Assessing the impact of fair value upon financial crises - Robert Boyer – 01/03/2007

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ABSTRACT

Usually the reform of accounting principles in accordance with fair value is assumed to provide better information about the financial situation of firms. Consequently the related transparency should reinforce the resilience of the economy to shocks and thus prevent severe financial crises. A careful investigation of the origins of contemporary crises challenges this prognosis. A first and quite basic argument is that financial markets valuations are built upon emerging conventions that help in coordinating dispersed expectations about a series of radical uncertain events. They never converge towards the fundamental value and therefore the adoption of market prices for valuing firm assets will introduce a permanent discrepancy between long term economic value of a firm and the present financial quotation. Second result, whereas historical costs do transcript actual transactions and track actual value creation but do not deliver the liquidation value of a firm, fair value implies the opposite strategy. It gives at each instant a seemingly relevant liquidation value but obscure the value creation process by mixing present profit with unrealized capital gains and losses. Paradoxically fair value principles exchange a deterioration of everyday information quality against a less inaccurate assessment of the valuation of the firm, were it to be liquidated today, a rather unlikely event. A third and derived argument points out that the discrepancy generated by fair value is increasing with the degree of uncertainty, at odds with the widely held belief about both the efficiency of existing financial markets to cope with uncertainty and the intrinsic merits of fair value. A fourth and unexpected consequence is quite crucial: since many contemporary financial crises derive from reverberation effects from one market to another, from credit to shares, from credit to real estate bubble and so on, the transformation of accounting principles brings an extra and powerful source of instability from shares to profit and conversely. Hence, stock market bubbles will be more likely. In a sense fair value introduces an accounting accelerator on top of the already present and typical financial accelerator in the credit relation between banks and non financial firms: risk taking will likely become more procyclical than previously. In other words, it extends to the entire economic system the source of financial fragility typical of the 90s. Fifth conclusion, the severity of crises is milder when the banking system is more resilient via a careful risk assessment. If fair value accounting is applied to banks, a extra volatility may be created that makes credit still more cyclical and increases their financial fragility, unless they extend the use of derivatives to shift these new risks to other actors. Thus, fair value is likely to reinforce the sources of instability and financial crises already observed in the 90s, unless a new wave of innovations introduces countervailing forces. Is this a desirable feature of accounting reform? A final conclusion stresses that fair value is only one part of a more structural change about the conception of the firm, the social alliances between managers, financiers and wage earners and finally the economic regime itself, and that outside the United States few developed and developing countries have the ability and interest to adopt such a model.

Keywords: fair value, accounting principles, financial fragility, financial crisis, complementarity of accounting and economic regime, accounting accelerator.

Biographical note:

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INTRODUCTION

The impact of changing accounting rules can be analyzed from various standpoints: price theory, accounting principles, financial analysis, firm theory and many other approaches. This article proposes a quite specific viewpoint inspired by a survey of alternative explanations of the impressive return of financial crises during the 90s. The bulk of the literature adopts a quite idiosyncratic approach that stresses the changing patterns of the recurring crises that took place in Latin America, Europe and Asia and economists propose specific vintage models for each episode. As a complement it has proven possible and useful to try to sort out a small number of mechanisms that are more or less present in all crises, even if are combined quite differently from one crisis to another. In the light of these mechanisms what could be the impact of the adoption and generalization of the accounting rules promoted by the principle of fair value? That is the question investigated by this article.

In a nutshell the main conclusion is rather simple: given the intrinsic imperfection of financial markets, fair value is likely to reinforce the accelerator effect typical modern financial systems since it is bound to generate new reverberation effects between the evaluation of firms financial results and market valuation of assets. The instability typical of a largely, if not fully, liberalized financial systems could be exacerbated by the shift from historical costs to market valuation of non financial firms assets. Unless the recognition of this shift of the risk to new actors triggers a new wave of financial innovations in order to counteract the factors of financial fragility brought in by the adoption and diffusion of fair value.

The paper is organized as follows. The first section surveys why financial markets do not deliver a reliable evaluation of the fundamental value that is supposed to be the reference put forward by financial theory. This is the structural reason why financial crises occur when overoptimistic expectations brutally shift to opposite over pessimistic views. It is a first reason why not to rely to mark to market valuations. The second section argues that most financial crises originate from the procyclicity of risk taking by banks, financers and firms. Again, the adoption of fair value would extend this pathological feature by translating it into the accounting system itself, thus obscuring the decision of actors. The financial accelerator model, typical of this pattern, can thus be extended to an accounting accelerator effect that will increase volatility and reinforce the reverberation effects that generate financial booms and bursts: this is the central argument of a third section. The next argument deals with the role of bank financial fragility in the severit of crises. Under this respect, the implementation of fair value for banks is bound to make them more fragile, unless they shift credit risk to other actors less equipped to assess them. A fifth section recognizes that one of the major appeal for fair value has been the very limits of historical accounting. This is not a justification for ignoring the potential unbalances and clear limits of fair value. Then a final development tries to understand why such and imperfect accounting system has been so widely adopted, especially by the European Union. Basically, fair value is only one of the component of emerging finance led regimes, themselves upon a new alliance between financiers and top managers.

THE INTRINSIC IMPERFECTION OF FINANCIAL MARKETS MAKES THE ADOPTION OF FAIR VALUE PROBLEMATIC

Fair value principles, basically, call for the replacement of historical accounting by an explicit evaluation of assets according to their expected returns over their lifetime. If a market for these
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assets exists, the related valuation should be adopted in order to state the financial position of the firm. If it is not the case, the firm should rely upon an explicit modeling, and of course this second option introduce a lot of discretionary power and uncertainty, by comparison with the much more objective financial market valuation. Thus, implicitly, the proponents of fair value do assume that financial markets are efficient. Technically this means that all the relevant information is incorporate into the quoted prices. But this does not imply that really existing markets do provide an approximation of the fundamental value of an asset, computed from its expected returns, given a long term interest rate.

