaterial adjustment to the market value of a firms assets triggering off a material financial disturbance elsewhere in the accounts. For example, a relatively small adjustment in the value of a firms marketable securities could undermine reported profits and thereby also undermine retained earnings reserves reported within shareholder. Plihon, for example, consolidates this understanding about accounting as a networked transmission system observing that when adjustments are made to one line item changes are not confined to a single set of accounting records but trigger compound effects. Plihon makes the point that financial fragility results from relatively immaterial adjustments to one line item translating into a material impact elsewhere in the financial statements. This connectivity between line items can generate unintended consequences for example: undermine liquidity, compromise solvency, damage credit ratings, force the sale of assets and amplify downsizing (Plihon, 2002).

In the financialized firm Lazonick (2011; 2013) draws attention to the fact that US and European firms are now distributing more of their profit as dividends and share buy-backs for treasury stock. These distributions are so high that there is very little surplus profit carried forward into the firm's shareholder equity to accumulate as retained earnings. This means that the financial fragility of firms is heightened because potential asset value impairments would be charged to retained earnings reserves but these are being hollowed out. Table 1 reveals that the S&P 500 group of companies distributed approximately 90 percent of their earnings as dividends and share buy-backs over the period 2011-2016

Table 1: US S&P 500 dividends and share buy-backs out of earnings

	Operating earnings	Dividends	Share Buybacks	Dividends and Share buy-backs	As a share of earnings
	mill $	mill $	mill $	mill $	%
2011-2016	$4,596.21	$1,605.74	$2,476.56	$4,082.30	89

Source: www.spdji.com/indices/equity/sp-500

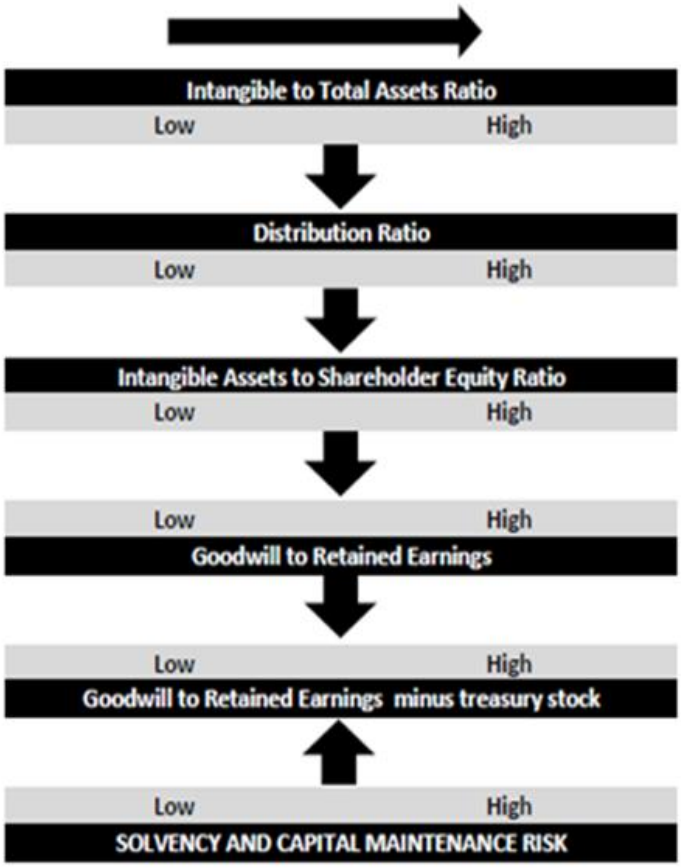
Froud et al (2006) argue that the potential for speculative asset values to become impaired is amplified because numbers and optimistic narratives combine to justify and inflate market values. On the technical side of things numbers are employed to represent the growth in an assets earnings and also construct the discount rate for the cost of capital. However, these technical calculations are also supplemented with narratives that tend to exaggerate the capacity for financial transformation. There is therefore a tendency for asset markets to promote the vendibility of assets at the expense of their serviceability that is the underlying earnings of these assets bears only a distant relation to their current market valuations.

To construct our framework of analysis we employ a series of key ratios to evaluate the adoption of FVA within the financialized firm. Our investigation focuses on the S&P 500 group of firms which have adopted FVA since 2001 and specifically focuses on the recording of goodwill which reflects the difference between an acquired company's book value and its stock market value. The adoption of FVA accounting modified how Goodwill is accounted for because this line item now accumulates on the asset side of a firm's balance sheet and is periodically tested to establish whether this is impaired[7] (see also KPMG, 2014). Previously goodwill would have been amortised as an annual charge against earnings and absorbed by a reduction in retained reserves in shareholder equity. Goodwill therefore represents the absorption of market value into the acquiring firm's accounts and is at risk if it is assessed to have become impaired (Biondi, 2013).

