

Competition between bookkeeping methods of asset valuation during the 19th and early 20th centuries in France

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Borrowing Richard's categories (1996), this comparison of different methods of appraising value in four settings — big firms, bankruptcy cases, the jurisprudence and bookkeeping manuals — describes and explains bookkeeping practices in an environment, from the 19th till the early 20th century, that lacked standardized accountancy procedures. This research enlarges on Richard's categories while pointing out the effects of the various methods of asset valuation on balance sheets.

The problems of determining value are being debated since the 2008 meltdown (ORLÉAN 2011). Previously, when the International Financial Reporting Standards (IFRS) were introduced in France, the question of fair value had already spawned studies in accountancy (CASTA & COLASSE 2001; COLASSE 2005; RICHARD 2005; BIONDI *et al.* 2008). The underwriting of risks and the advantages of the new IFRS method of valuation have become increasingly moot in the academic and professional literature, thus fueling the debate.

How to set a value on assets is not a new problem. This thread, which has been running through the loom of bookkeeping for a long time, assumed special importance during the industrial revolution in the 19th century. Industrialization required ever more capital, and transformed its very nature. The place of fixed assets on company balance sheets expanded, whence questions about how to calculate their value. Concomitantly, this growing need for capital brought new stakeholders into companies. Changes in the origin and uses of capital modified the function of accountancy. Bookkeeping became the basis for, at regular intervals, determining net worth; and to do this, it was indispensable to appraise the value of assets. By looking back on this period before the standardization of accountancy, let us try to see how various parties dealt

with the problem of determining value in a situation without bookkeeping standards. Calculating value is a key problem not just for firms. It also crops up in places of conflict about what accountancy should show.

Two major sets of responses were given to the problem of finding asset valuation: the purchase price and the market value. The debates now raging in accountancy are but endless reformulations of this alternative.

Herein,⁽¹⁾ we want to show how, at the end of the 19th century, the problem of value compelled recognition in four settings: companies, bankruptcy proceedings, the jurisprudence and bookkeeping manuals. The first part of this article will present the theoretical framework, drawn from Richard (1996), of the development of bookkeeping from the 19th to the 20th century. The second will analyze bookkeeping methods of asset valuation in actual practices in these four settings at a time when there were no standards. Three general conclusions will then be drawn.

⁽¹⁾ In comparison with the original version in French, this English translation, made by Noal Mellott (Omaha Beach, France), has completed bibliographical references.

Methodology

This article provides an overview of the results of research on the contrasting practices in two big companies in France: Schneider and L'Air Liquide. This research found a linkage between bookkeeping methods of valuation and the raising of capital. These two firms adopted quite different practices. L'Air Liquide, which had just been founded in 1902, needed short-term financing whereas Schneider was an older company, its shares held by family members. The archives of both companies were examined: annual reports, instructions, notes, minutes of the meetings of the boards of directors, lists of share- and bondholders — between 1890 and 1939 for Schneider, and between 1902 and 1939 for L'Air Liquide. These two cases are presented in detail in Fabre (2008).

This research also focused on the methods of asset valuation used during bankruptcy proceedings. For each of the 500 cases of insolvency (1847-1887) examined, we analyzed the three financial statements drawn up with different valuation methods, thus bringing to light the methods that set the highest and lowest values. We thus examined the first hundred (useable) cases of the years 1847, 1857, 1867, 1877 and 1887 in the D11U3 series of the Archives of the City of Paris. This series started in 1847, and we stopped in 1887 because, two years later, the Act of 1889 modified bankruptcy proceedings. By examining cases from ten-year intervals, slow changes in practices become perceptible. For a fuller account of the reasons for this sample, see Labardin (2011, 2013).

This research also referred to the court orders that made jurisprudence from 1847 to 1939. Praquin (2003) has examined this body of jurisprudence in detail. Herein, two somewhat contradictory sources of jurisprudence are used to present diverging opinions.

For this research, we also examined several bookkeeping manuals from this period that contained advice on valuation. All these sources have been presented in more detail elsewhere.

The goal herein is to compare the practices of asset valuation used in these four settings: companies, bankruptcy proceedings, the jurisprudence and bookkeeping manuals. After pointing out the methods of asset valuation used, item by item, in balance sheets along with their effects (positive or negative) on financial statements, these methods will be linked to stakeholders' interests.

The choices made for this research have weak points. One is that we pay little attention to specific situations in the aforementioned settings. Indeed, bankruptcy proceedings must handle different problems than those arising when decisions have to be made about how to distribute earnings. Although we cannot fully describe every situation, our review does provide a glimpse into a world of accountancy where standardized bookkeeping procedures did not exist. It helps us gauge the degree to which given accounting practices were contingent.

Principles of asset valuation: Static and dynamic bookkeeping

With an eye on bookkeeping methods for calculating value, we shall review the various stages, identified by Richard (1996, 2005), in the development of accountancy in France. Static bookkeeping, the first stage, was current from the 19th to the start of the 20th century. It followed on the keeping of the books by cashiers, which, according to Richard (1996), declined for three reasons. First of all, this cash statement method was incapable of presenting a full account of "contributions" from "capitalists". By leaving fixed assets out of accounts, it failed to list contributions in kind. Secondly, information on the company's indebtedness was missing — information essential to "capitalists" who pay close attention to the due dates of liabilities. Thirdly, this method provided information about a company's efficiency only at the time of its liquidation.