Such a discrepancy does not derive from minor market imperfections or a typical information asymmetry, since it is the direct consequence of the fact that financial markets are different from other markets. Financial markets are inherently volatile because they are driven by expectations about the future. These are markets for “credence” goods, dependent on psychological factors, as opposed to search goods or experience goods (Spencer, 2000). Financial markets deal with expected valuation by diverse actors facing radical uncertainty and in some instance strategic behavior for some traders shift market faraway from the so-called fundamental value. The competition among traders does not overcome the radical uncertainty that is typical of a market economy. This is a major difference with respect to the functioning of markets for standard goods.

Under this respect, the long term evolutions of American stock market exhibit a large volatility, much more important than should imply the evolution of dividend and earnings (Shiller, 2003). Even when one assumes that dividends were perfectly known, one observes very large fluctuation of stock market crises that never converge towards the reconstituted fundamental value (figure 1). One can easily imagine that such a pattern will be exacerbated if earnings are valued according to fair value, as shown later.

**Figure 1 – US Stock Market Valuation Never Converges Towards Fundamental Value**

![Graph](https://via.placeholder.com/150)

Consequently, since this feature is quite general across countries and persisting in the long run, the introduction of fair value could have two detrimental consequences. Firstly, it would privilege a short run valuation of the firm, much more erratic than would imply the valuation of the asset over its complete last time. Secondly, as a consequence the excessive volatility of financial markets would permeate the entire economic system, and probably trigger quite erroneous decisions in the allocation of capital.

A significant fraction of the theoretical literature (Keynes, 1936; Orléan, 1990; 2004; Shiller, 1999; 2000) shows that the conjunction of radical uncertainty and a large liquidity of financial market generates the succession of speculative bubbles that regularly burst out. In this context, when uncertainty increases traders tend to weigh the average market price more than their own private valuation. Initially, this feature only increases the variance of the market prices around the long term fundamental value. Nevertheless, up to some threshold in the imitative behavior, the fundamental value is no more an attractor and the economy oscillates around two opposite values that express respectively over-pessimistic and overoptimistic views of the traders (figure 2). This is the direct consequence of the fact that the traders do not try any more to make any personal valuation of stocks but that they entirely rely on market prices in such a manner that they convey less and less information.

Figure 2 – Distribution of probability when traders are more and more uncertain about the quality of their valuation

This very basic argument points out some possible adverse consequences of the introduction and diffusion of fair value: it makes the evaluation of the firm more volatile and more imprecise. In the context of the major uncertainties facing the world economy (what productive paradigm, what rule of the game for the international system…) and the buoyant liquidity associated to low interest rate, fair value might widen the discrepancy between share prices and the fundamental value, by comparison with historical cost accounting.

PROCYCLICAL RISK- TAKING BEHAVIOR, AT THE ORIGIN OF MOST FINANCIAL CRISES, MIGHT WORSEN WITH FAIR VALUE

A second and quite general mechanism is at the root of most financial crises. Actually, all markets for assets (credit, foreign exchange rates, stocks, real estate) show a cyclical pattern: the risk is under-evaluated during booms, and is over-evaluated during slow-downs. In the case of banks, the cyclical pattern is well known: immediately after a major financial crisis and the related bankruptcy of firm, banks are very careful in assessing the risk of default in the determination of the interest charged to firms. But when the boom associated with a low interest rate is continuing over a significant period, many statistical studies show that the expected probability of default tend to decrease to zero and this generates credit to quite risky project. The discrepancy between expected returns and actual economic rate of returns is at the origin of a down turn, during which the expected probability of default is drastically increased, thus propagating a recession. This short termism might be aggravated by many psychological factors pointed out by behavioral finance: mimetism, memory loss, over confidence in one’s own ability, blindness to impending catastrophe. In any case, comparative and historical studies confirm the generality of this pattern even if might be rather unequal given the specific organization of each national financial system (figure 3).
FIGURE 3 – BANK CREDIT IS LARGELY PROCYCLICAL

1 As calculated by the OECD.
Sources: OECD Economic Outlook; national data.
Recent advances in financial economics explicit financial accelerator models that formalize the related pattern (Bernanke, Gertler, and Gilchrist, 1999). During speculative periods, the boom of credit derives from the synergy of two mechanisms. On one side, an exogenous productivity shock generates better profit and this allows a decrease a risk premium and extends the ability to borrow from the bank. On the other side, this increases the net value of the firm and hence the firm can get more debts and increase capital formation. The impact of these mechanism is the so-called “financial accelerator”. Consequently, the way bank credit is managed increases the effect of shock, both in the boom and burst periods. For technology and demand shocks, this multiplier is rather moderate, but wealth shocks – especially related to the second mechanism - are much more amplified by credit market mechanisms (figure 4).

**FIGURE 4 – THE FINANCIAL ACCELERATOR: A MULTIPLIER EFFECT OF SHOCKS**

![Graph showing the financial accelerator effect of shocks](figure.png)


Such a mechanism may occur even when firms use historical costs accounting, provided that the financial department makes decision according to a rational economic reasoning taking into account wealth effects. Nevertheless, the fact that assets valuation is incorporated into both the balance sheet and the evaluation of profit will probably reinforce the financial accelerator effects. The more so if fair value applies too the banks. In good times, the appreciation of capital will reduce the need for building reserves and it will be easier to comply with prudential ratios. Conversely in bad times the required reserves will be larger, hence an extra credit squeeze. Thus the reform of accounting has potentially a significant impact upon financial supervision (Landesmann, 2006). One may expect a worsening of the trends already observed during the 90s: most financial crises are preceded by a boom on the credit market (IMF, 1998; Kaminsky and Reinhart, 1999;...), they are more frequent and they diffuse emerging economies. The procyclical pattern of finance is exported by developed countries towards emerging countries (BIS, 2003) (figure 5).