A first key ratio describing the financialized firm is the earnings distribution ratio which reveals the extent to which the share of earnings distributed as dividends and share buy-backs is increasing. A further important ratio reveals the relation between retained earnings held in reserve and goodwill. Specifically, the ratio of goodwill to retained earnings minus treasury stock reveals the extent to which a firm is accumulating a reserves that could absorb goodwill impairment. Our argument is that net retained earnings after deducting treasury stock provides an important financial buffer, similar to a banks regulatory capital, acting to contain or hedge the risk of insolvency

[7] http://www.fasb.org/jsp/FASB/Document_C/DocumentPage?cid=1218220124961&acceptedDisclaimer=true

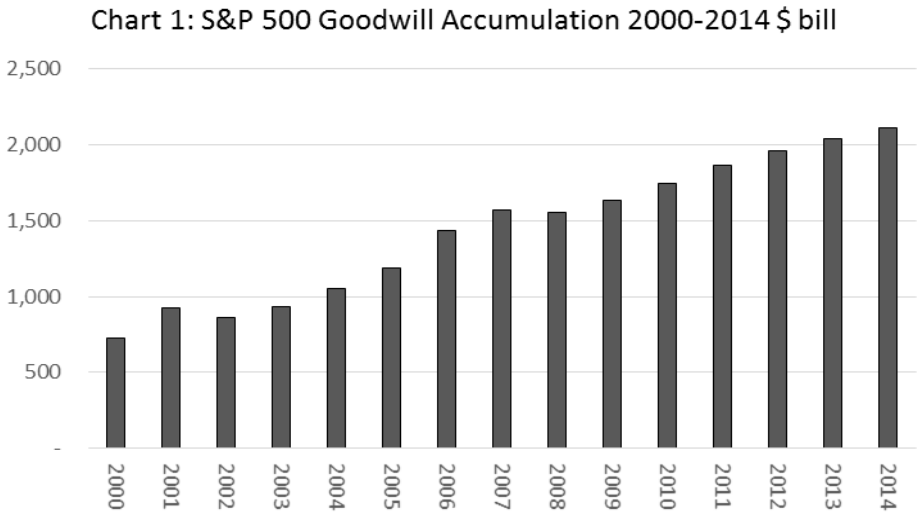
Figure 1: Key ratios employed to review the adoption of FVA within the financialized firm



Source: adapted from Haslam et al 2016
Notes: For definitions of data employed to construct these ratios see endnote[i]

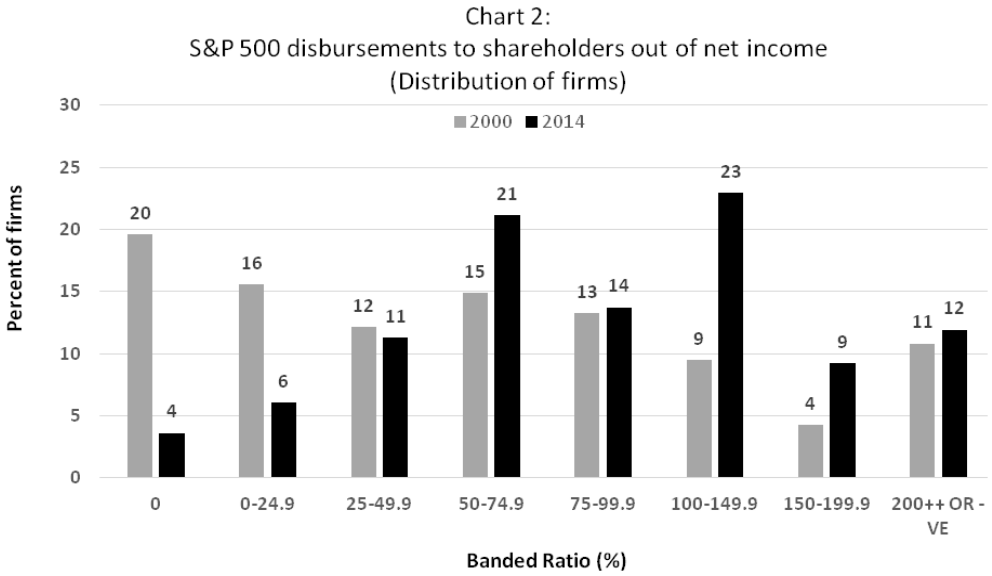
3.0 Asset impairment risk: Fragility and instability in the financialized firm

The absorption of goodwill into the S&P 500 continues to accumulate as firms also continue to acquire other firms in an active market for corporate control. In the US the typical market to book value multiple averages 3:1, that is the market value of acquisitions is roughly three times that of their recorded book value. Goodwill arising out of corporate acquisitions will continue to accumulate on the acquiring firm's balance sheet because it is not amortised. In 2014 we estimate that the US S&P 500 group of firms had an accumulated goodwill on balance sheet amounting to $2.2 trillion. Although this goodwill was only equivalent to 8 percent of total assets recorded on the balance sheet of the S&P 500 it is, as we will go now argue, a significant item relative to annual net income and stock of retained earnings reserves held within shareholder equity.



Source: Source: Thomson Analytics Datastream S&P 500 data
Note: Sample consists of 444 paired S&P 500 firms that is all firms for which we have data on total assets, and intangible assets over the complete period.