Thus the diffusion of fair value to new firms, including at the domestic level, will extend the probability that a given economy enters into a zone of financial fragility. Nevertheless, two contrasted interpretations might be given about the actual impact of fair value. On one side, the proponents of the efficiency of financial markets argue that fair value will stabilize them, via a better diffusion of real time information about the wealth of firms. On the other side, the economists who have adopted the financial accelerator model would tend to diagnose a larger risk of financial bubbles and their bursting out. In between, one may imagine that firms and banks will not react mechanically as assumed by formal modeling, but will innovate precisely to reduce the risk of bankruptcy (Landesman, 2006).
FAIR VALUE MAY DEEPEN FINANCIAL CRISES, DUE TO MORE REVERBERATION EFFECTS AMONG ASSET MARKETS

If speculation were limited to a single asset, without any link to the credit market, the probability and severity of financial crises would be far more moderate. In the Golden age, the segmentation of various financial markets and their strong public control, limited drastically the frequency of financial crises (figures 11 and 12, infra). Very few spillover effects from one market to another were possible. By contrast, the quasi total financial liberalization, the multiplication of new financial instruments, and the diffusion to emerging countries of modern finance have generated huge reverberation effects. Comparative and historical analysis suggests that the probability of crises is the higher when the fast growth of credit affects progressively quite all other assets: bonds, shares, real estate, public debt, foreign exchange....

The comparison of the Japanese bubble of the 80s with the American Internet boom is a good evidence about the importance of reverberation effects: analyzed separately, each market could have been stabilized, but their interactions push the economies into the zone of financial fragility.

- In Japan, during the boom, one observes a strong correlation between the boom of credit, the stock market speculation, real estate appreciation. The strength of these spillovers, associated with a quite permissive monetary policy, explains simultaneously the dynamism of the boom and the depth and the duration of the deflation period that follows the bursting out of the bubble (figure 6).

- By contrast in the US, the real estate bubble follows the bursting out of the Internet boom, whereas the credit to firms does not play the same role than in Japan, since most of large corporations mainly relied upon internal cash flow and rarely upon the emission of new shares (figure 7). These diverging patterns might be partially explained by the structural differences in the real estate markets in both countries but the degree of reverberation is quite unequal indeed and it captures an important feature in the origin of financial fragility.
FIGURE 6 – SPILLOVER EFFECTS FROM THE STOCK MARKET TO REAL ESTATE... AND BANK CREDIT: JAPAN

Source: Kobayashi, Inaba (2002), Figure 1.

FIGURE 7 – NO REAL ESTATE BUBBLE DURING THE INTERNET BOOM: THE US

(Indice 100 en 1980)

Source: Office of Federal Housing Enterprise Oversight (OFHEO)

Of course, this comparison is quite specific and each crisis too, largely due to differences in economic structures and institutional setting among countries. Furthermore, the nature of financial crises seems to change over time. The conventional response of economists was and still is to conceive several – at least three – generations of models which were supposed to describe the specific features of successive financial crises which took place during the previous decades. The first generation model (Krugman, 1979) gives a central role to economic fundamentals, such as inflation or public deficits, in view of explaining the currency crises which took place in the 1970’s when the Bretton Woods fixed exchange rates system broke down. Then came the second generation of models (Obstfeld, 1994) which put the emphasis on the role of self-fulfilling prophesies to give a rational to the speculative attacks which blew out the European Monetary System in 1992 – 1993. Last, and not least, a third generation of models (Pesenti and Tille, 2000) gave rise to a large amount of literature in the aftermath of repeated crises in Mexico (1994), East Asia (1997 and 1998), Russia (1998).

This is true, but underlying mechanisms remain identical in most crises. Indeed, a careful analysis of studies of all kinds (historical, panel data empirical work, theoretical formalisations) shows that, in fact, one can isolate a few invariant mechanisms which lie at the origin of most crises. The idea that the intensity of reverberation effects delineates the limits between structural stability and financial fragility delivers a method for surveying and classifying the numerous models that try to capture the nature of the various financial crises. They differ according to the nature and number of assets involved: for developed countries the interactions govern bank credit, stock markets, productive capital and change; for emerging countries the issue of sovereign debt is quite central. Nevertheless all the models do explicit various reverberation effects and financial fragility takes place when they are important enough (figure 8). The argument is mainly illustrative, since the interested reader should read a more detailed study that develops more completely this argument (Boyer, Dehove, Plihon, 2004).

**Figure 8 – A survey of the various spillovers at the origin of financial crises**

Emerging countries

- Change (2)
- Bank credit (1)
- Sovereign debt (1)
- Productive capital (3)

Developed countries

- Change (2)
- Bank credit (6)
- Stock Market (6)
- Productive capital (3)

(1) Krugman (1979)
(3) Kiyotaki, Moore (1997)
(6) Caballero et Krishnamurphy (1998)
(7) Bernanke, Gertler et Gilchrist (1999)
This analytical framework points out another likely consequence of the adoption of fair value accounting principles. Actually, they will introduce the instability of the financial market into the internal valuation process of the firm that used to be governed and stabilized by historical costs accounting. Therefore, the synergy between the internal and external volatility may push some economies out of their stability zone, since the domination of shareholder value pushes more and more firms to adopt and take seriously fair value accounting. Similarly, banks are directly affected by the same accounting principles and in order to try to stabilize their own rate of returns they have used a full range of new financial instruments including securitization of credit. Consequently, the risk bearing is shifted outside the core of the financial system and this externality might be quite detrimental to long term financial stability. On one side, key financial actors have incentives to take more risks since these risks will be eventually passed to other actors; the related cumulative effects may push the economy into the zone of financial fragility, since the pricing of the new instruments does necessarily anticipate the implied systemic risks. On the other side, the buyers of these instruments are generally less equipped to assess the risk implied due to a clear information asymmetry and less sophisticated surveillance coverage (Figure 9).

**FIGURE 9 – THE NEW REVERBERATION EFFECTS ASSOCIATED TO FAIR VALUE**

- Fair value
- Securitization of banks
- Shareholder value
- Shift of risk to external actors

**THE ADOPTION OF FAIR VALUE BY BANKS MAY HINDER THEIR RISILIENCE TO FINANCIAL CRISES**

The rise of financial markets has generated the feeling that the banks are less and less important in the dynamics of capital accumulation and that they could even vanish. This prognosis does fit with the fact. The net contribution of bank finance to productive investment has been minimal, sometimes negative, even in the US during 90s viewed as a typical phase of financialisation. SME and households, who cannot emit bonds or shares, have to rely upon bank credit for their investment and consumption. Banks are the basic providers of liquidity and this is especially important for economic activity and the macroeconomic consequences of the bursting out of financial bubbles. Furthermore, banks experience their own crises. If bank runs have become less frequent in developing countries, they are still present in emerging economies. The irreversibility of bank loans triggers another type of crisis when a negative shock affects the profit of the borrowers who cannot reimburse the credit and pay the interest to the bank.

Thus, the banking system can be both a source of crisis and be a solution to some dramatic episodes when the reversal of a speculative boom triggers a run towards the liquidity by firms and finance. The degree of resilience / fragility of the banking system is a discriminating factor in the unfolding of financial crises. A strong and persisting liquidity constraint may trigger a cumulative depression (the Great American depression 1929-1932) whereas an adequate supply of liquidity
can organize the rebound of the economy (the 1987 stock market crash in the US). A synoptic view of the various types of reverberation processes that lead to a crisis confirms the centrality of bank credit. Once the crisis bursts out, the flight to liquidity puts again banks at the forefront of process that may lead to a recession and a recovery or a depression (Figure 10).

**Figure 10 – The Key Role of Bank As Provider of Liquidities During Crises**

This centrality of the banking system becomes crucial in the era of financial liberalization, since the shift from bank intermediation to direct finance has induced a change in the strategy of banks towards different and generally more risky credit. In order to compensate the shift of large corporations towards the stock market, banks entered into new businesses in direction of SME, households, foreign firms. In the context of rather low real short term interest rates, the high liquidity has favored the emergence of bubbles...

No surprise then if he number of banking crises has increased since the early 1980’s: there is a link between banking crises and financial deregulation (Kaminsky & Reinhart, 1999 and 2000). Banks’ fragility is a major cause of financial crises in emerging countries (Chang & Velasco, 2000): « third generation model » (Pesenti and Tille, 2000) gave rise to a large amount of literature in the aftermath of repeated crises in Mexico (1994), East Asia (1997 and 1998), Russia (1998). These models went on to draw attention on financial vulnerability related to financial liberalization (internal and external) in the so called emerging markets. Actually, historical record shows that “twin foreign exchange/banking crises” were the major source of financial instability in the 1990’s in these countries (Figure 11). Internal financial liberalization has brought another somehow unexpected consequence: while it was assumed to smooth the adjustment of saving and investment, the surge of Stock market has been associated with periods of speculative boom and burst. The frequency of stock market crises has dramatically increased (Figure 12).
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**Figure 11 – Banking crises, currency crises, and twin crises: 1890-1997**

**Figure 12 – Frequency of stock market crises according to various definitions: 1900-2003**

Source: Boucher Christophe (2003)
These findings have clear implications for the impact of the generalization of fair value. Firstly, the stock market crises cast some doubts about the accuracy of asset valuation provided by highly liquid financial market prone to speculative bubbles, given the low interest rates associated with the new paradigm for monetary policies. Secondly, how will fair value be applied to banks and what are the likely consequences for global financial stability? Various researches (Enria et al. 2004; Biondi et al. 2004; Burkhardt and Strauss 2006; Biondi 2003) point out that the impact is not simple to assess but that adverse effects should not be neglected and they should be corrected by new forms of regulations (table 1).