In the year 2000 the ratio of goodwill to net income in the S&P 500 stood at 2:1 and by the year 2014 this had increased to 2.5:1. A relatively minor goodwill impairment would have a significant impact on S&P 500 net income, for example, just a 10 percent impairment of goodwill in 2014 would have reduced net earnings per share (EPS) by one-quarter and this, in turn, would immediately have a negative impact on stock market valuations because EPS is employed to construct equity valuations.



Source: Thomson Analytics Datastream S&P 500 data
Note: Sample consists of 444 paired S&P 500 firms with all firms having data on Net Income, Dividends and Share buy-backs across both time periods

In chart 2 we show the distribution of net income to dividends and share buy-backs for a matched group of firms, that is, the same firms for which we have data for both years. The banded ratio reveals the share of firms in the sample of 444 that distribute between X and Y percent of their net income. The general pattern observable in this chart is for an increased number of firms listed in the S&P 500 to distribute more of their net income to shareholders over the period 2000 to 2014. In 2000 twenty-four per cent of firms in our S&P 500 matched sample distributed dividends and share buy-backs in excess of their net income but by 2014 some 44 per cent of firms were distributing more to shareholders than their net income generated. Lazonick (2014) argues that this high distribution of profit to shareholders leads to a culture of 'downsize and distribute' because, in an era of shareholder value, there is very little headroom for productive re-investment: 'Consider the 449 companies in the S&P 500 index that were publicly listed from 2003 through 2012. During that period those companies used 54% of their earnings—a total of $2.4 trillion—to buy back their own stock, almost all through purchases on the open market. Dividends absorbed an additional 37% of their earnings. That left very little for investments in productive capabilities or higher incomes for employees' (Lazonick, 2014).

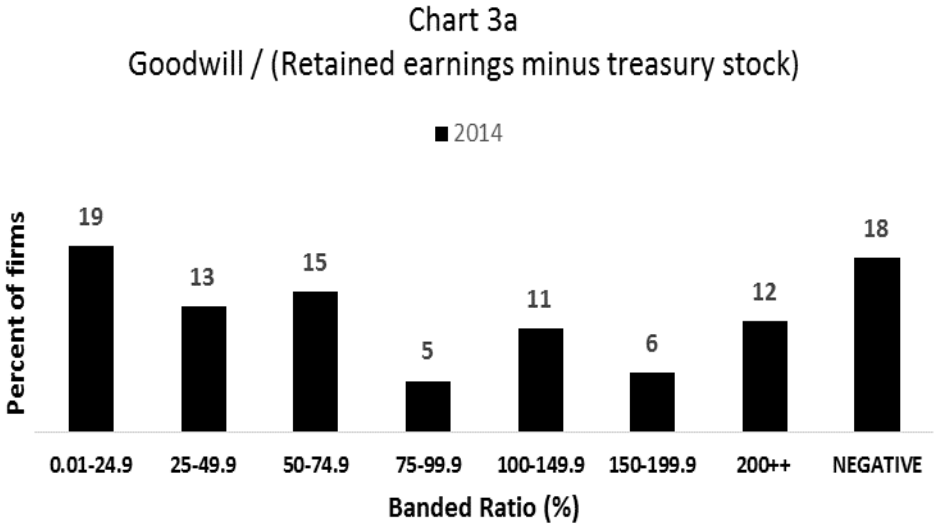
Our findings also confirm that the S&P 500 group of firms are distributing a higher proportion of net income as dividends and share buy-backs during the period 2000 to 2014 and this, we argue impacts upon the accumulation of profit reserves in shareholder equity. The accumulation of profit reserves, after deducting dividends and treasury stock, is accumulating at a slower rate than the accumulation of goodwill. In charts 3a and 3b we estimate the number of firms listed in the S&P 500 that have recorded goodwill that exceeds their accumulated reserves reported in shareholder equity. The information employed to construct these charts is outlined in table two. For the first group of firms we are able to subtract accumulated treasury stock balances from retained earnings but for the second group we are estimating the retained earnings minus treasury stock by subtracting from total shareholder equity the accumulated original paid in capital including share premiums.

The analysis for both charts 3a and 3b reveals a similar pattern. Roughly 50 percent of firms listed in the S&P 500 are operating with accumulated goodwill that exceeded their retained earnings after deducting treasury stock. If these firms were to write down their goodwill this could potentially erode paid in capital exacerbating financial fragility and amplifying financial instability.