TABLE 1 – POTENTIAL DRAWBACKS AND ADVANTAGES OF FULL FAIR VALUE ACCOUNTING APPLIED TO BANKS

<table>
<thead>
<tr>
<th>DRAWBACKS</th>
<th>ADVANTAGES</th>
</tr>
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<tbody>
<tr>
<td>1. Likely increase in the volatility of income</td>
<td>1. A response to the shift of power towards investors and financiers</td>
</tr>
<tr>
<td>• For assets and liabilities held to maturity, artificial volatility</td>
<td>• In line with finance-led accumulation regimes</td>
</tr>
<tr>
<td>2. Increase in the intrinsic pro-cyclical pattern of bank lending</td>
<td>2. Improved scope for market discipline and corrective action</td>
</tr>
<tr>
<td>• Reduction of lending to SME</td>
<td>• More information to investors</td>
</tr>
<tr>
<td>• Incentive to hedge, securitize or shift the risk to less informed actors</td>
<td>• Incentive to corrective actions at an early stage</td>
</tr>
<tr>
<td>3. Challenge to the role of banks in maturity and liquidity transformation</td>
<td>3. Use the financial innovation in order to</td>
</tr>
<tr>
<td>• Incentive to hedge, securitize or shift the risk to less informed actors</td>
<td>• make more efficient the role in maturity matching and transformation</td>
</tr>
<tr>
<td>• Emphasis upon short term results against long term customer relationships</td>
<td>• Increase systemic resilience</td>
</tr>
<tr>
<td>4. Adversely affect to ability of banks to smooth inter temporal shocks</td>
<td>4. Possible limitation of the scope for pro-cyclical evolution</td>
</tr>
<tr>
<td>• Pressure to distribute unrealized gains on assets</td>
<td>• Earlier recognition of asset deterioration</td>
</tr>
<tr>
<td>• Incentive to build up additional reserves</td>
<td>• Incentive to build up additional reserves</td>
</tr>
<tr>
<td>5. Potential disruption of market discipline by the reduction of comparability of financial statements due to the use of models when there is no observable market</td>
<td>5. Investors already try to valuate assets according to their expected return</td>
</tr>
<tr>
<td>• Variety of models</td>
<td>• In position to interpret full fair value accounting</td>
</tr>
<tr>
<td>• Different valuation by shareholder</td>
<td></td>
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</tbody>
</table>
The adoption of fair value is part of the general strategy built upon the hypothesis that transparency is necessary for the credibility of financial markets and contributes to their stability. Thus a more frequent valuation of assets and liabilities is important for banks and allow them to adopt earlier corrective strategies, but simultaneously this will increase the volatility of income and financial results of the banks. Consequently the pro-cyclical pattern of risk is likely to be exacerbated and not reduced as expected. The short termism implied by shareholder value is bound to increase. The central role of banks in smoothing inter temporal shocks will be reduced. The incentive to hedge, securitize and thus shift the risk to outsiders will reinforce the current trend towards the fragmentation and externalization of risks that are typical of banking activity. Beneath the surface of risk dilution, the basic irreversibility of bank credit-remains and this is a recurring source of major financial crises. As John-Maynard Keynes already pointed out the apparent fluidity of financial transactions cannot overcome the intrinsic time dimension of productive investment.

Fair value puts at risk the resilience of banks; at the interface of finance and economic activity, they may add another financial accelerator effect to the already existing ones. Reverberation effects are extended and the zone of global stability reduced. It is specially so for the banks of emerging countries since they generally do no benefit from adequate risk assessment. Finally transparency promoted by fair value is a two edged sword: on one side it corrects some deficiencies of historical cost accounting but on the other side it may well make more inaccurate and instable the evaluation of the financial position of firms and banks.

THE IMPERFECTION OF HISTORICAL COSTS DOES MEAN THAT FAIR VALUE IS A PANACEA.

Of course, historical cost valuation does not give the exact value of a firm and this a major drawback in the epoch of deep and liquid financial markets where the buying and selling of shares is part of corporate strategies of external growth by acquisition, merger, of buyback but also it allows the development of private equity. Fair value imposes to non financial firms the precise accounting system financiers and investors need in order to prosper in their specific business (Capron, 2005; Chiapello, 2005; Biondi et al., 2004). But the obliteration of the source of value creation in the every day productive activity, that is the strength of historical cost accounting, may induce a sequence of decisions about the allocation of capital that finally prove to be detrimental to the level and stability of the economic rate of profit in the long run (Kay 2005). Investors consider the firm as a bundle of substitutable assets, including the talent of top managers, whereas modern theories of the firm convincingly show that the profit is the outcome of the activity of managers in the organization of strategic complementarities between firm specific assets Biondi, 2005).

Fair value is basically focusing on the valuation of assets and stocks and thus it delivers the patrimonial position of the firm with respect to creditors and share-holders. Consequently, the evaluation of profit mixes unrealized capital gains and losses with actually realized profit and this feature has two detrimental consequences:

- Firstly, the corporation may make decisions based on erroneous data confusing a sure current income with the evaluation- by financial markets or by an ad hoc firm specific model – of
future and by definition uncertain incomes. After all the Enron story illustrates the amplitude of the gap that can be generated between actual and desired returns with a clever use of the temporal dimension of profit generation and of group frontiers, in an American accounting system already largely featured by fair value accounting (Benston and al. 2003, Biondi 2007). What about the next generation of financial scandals under IAS-IFRS that fosters the fair value several steps forward?

- Secondly, the measure of profit by historical costs used to give anchor to financial markets. The Tobin q ratio – defined as the ratio of stock market valuation to the cost of replacement of capital- was precisely using the duality between internal and external valuation of the corporation in order to inform the investment and financing decisions of managers and financiers and eventually detect bubbles. Conceptually, fair value accounting is moving the anchor along with the tide that moves the ship. One may expect that an accounting accelerator will reinforce the already destabilizing impact of the typical financial accelerator.

More generally, the issue is no more the choice between a totally imperfect accounting system based on historical costs and a much more satisfactory fair value accounting, since the adoption of the later has already been decided by the European Union. The task is now to assess the merits and weaknesses of fair value in order to prevent, if possible, the next problems and sources of crises(Table 2).