Table 2: Data employed to construct charts 3a and 3b

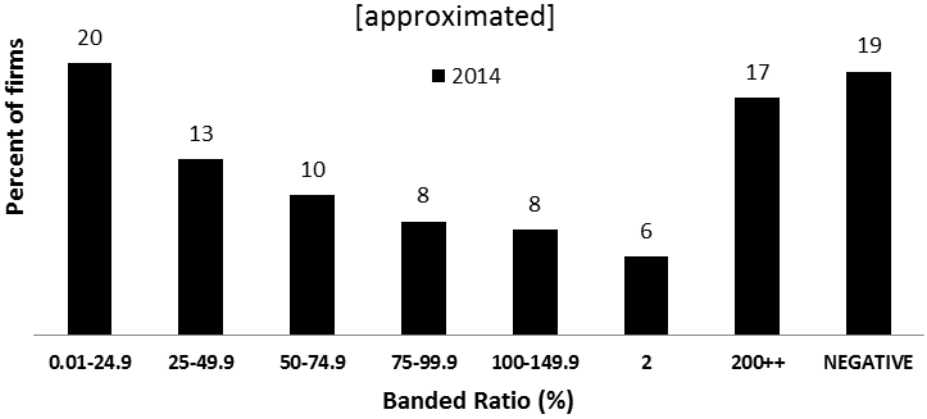
For the year ended 2014 for S&P 500 firms	Chart 3a	Chart 3b
Accumulated common stock and additional paid in capital	X	X
Plus Accumulated retained earnings	X	Approximation for retained earnings minus treasury stock
Minus Accumulated treasury stock	(Y)	
Plus / minus other comprehensive income	X or (Y)	
= Total shareholder equity	Z	Z
Number of firms with data	257	159

Notes: Chart 5a employs the data for 257 matched firms where we have both accumulated retained earnings and treasury stock disclosed in 2014. For chart 5b we have subtracted accumulated common stock and additional paid-in capital (including share premiums) from total shareholder equity to obtain an estimate of retained earnings after deducting treasury stock (noting that this will also capture comprehensive income adjustments)



Source: Thomson Analytics Datastream S&P 500 data
Note: Sample consists of 257 paired S&P 500 firms with all firms having data on treasury stock and retained earnings. A negative ratio results because retained earnings after deducting treasury stock are negative.

Chart 3b:
Goodwill / (Retained earnings minus treasury stock)
[approximated]



Source: Thomson Analytics Datastream S&P 500 data
Note: Sample consists of 159 paired S&P 500 firms with all firms having data on paid in capital including premiums and total shareholder equity (see table 1). A negative ratio results because the deduction of paid in capital from shareholder equity results in a deficit figure.

Our aggregate analysis reveals that US firms are absorbing market value on to their balance sheets as they account for the difference between the market and book value of acquisitions as 'goodwill'. These financialized firms are aggressively distributing more of their profits as dividends and share buy-backs and this is reducing the accumulation of retained earnings to the point where many firms could not absorb a significant goodwill impairment. In circumstances where retained earnings reserves are completely hollowed out asset impairments would immediately need to be written off against paid in capital. In table 3 we employ three company cases to reveal the extent to which retained earnings reserves are being hollowed out relative to goodwill: Microsoft, Pfizer and Hewlett Packard

Table 3: Goodwill and retained earnings reserves in Pfizer, Microsoft and Hewlett Packard

	Pfizer	Microsoft	Hewlett Packard
For Year 2015-6	$ mill	$ mill	$ mill
Paid in Capital	81,501	68,178	1,981
Retained earnings	-7,259	2,282	32,089
Other Comprehensive Income	-9,522	1,537	-6,302
Retained earnings plus comprehensive income	-16,781	3,819	25,787
Goodwill	48,242	17,872	32,941
Net Income	16,700	6,960	4,554

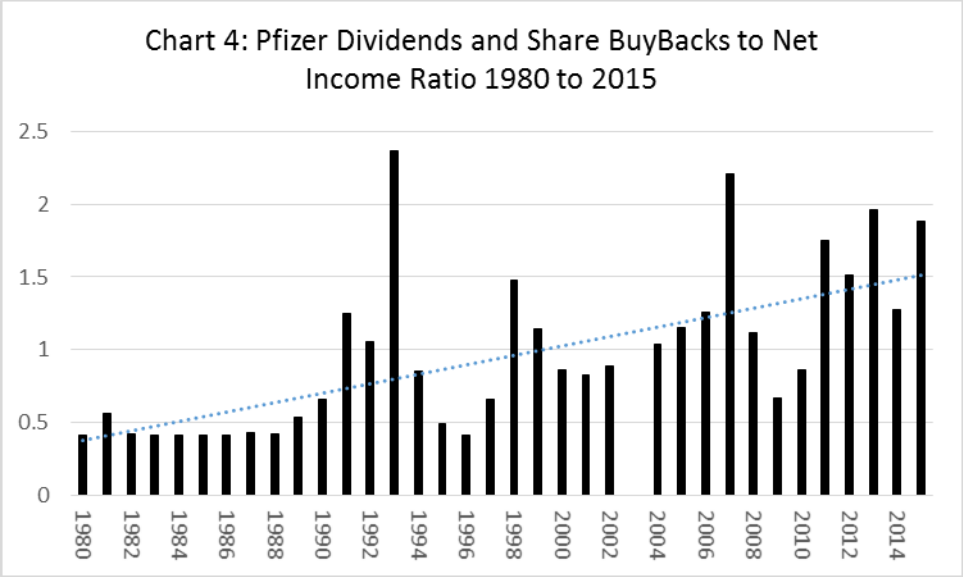
Source: Edgar Securities and Exchange Commission datasets. https://www.sec.gov