<table>
<thead>
<tr>
<th>TABLE 2 – THE MACROECONOMIC CONSEQUENCES OF THE FAIR VALUE PRINCIPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STRENGTHS</strong></td>
</tr>
<tr>
<td>1. The accounting system translates the leading conception of the firm as a bundle of assets</td>
</tr>
<tr>
<td>2. A response to the expectations and demands of investors and financiers</td>
</tr>
<tr>
<td>3. Easier access to financing via more accurate balance sheet</td>
</tr>
<tr>
<td>4. Transparency and real time information, as requirement of financial markets</td>
</tr>
</tbody>
</table>

For instance, the balance sheet of firms is a priori more accurate and less heterogeneous under fair value but new sources of imprecision are introduced. In the accounting standard SFAS 157 issued in 2006 and devoted to “Fair Value Measurements” the FASB describes three levels of evaluation: the more satisfactory method is based on quoted prices of identical assets and liabilities, but the degree of confidence is lower when the reference is to similar or related assets and liabilities and the degree of discretionary power of the accountant is maximum when the uses estimates based on company specific models (Landsman 2006). By the way, this American standard is considered by the IASB as the basis for developing its own standard. Therefore the shift from an historical approach to a forward looking evaluation of assets does not remove the
risk of an opportunist use of fair value in order to present to financial analysts the overoptimistic financial returns they expect. The financial scandals of the 90s could take a new form.

This does not mean that fair value cannot be useful, since it provides earlier signals of financial fragility than historical cost and therefore corrective action by managers and regulatory authorities may reduce the amplitude and frequency of financial crises. This feature could counterbalance the expected increase of income volatility (Enria et al., 2004). More generally, if the accounting system and regulatory regime change, the behavior of economic actors will change and possibly innovations will emerge in order to cover the new risks associated with the extra volatility shown by fair value accounting. At the opposite, an interesting counter argument points out that during the 90s many investors were already using the equivalent of fair value in estimating the net value of quoted corporations. Some empirical studies suggest that financiers were able to distinguish between the underlying volatility and the impact of accounting method change upon this volatility. The experience of the Danish banks, early adopters of mark-to-market accounting brings and interesting message: there is evidence of earnings management, but the book values become closer to equity market values (Bernard, Merton and Palepu, 1995; quoted by Landsman, 2006).

In the domain of finance, this is a modern expression of the old dialectic between the weapon and the shield. The more aware of possible negative fallouts of fair value will be the various actors, the less likely an exacerbation of the implied and quite real risk of financial fragility.

**FAIR VALUE IS PART OF A SERIES OF MAJOR STRUCTURAL CHANGES**

The previous remarks lead to a rather important conclusion: the impact of fair value cannot be assessed independently from a series of other regulations and economic institutions such as the nature of financial intermediation, prudential regime and the objective of the firm. The argument can be pushed a step forward: the fair value movement is to be analyzed as the accompanying accounting principle that complement major structural transformations about the conception of the firm, implicit social alliances and the governance of a finance led economic regime.

**From an organic to a financial definition of the firm**

Historically, financial markets were created in order to facilitate the financing of large corporations: the liquidity of the stock market entitled shareholders to benefit from freedom to buy and sell without disturbing the medium-long term horizon of managers who make decisions about largely irreversible productive and organizational investments (Blair 2000, Aglietta-Rebérioux 2005). Historical cost accounting was associated to this organic vision of the firm, based on the cooperation of managers and core workers via incentives or control. The reference market is that of products and the profit is supposed to emerge out of the search for a complementarity among firm specific competences and assets. Outsiders refer to the accounting statements provided by the firm to forge their own valuation of shares. The feedback from financial market to firm strategy is present but this is rarely a real time process, since for instance only annual accounts are publicized. Retrospectively, there was a clear congruence between the style for management, ownership distribution, the technical requirements of investment and the accounting principles.

This period seems over after more than two decades of major structural changes (Boyer, 2000a). The financial liberalization and globalization appears to be one of the leading factors in the revision of firm conceptions, the respective role or product and financial markets and finally the
Assessing the impact of fair value upon financial crises - Robert Boyer – 01/03/2007

objective of accounting (Table 3). In the United States, the increasing power of institutional investors triggered in particular by the progressive rise of pension funds after ERISA (Montagne, 2006), is accompanied by the diffusion of a new conception of the corporation. At odds with the previous vision inherited from Berle and Means (1932), the corporation is a legal entity that is the property of stockholders who simultaneously have the right to control managers’ decisions and enjoy the ability to exit by selling their shares. The profit is assumed to derive from an active management of the various assets in reaction to the evolution of financial markets. It is thus crucial to redirect the accounting system in the direction of the valuation of assets and liabilities just to make possible the permanent restructuring of the various divisions of the corporation, mergers and acquisitions.

The Sloanist manager in charge of organizing the cooperation of the various shareholders and optimizing the competitiveness on the product market becomes less important than the Chief Financial Officer, whose basic task is to build the confidence of investors about the future of the corporation. This shift from the product to financial market is a good evidence for the new power of finance (Orléan, 1999). The external valuation by financial analysts becomes as, if not more, important than the internal tracking of value creation that used to be the main purpose of historical cost accounting. Another novelty of fair value is to originate from an international private organization, the International Accounting Standards Board (IASB, previously IASC). The international accountants take the lead ahead of national bodies in charge of norms and supra national entities such as the European Union: the target of accounting is no more the national tax authorities but the international financial community (Capron and Chiapello, 2005). This cross border spillovers of accounting standards plays a significant role in the institutional redesign of European countries (Quack, 2005) but Japan as well (Suzuki 2006).