These three company cases illustrate the extent to which retained earnings can be hollowed through the distribution of dividends and share buy-backs for treasury stock. In the case of Pfizer retained earnings are negative and there is also a negative comprehensive income reserve arising out of charging pension fund deficits and currency translation losses. In this specific case any goodwill impairments would immediately erode paid in capital and a relatively modest 10 percent goodwill impairment would reduce net income by one-quarter. Companies like Microsoft have also pursued aggressive dividends and share buy-back policies and this has eroded retained earnings to $2.3bn with goodwill standing at $18bn and so a relatively small goodwill impairment charge would erode paid in capital and undermine reported net income. Hewlett Packard has maintained retained earnings to a level that would absorb a significant goodwill impairment but even a relatively small write down would significantly damage reported net earnings.

In the Pfizer case we observe that over the period 1980 to 2015 the ratio of distributed net income increases from roughly 50 percent of profits to levels that are consistently in excess of profits generated by the company (see chart 4). During the period 1980 to 2015 Pfizer's accumulated net income was roughly $100bn with dividends roughly $100bn and share buy-backs $105bn. In order to maintain the payment of dividends and purchase of stock buy-backs that exceeded net income Pfizer was using debt to finance equity distributions. When a firm makes share repurchases these are recorded at their market value and shown as reducing retained earnings in shareholder equity in the balance sheet.

The Pfizer case also illustrates that treasury stock is a fluid balance because repurchased shares can subsequently be employed to finance future acquisitions, that is, Pfizer's deals have been financed by a mix of cash plus own treasury shares. For example, the deal to purchase Wyeth in 2010 for $68bn involved Pfizer paying for the deal with a mix of borrowing, cash reserves plus its own shares issued from treasury stock. The market value of these treasury stock shares was $17.19 per share and accounted for roughly 34% of the deal.

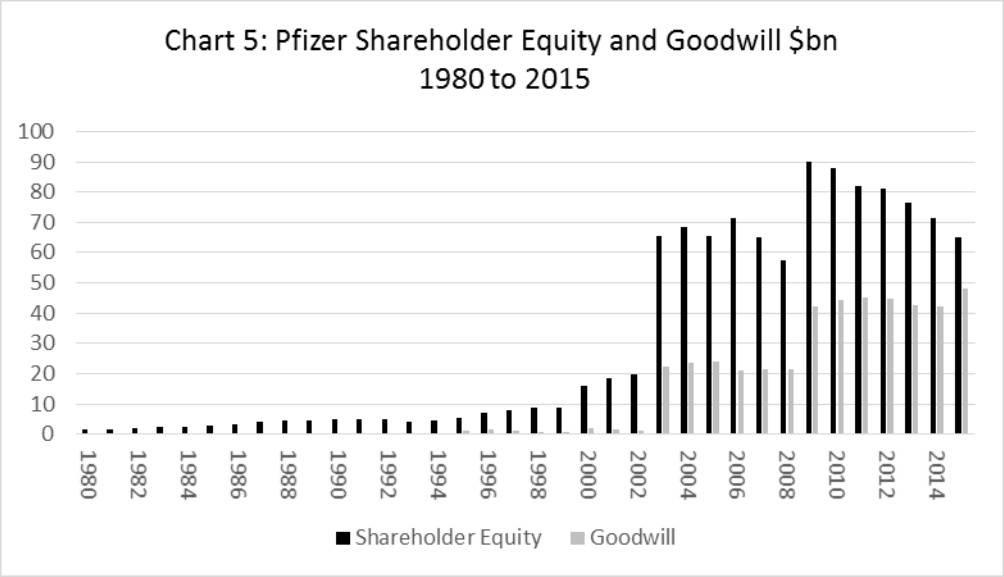
> Under the terms of the deal, Pfizer would pay $50.19 a share for the company — $33 a share in cash and 0.985 Pfizer shares worth $17.19 a share based on Pfizer's closing price on Friday. That is roughly a 29 percent premium over the share price before word of the deal leaked on Friday.
>
> http://www.nytimes.com/2009/01/26/business/26drug.html?_r=0



Source: Thomson Analytics Datastream S&P 500 data

After the acquisition of Wyeth Pfizer's earnings per share deteriorated but the promise to investors was that a more aggressive stock buy-back campaign would strengthen earnings per share (EPS). Within two years of the acquisition roughly $20 billion had been spent on share buy-backs a figure roughly equivalent to the companies spend on R&D during the same period.

> Pfizer has begun buying back stock following a hiatus after its $68 billion purchase of Wyeth in 2009, but the purchases have been modest so far, at $1 billion in 2010. A more aggressive buyback of $5 billion to $6 billion annually in the next five years could lift the company's profit to more than $2.60 a share by 2015, speculates one shareholder. An even bigger buyback program of $8 billion to $9 billion annually could lift profit to almost $2.90 a share http://www.barrons.com/articles/SB50001424052970204650204576003802213136870y 2015.