### Table 3 – Two accounting systems, two conceptions of the firm

<table>
<thead>
<tr>
<th>AIM</th>
<th>HISTORICAL COSTS</th>
<th>FAIR VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Assessing the origin of profit</td>
<td>1. Evaluating the value of a firm</td>
</tr>
<tr>
<td></td>
<td>2. Assessing the financial position with respect to various stakeholders (employees, owners, State)</td>
<td>2. Transparency of the firm for shareholders</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONCEPTION OF THE FIRM</th>
<th>Organic, based on cooperation of various competences</th>
<th>Legal interpretation of the firm as the property of shareholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORIGIN OF PROFIT</td>
<td>1. Productive transformation of various factors and assets into products for the market</td>
<td>1. Active management of assets in order to exploit financial market opportunities</td>
</tr>
<tr>
<td></td>
<td>2. Search for the complementarity of firm specific assets by managers</td>
<td>2. Exploitation of assets substitution within and outside the firm</td>
</tr>
<tr>
<td>LEADING ACTOR</td>
<td>The managers as organizers of internal generation of profit</td>
<td>The chief financial officers, as the interface with finance</td>
</tr>
<tr>
<td>LIKELY ALLIANCES</td>
<td>Between managers and permanent/core workers</td>
<td>Between managers and financiers</td>
</tr>
<tr>
<td>RELEVANT TERRITORY</td>
<td>National territory under the supervision of State authorities</td>
<td>International finance under the aegis of an expert community</td>
</tr>
<tr>
<td></td>
<td>1. The accounting system provides a rather objective evaluation of past value creation, largely independent from financial markets</td>
<td>1. The valuation by external actors helps in valuing some assets traded on financial markets</td>
</tr>
</tbody>
</table>
Fair value, as the consequence of the alliance of top-managers and financiers

Thus fair value accounting is part of a set of major transformations affecting economic and social relations. During the golden age of the post WWII settlement, one could in retrospect diagnose a de facto alliance between managers and wage earners: the acceptance of mass production methods by workers was associated with the parallel development of mass consumption, via the Fordist compromise linking the increase of wages to productivity advances. Given a stable and permissive international regime and a quite patient capital, this alliance was at the center of a genuine growth regime. The strength of managers was the counterpart of the dispersion and weakness of owners (Roe 1994) and the state was involved in defining the rules of the game concerning competition and the access to finance (Fligstein, 2000). The task of the accounting system was to trace the origin of profit starting from the transactions of the firm with a complete set of stakeholders: suppliers, wage earners, banks, state and of course stockholders. By the way an evidence of the status of managers at that period is precisely that they were paid by wages and bonuses, computed via the internal process of performance evaluation. The inward and backward looking accounting system could even be used to promote a decentralization along functions or/and departments in order to mimic internally a competition in the allocation of cash flow to new projects. It is important to note that the normalization of accounting was largely specific to each economy.

Nevertheless historical cost accounting was not devoid of drawbacks. Firstly it implied some tensions between the objectives of the diverse stakeholders, for example the internal measure of profit could differ from the statement delivered for taxation purposes. Secondly, in period of high inflation the replacement costs of productive capital were higher than the historical costs, thus creating a bias in the evaluation of net profit. Thirdly, when large companies began to enlist on foreign stock markets, especially in Wall Street, the duality of financial statement began to be problematic. These discrepancies in accounting norms aggravated with the rise of global finance and the optimization of portfolios at the world level. The proponents of fair value have been surfing on these difficulties. In a sense, it resolves the contradictory demands of shareholders by stressing that the stockholders are the main target and beneficiary of financial statements.

What about the interest of managers in this new era? Initially stock options are conceived and implemented in order to control the opportunistic behavior of top managers and align their interest with those of shareholders (Jensen and Meckling, 1976). In retrospect, the recurring financial scandals do suggests that the power of managers is preserved and that they have used value creation and fair value to convert this power into their own wealth, sometimes at the detriment of individual stock holders (Bebchuk and Fried, 2003) The last decade exhibits many evidences of an implicit alliance of top managers with financiers (Boyer, 2004): the large overvaluation of profit during the internet bubble, the explosion of stock options and CEO remuneration, the golden parachutes attributed to quite mediocre managers, the practice of backdating of stock options and the frequency of insider trading benefiting to large investment banks ,hedge funds and top managers. Transparency, shareholder value, fair value appear to be the very expressions of this new alliance between top managers and financiers (Figure 13). The reversal with the previous period is impressive from the point of view of wage earners: they have to bear a larger share of the risk just to allow a stable rate of return on equity, they have experienced a significant decoupling of their remuneration with respect to firm performance and
they had to accept that their pensions will more and more depend upon the evolution of financial markets. Thus fair value accounting is the technical component of a new epoch in the reconfiguration of contemporary societies.

**FIGURE 13 – THE 90’S. THE CONTEMPORARY CONFIGURATION OF ACTORS: THE ALLIANCE OF INVESTORS AND MANAGERS**

Fair value as the promotion of a finance-led accumulation regime

Fair value is also an ingredient for a possible new economic regime. The central variable of this regime is the stock market valuation, since it is this market that is governing the strategies of firms and the behaviour of individuals and it socializes expectations of quite all actors (Orlean, 1999). Direct finance tends to overcome bank credit as the key component of the financial system: the generous access to credit is conditioned by the valuation of the stock market. Fair value links the estimate of profit to the valuation by financial markets. In this context, productive investment has to comply with the high rate of return required by the financial system and this shaving a deflationary impact upon its volume. This drives a new pattern for macroeconomic variables since simultaneously the wealth on the stock market is taken into account by banks when they grant credit to households (Figure 14).

Consequently, the levels of production and employment are no more the consequence of the interaction of productive and consumption norms independently of any major role of the financial markets, i.e. the golden Age regime of the post WWII era (Aglietta and Rebérioux, 2005). Basically the stock market is the focal point that all actors consider when they make decision, since it is providing a coordination of expectations. Growth is thus governed by these expectations.