Source: Thomson Analytics Datastream S&P 500 data

Treasury stock and goodwill are interconnected line items and this is because the treasury stock employed to finance acquisitions such as for Wyeth would be reported as reducing the balance of treasury stock. If the balance of treasury stock is reduced then this would serve to inflate shareholder funds (see jump in shareholder equity from 2008 to 2009). However the subsequent aggressive buy-back of shares to replenish treasury stock and inflate reported EPS would then show up as a progressive reduction in shareholder equity from 2010 onwards. In chart 5 Pfizer's goodwill ratchets relative to shareholder equity because goodwill is accumulating after each acquisition whilst retained earnings are being depleted by an aggressive dividends and buy-back program. In Pfizer retained earnings balances reduce relative to goodwill accumulations as the process of financial engineering sets these two line items on divergent trajectories contributing to financial fragility and heightening the risk of financial instability.

4. Conclusions and Discussions

In this chapter we have argued that changes to accounting practise and disclosure should be evaluated within the context of the financialized firm so as to reveal contradictions and heightened risk to society. The re-orientation of accounting practise from HCA to FVA has been justified within an 'investor-capital market' frame that focuses on the provision of decision useful information to investors so as to promote capital market efficiency and reduce the cost of capital. The users and preparers of firm financial statements are generally supportive of the adoption of FVA because it records 'real' transactions at their market value and this is information that investors tell us they want to see produced. That is, accounting disclosures now reflect current 'economic realities' where economic theory

'guides accounting practice' (Baker & Schulte, 2016). The adoption of FVA, by way of contrast, troubles accountants because, according to Littleton, it shifts the focus of financial statements from the income statement to the balance sheet and the adjustment of balance sheet asset values to their market value. This objection is also founded upon the argument that accounting disclosures should both reflect and inform a conservative and prudent stewardship of resources to ensure capital maintenance (Hoogervorst, 2012; FRC, 2014). Whilst others have argued that the adoption of fair value accounting, and specifically with regards to the valuation of financial instruments may contributed to the financial crisis in the banking sector (Biondi, 2011; Maystadt, 2013).

In this chapter we argue that it is necessary stress test changes to accounting standards in relation to firm financial fragility and stability rather than the narrow requirements of investors and promotion of capital market efficiency. To make reinforce this conceptual shift we also argue it is necessary to contextualize the installation of new accounting practices and disclosure requirements within financialized firms. Drawing on three elements from the financialization literature we construct an understanding of the financialized firm: First, Krippner's (2005) observation that non-financial firms are becoming more like financial firms; Lazonicks (2013) argument that US firms and their European counterparts are aggressively distributing earnings at the expense of re-investing; and Froud et al's (2006) argument that numbers and narratives combine to inflate capital valuations ahead of their putative earnings capacity where this 'intangible' component of an assets value is volatile (Veblen, 2005; Haslam et al, 2012).

In line with Krippner's argument the adoption of FVA makes non-financial firms more like financial firms, that is, it the non-financial firm's balance sheet increasingly resembles a bundle of speculative financial instruments. That is, asset values are being adjusted on the basis of future earnings discounted back in time to generate a current market value (Palea, 2015). This process of adjusting asset values to a market value conjoins the firm's asset values to secondary markets that by their nature are volatile. In this chapter we focus on accounting for goodwill which records the difference between the book and the market value of acquired firms. This goodwill is no longer amortised but accumulating on balance sheet whilst being periodically assessed to establish if it is impaired.

Our analysis also confirms that US firms in the S&P 500 are distributing a higher proportion of their net income (Lazonick, 2013) and many are paying out more than they earn as profit in a given year. Thus many firm are now using borrowings to finance dividends and share buy-backs. This aggressive distribution of earnings is, we argue, hollowing out retained earnings which, like a banks regulatory capital, act as a buffer to absorb any adverse changes to the market value of assets held on balance sheet. What now matters is the interconnectivity between one accounting line item and another as identified by Plihon (2002) who observes that relatively immaterial adjustments to one line item could

compromise another line item which also happen to be a key signifier for a credit rating agencies, a key financial element in a bond covenant or solvency test.

Our analysis of the S&P500 reveals that the goodwill recorded on balance sheet is accumulating ahead of the retained earnings component of shareholder equity which is a financial buffer available to absorb asset value impairments. From a position of relatively robust reserves, in relation to asset value at risk, the S&P 500 is drifting further towards a situation of financial fragility and impending financial instability. Asset impairments can also undermine reported net income and again we argue that relatively small adjustment to a line item like goodwill would undermine earnings and trigger corporate restructuring. The company cases also reveal a different perspective on the interconnectedness of line items and although goodwill and treasury stock are inter-related line items with one feeding the inflation of the other these line items are on different trajectories in the financialized firm.

The adoption of FVA was justified on the basis that it would provide decision useful information to investors and thereby would also contribute to making capital markets more efficient. The central argument of this chapter is that it is necessary to evaluate and stress test changes in accounting standards and their impact on reported firm financials. Specifically, we argue that changes to accounting disclosure need to be contextualised within the financialized firm. In the financialized firm balance sheet assets now congeal speculative valuations at risk of being impaired but this risk is not being hedged by reserves because these are being hollowed out. In the context of the financialized firm the adoption of FVA is leaving firm's financially fragile and at heightened risk of instability.