Since the norms associated to shareholder value have diffused and permeated a large number of developed and even developing countries, one could imagine that the features observed in the United States are quite general and therefore, a finance led regime is quite likely as a follower of the Fordist one.
FIGURE 14 – THE MAIN MACROECONOMIC RELATIONS OF A FINANCE-LED ECONOMIC REGIME

Dividends and Pension funds + High stock market price + Easy access to credit + Profit

Diffusion of Financial and accounting norms - High rate of return of productive investment + Consumption + Production + Employment

Global Financial Regime

Shareholder and fair value as new forms of competition and governance mode

Highly reactive wage labour nexus
A previous research has proposed a very simple model of a finance led growth along the hypotheses put forward by Figure 14 (Boyer, 2000b). The very possibility of such a regime requires a precise configuration for the parameters of the investment and consumption functions. It is the more likely, the higher the ratio wealth in shares/ disposable income, the more important is the impact of wealth upon consumption, the higher the propensity to invest profit with respect to accelerator effects. But such a finance led growth is not stable: whenever the target for the Return on Equity (ROE) is too high, or the wages are too flexible. Furthermore, the shift from historical costs to fair value drastically change the measure of ROE and this brings another source of reverberation effect.

Even starting from a stable regime, the very success of the financialisation, i.e. an increase of financial wealth more rapid than earned income, may trigger a financial crisis. This may precisely have happened during internet bubble in the US. It is an important hint about one possible outcome of the generalisation of fair value, when introduced in economies with large and liquid financial markets. Nevertheless such a configuration is not common outside US and possibly UK. Actually, a rough calibration of the model for some OECD countries delivers an interesting, but not so surprising result: the American economy is the only candidate for such a finance led regime. By contrast, quite all other economies do not enjoy superior performances if shareholder value principles are introduced. The reason of such a result is simple enough: when wage is the main source of income, financial portfolio are small and investment react essentially to demand and not directly to profit, financialisation is detrimental since it implies a loss in production, profit and employment. Besides this macroeconomic effect, the adoption of a typical financial definition of profit by industrial firms has a direct impact upon their investment strategies. Furthermore the explicit or implicit alliances between financiers, industrialists and wage earners are quite different indeed, compared with those prevailing in the US.

Consequently a rational analysis of society wide welfare would conclude that it is unwise to mimic the American trajectory, because the domestic configuration is quite different. A political economy approach would be required in order to explicit how the interaction of the most powerful actors has nevertheless led to the adoption of these objectives and managerial tools. Finally one observes a remarkable congruence between financial deregulation, shareholder and fair value, the transformation of corporate governance, the diffusion of stock options within CEOs remuneration schemes, the financialisation of the wage labour nexus. In other words, in the US the alliance between financiers and top managers has contributed to the coalescence of a brand new finance led accumulation regime (Figure 15).
FIGURE 15 – A MORE DISAGGREGATED VIEW OF A FINANCE LED ACCUMULATION REGIME

De facto alliance of Top managers and financiers

Financialisation

- Search for stable and high rate of return
- Growth of pension funds
- Flexible financing of mortgage
- Surge of consumers credit

New pattern for investment (merger/acquisition)

+ More wage flexibility and moderation

Employment

+ Wealth led Consumption

Production
CONCLUSION

The reform of accounting principles in accordance with fair value is assumed to provide a better information about the financial situation of firms. Consequently the related transparency should reinforce the resilience of the economy to shocks and thus prevent severe financial crises. This article challenges this conclusion and puts forwards a series of arguments.

1. A careful investigation of the origins of contemporary crises challenges this prognosis. A first and quite basic argument is that financial markets valuations are built upon emerging conventions that help in coordinating dispersed expectations about a series of radical uncertain events. These expectations never converge towards the fundamental value and therefore the adoption of market prices for valuing firm assets will introduce a permanent discrepancy between long term economic value of a firm and the present financial quotation.

2. Whereas historical costs do transcript actual transactions and track actual value creation but do not deliver the liquidation value of a firm, fair value implies the opposite strategy. It gives at each instant a seemingly relevant liquidation value but obscure the value creation process by mixing present profit with unrealized capital gains and losses. Paradoxically fair value principles exchange a deterioration of everyday information quality against a less inaccurate assessment of the valuation of the firm, were it to be liquidated today, a rather unlikely event.

3. A third and derived argument points out that the discrepancy generated by fair value is increasing with the degree of uncertainty, at odds with the widely held belief about both the efficiency of existing financial markets to cope with uncertainty and the intrinsic merits of fair value.

4. A fourth and unexpected consequence is quite crucial: since many contemporary financial crises derive from reverberation effects from one market to another, from credit to shares, from credit to real estate bubble and so on, the transformation of accounting principles brings an extra and powerful source of instability from shares to profit and conversely. Hence, stock market bubbles will be more likely. In a sense fair value introduces an accounting accelerator on top of the already present and typical financial accelerator in the credit relation between banks and non financial firms: risk taking will likely become more pro-cyclical than previously. In other words, it extends to the entire economic system the source of financial fragility typical of the 90s.

5. A fifth Last but not least, the severity of crises is milder when the banking system is more resilient via a careful risk assessment. If fair value accounting is applied to banks, an extra volatility may be created that makes credit still more cyclical and increases their financial fragility, unless they extend the use of derivatives to shift these new risks to other actors. Thus, fair value is likely to reinforce the sources of instability and financial crises already observed in the 90s, unless a new wave of innovations introduces countervailing forces. Is this a desirable feature of accounting reform?

6. A final conclusion stresses that fair value is only one part of far reaching structural changes about the conception of the firm, the social alliances between managers, financiers and wage earners and finally the economic regime itself, and that outside the United States few developed and developing countries have the ability and interest to adopt such a model.
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