References

American Accounting Association. (1966). A Statement of Basic Accounting Theory (Evanston, IL: AAA).

Baker, R., & Schulte, S. (2016). Representing the market perspective: Fair value measurement for non-financial assets. *Accounting, Organizations and Society*, in press.

Barth, M. (2007). Standard-setters, measurement issues, and the relevance of research. *Accounting and Business Research* 37(3), 7-15.

Barth, M., & Landsman, W.R. (2010). How did Financial Reporting Contribute to the Financial Crisis? http://www.bde.es/f/webpi/SES/seminars/2010/files/sie1007.pdf

Biondi, Y. (2011). The Pure Logic of Accounting: A Critique of the Fair Value Revolution, Accounting, Economics, and Law: 1:1, Article 7. http://www.degruyter.com/downloadpdf/j/ael.2011.1.1/ael.2011.1.1.1018/ael.2011.1.1.1018.xml

Biondi, Y. (2013). Hyman Minsky's Financial Instability Hypothesis and the Accounting Structure of Economy, *Accounting, Economics and Law: A Convivium*. 3(3):141-166 http://www.degruyter.com/view/j/ael.2013.3.issue-3/ael-2013-0045/ael-2013-0045.xml#S0002

Biondi, Y. (2012). What Do Shareholders Do? Accounting, Ownership and the Theory of the Firm: Implications for Corporate Governance and Reporting, *Accounting Economics and Law: A Convivium.* 2(2): 2152-2820 http://www.degruyter.com/view/j/ael.2012.2.issue-2/2152-2820.1068/2152-2820.1068.xml

Chambers, R. (1965). Measurement in Accounting. *Journal of Accounting Research*, 3(1), 32-62.

Chambers, R. (1966). Accounting, Evaluation and Economic Behavior , New Jersey: Prentice-Hall.

Ditchev, I., & Penman, S. (2007). *On the Balance Sheet Model of Financial Reporting*. Columbia Business School, Centre for Excellence in Accounting and Security Analysis. http://www8.gsb.columbia.edu/sites/ceasa/files/files/Dichev_final.pdf

Edwards, E & Bell, P. (1964). The theory and Measurement of Business Income, University of California Press, Berkeley and Los Angeles.

Emerson, T., Karim, K & Rutledge, R. (2010). Fair Value Accounting: A Historical Review of The Most Controversial Accounting Issue In Decades. *Journal of Business & Economics Research* 8(4): 77-86

Epstein, G. (2005). Financialization and the world economy. Northampton, MA: Edward Elgar, USA.

Froud J., Johal S, Leaver A., & Williams K. (2006). Financialization and Strategy: Numbers and Narratives. London: Routledge.

Financial Reporting Council (FRC, 2014). True and Fair https://www.frc.org.uk/FRC-Documents/Accounting-and-Reporting/True-and-Fair-June-2014.pdf

Financial Accounting Standards Board (FASB, 2008) Statement of Financial Accounting Concepts No. 1: Objectives of Financial Reporting by Business Enterprises. http://www.fasb.org/resources/ccurl/816/894/aop_CON1.pdf

Froud, J, Johal, S, Leaver, A & Williams, K. (2006). *Financialization and Strategy: Narrative and Numbers. London:* Routledge, Taylor and Francis.

Gigler, F., Kanodia, C., & Venugopalan, R. (2103). Who Benefits from Fair Value Accounting? An Equilibrium Analysis with Strategic Complementarities http://laef.ucsb.edu/pages/conferences/aae13/papers/kanodia.pdf

Haslam, C., Andersson, T., Tsitsianis, N & Yin, Y.P (2012) Redefining Business Models: Strategies for a Financialized World. London: Routledge, Taylor and Francis.

Haslam,C ., Tsitsianis,N., Hoinaru, R., Andersson, T & Katechos, G (2016) Stress Testing International Financial Reporting Standards (IFRS): Accounting for Stability and the Public Good in a Financialized World

Hoogervorst, H. (2012). The Concept of Prudence: dead or alive? FEE Conference on Corporate Reporting of the Future, Brussels, Belgium, Tuesday 18 September http://www.ifrs.org/Alerts/PressRelease/Documents/2012/Concept%20of%20Prudence%20speech.pdf

Hopwood, A. G. (2009). The economic crisis and accounting: Implications for the research community. *Accounting, Organizations and Society* 34(6-7), 797-802.

International Accounting Standards Board (IASB). 2013. A review of the conceptual framework for financial reporting. Discussion paper DP/2013/1 http://www.ifrs.org/Current-Projects/IASB-Projects/Conceptual-Framework/Discussion-Paper-July-2013/Documents/Discussion-Paper-Conceptual-Framework-July-2013.pdf

Institute of Chartered Accountants in England and Wales (ICAEW, 2014) The Effects of Mandatory IFRS Adoption in the EU: A Review of Empirical Research. http://www.icaew.com/~/media/Files/Technical/Financial-reporting/Information%20for%20better%20markets/IFBM/effects-of-mandatory-ifrs-adoption-oct2014-execsum.pdf.

IFRS (2013) Conceptual Framework: Capital Markets Advisory Committee meeting http://www.ifrs.org/Meetings/MeetingDocs/Other%20Meeting/2013/March/AP%203%20conceptual%20framework.pdf

KPMG (2014).Who cares about goodwill impairment? A collection of stakeholder views, http://www.kpmg.com/CN/en/IssuesAndInsights/ArticlesPublications/Documents/Who-cares-about-goodwill-impairment-O-201404.pdf

Krippner, G. (2005). The financialization of the American economy, *Socio - Economic Review* 3 (2): 173:207

Lazonick, W. (2011.) Reforming the Financialized Business Corporation, http://50.87.169.168/Documents/EPRN/Lazonick-Reforming-the-Financialized-Corporation.pdf

Lazonick, W. (2013). The Financialization of the U.S. Corporation: What Has Been Lost, and How It Can Be Regained. https://www.google.co.uk/search?hl=en&q=lazonick+financialization&ei=dHDsVLqPGdGO7Qa5qoCgAQ

Littleton A. (2011). Economists and Accountants. *Accounting, Economics, and Law: A Convivium* 1(2), Article 2.

Maystadt, P. (2013). Should IFRS standards be more "European"? http://ec.europa.eu/finance/accounting/docs/governance/reform/131112_report_en.pdf

Morgan, G. (1988). Accounting as reality construction: towards a new epistemology for accounting practice, *Accounting, Organizations and Society*, 13 (5): 477-485

Orhangazi, O. (2008). Financialization and the US Economy, Edward Elgar Publishers, UK

Palley, T. (2007). Financialization: What It Is and Why It Matters, The Levy Economics Institute and Economics for Democratic and Open Societies, Washington, D.C. http://www.levyinstitute.org/pubs/wp_525.pdf

Palea, V. (2015) The politics of fair value reporting and the governance of the standards-setting process: Critical issues and pitfalls from a European perspective, *Critical Perspectives on Accounting*, 29: 1-102

http://doi:10.1016/j.cpa.2014.10.004

Palley, T. (2007). Financialization: What It Is and Why It Matters, Working Paper No. 525 The Levy Economics Institute and Economics for Democratic and Open Societies, Washington, D.C.
http://www.levyinstitute.org/pubs/wp_525.pdf

Penman, S. (1973). A framework for the development of a theory of Financial Accounting. *University of Queensland papers*, Vol. (2):4.
https://espace.library.uq.edu.au/view/UQ:221172/HF5625_P46_1973_v2no4.pdf

Plihon, D. (2002). Rentabilite´ et risque dans le nouveau régime de croissance. Commissariat Général du Plan – No. 69, October.
http://www.ladocumentationfrancaise.fr/var/storage/rapports-publics/024000552.pdf
Power, M. (2010.) Fair value accounting, financial economics and the transformation of reliability, Accounting and Business Research, 40 (3): 197:210

Ronen, J. (2008.) To Fair Value or Not to Fair Value: A Broader Perspective, *ABACUS*, Vol. 44 (2), 181-208

Ryan, S.(2008). Fair value accounting: Understanding the issues raised by the credit crunch. Council of Institutional Investors
http://www.sib.wa.gov/information/pr/white_paper.pdf

Tarca, A. (2012). The Case for Global Accounting Standards: Arguments and Evidence
http://www.ifrs.org/use-around-the-world/documents/case-for-global-accounting-standards-arguments-and-evidence.pdf

Whitley, R. (1986). The transformation of business finance into financial economics: The roles of academic expansion and changes in US capital markets, *Accounting, Organizations and Society,* 11(2), 171-192.

Veblen, T. (2005). The Theory of Business Enterprise, Cosimo Inc, New York

Zeff, S. (1999). 'The evolution of the conceptual framework for business enterprises in the United States'. *Accounting Historians Journal*, 26, 89-131.

Endnotes

[i] *Common Equity*

Shareholders' Equity Data represents common shareholders' investment in a company. It includes but is not restricted to: Common stock value, Retained earnings, Capital surplus Capital stock premium and goodwill written off

Retained Earnings

Retained earnings represent the accumulated after tax earnings of the company which have not been distributed as dividends to shareholders or allocated to a reserve account.

Treasury Stock

Treasury stock represents the acquisition cost of shares held by the company. This stock is not entitled to dividends, has no voting rights and does not share in the profits in the event of liquidation.

Paid in Capital= common stock + capital surplus

Common stock represents the par or stated value of the issued common shares of the company. It includes the value of all multiple shares.

Capital surplus represents the amount received in excess of par value from the sale of common stock.

Goodwill/Cost In Excess Of Assets Purchased, Net

Goodwill represents the excess cost over the fair market value of the net assets purchased. It is included in other intangible assets.