The static model of bookkeeping came into use to make up for these shortcomings. Two factors — the longer life of companies and industrialization — underlaid this trend. Owing to the growing need for capital, those who helped finance a company began requiring a return on investment at least equal to their contribution. It was not possible, therefore, to wait until the company was liquidated before redistributing dividends to its "capitalists". The entrepreneur would, therefore, draw up a version of the company's accounts in the case of a fictive liquidation, so as to periodically determine income and imagine an eventual distribution of dividends.

To describe a fictive liquidation, methods had to be worked out for determining the worth of the company's assets. The Code of Commerce of 1807 had nothing to say about valuation, apart from an appended note mentioning an "evaluation of assets" at the "market rate". The purpose of asset valuation was to protect debt-holders: a fictive sale of the company's property should cover all contracted debts and bond issues.

This static model of bookkeeping took was based on the market value of the company's property or, in the absence of a market, on an expert's appraisal of the degree of use of machines, etc., so as to determine the value by taking into account depreciation. Intangible assets did not receive special attention; in practice, they were systematically listed among "charges" (i.e., operating costs).

Richard has discerned two phases in the diffusion of this static model in 19th-century France. He set them in the perspective of the changes made to the principle of the liability of partners in a company. During the first phase, described as the diffusion of a "pure" static model, the principle of unlimited liability still reigned in business. Since the intent was to reflect potential capital gains and losses, all variations, up or down, in market value were taken into account. This approach was not incompatible with the "prudential principle", which prevailed in bookkeeping circles at the time. The capital gains to be distributed (following an increase in earnings derived, in part, from potential capital gains) could, in case of default and owing to the principle of unlimited liability, be recovered by creditors from the personal estates of the partners sitting on the board of directors.

In the mid-19th century, the legal form of the corporation made strides, bringing with it the principle of limited liability. This had repercussions on bookkeeping. To protect creditors given the limited liability of shareholders, the potential capital gains calculated in case of the corporation's fictive liquidation could no longer figure on the books. This is the context of the second phase of the static model's development — of a prudential variant that allowed for recording only potential capital losses and for distributing only earnings that were actual profits. This prudential static model was still designed to appraise fixed assets at minimum worth, the intent being to gauge the degree to which a corporation's debts would, in case of default, be covered by selling all its property that had a distinct sale price.

When all is said and done, static bookkeeping shared many points in common with the cashiers' method for drawing up cash statements. Neither model tried to provide a picture of asset formation. Instead, they focused on criteria related to liquidation. Once cash receipts and payments were no longer the focal point of bookkeeping, the procedures for calculating a fictive liquidation for the purpose of protecting creditors meant that only assets with an objective value were recorded on balance sheets. The pivot was market value, *i.e.*, the price at which each individual asset could be sold.

During the last two decades of the 19th century, this static model came under criticism, especially from business circles, specifically from directors of big corporations (RICHARD 1996). It was criticized from two angles.

The first reproach was that the static model postponed profits (and dividends) since: intangible expenditures were entered as charges, tangible capital goods were quickly amortized, and only potential capital losses were

recorded. This bookkeeping practice put a strain on the income reported, especially during the period when the company invested in new business activities. It was, in fact, during this start-up period that investors had to be attracted and reassured, especially when the company called for outside sources of financing.

The second current of criticism pointed to the static model's volatility, given its sensitivity to negative fluctuations in market prices. This too tight of a linkage between balance sheets and market fluctuations was an argument used against the static model by the directors of big corporations with considerable shares in portfolio. Stock market crashes and financial scandals during the second half of the 19th century lent weight to this criticism.

In this context, dynamic bookkeeping emerged at the start of the 20th century, the second stage in the development of accountancy (RICHARD 1996). Putting an end to the calculation of fictive liquidations, this new method advanced the principle of the continuance of business and reformulated the problem of how to determine the worth of goods.

Discarding the principle of a fictive liquidation gave rise to several questions since the purpose was no longer to see how a company's debts would be recovered in case of default. In line with the principle of the continuance of business activities, the objective was now to evaluate efficiency at regular intervals. This led to a specific conception of the goods owned by a firm and of the way to record them in the books. First of all, intangible expenses were now listed among assets, like capital expenditures. These assets were to be appraised at "cost value", set at the time they were entered on the books. Although dynamic bookkeeping made a distinction between the assets for long-term use and those intended for resale, both were appraised alike, at cost value. This method of asset valuation implied new standards for assessing depreciation and obsolescence.

In this context, the concept of amortization was worked out. Lemarchand (1993) has pointed to the disparity between the methods for calculating amortization and for entering it on the books. However these different practices converged, especially in manufacturing, on the objective of internally financing business activities from reserves. Thanks to these methods, dynamic bookkeeping had a clearly identified purpose, namely the periodic assessment of a firm's "performance". By regularizing earnings, it sought to allow for a periodic distribution of dividends. This was now possible since long-term investments were listed as assets and, moreover, fixed assets were being systematically amortized, thus spreading the cost value of goods over a definite period of use. Earnings were no longer saddled with these expenditures during the year of payment, whence the possibility of recording profits from the very start of the investment cycle.(table1)

Table 1: Static and dynamic models of bookkeeping (Richard 1996)

	Static		Dynamic
	<i>Pure</i>	<i>Prudential</i>	
Principle of asset valuation	Liquidation value	Lowest market price	Purchase price minus amortization or depreciation
Valuation of intangible fixed assets (goodwill, patents, etc.)	Entered as "charges" (operating costs)	Entered as "charges"	Purchase price minus amortization
Valuation of tangible fixed assets (land, buildings, machines, etc.)	Liquidation value	Lowest market price	Purchase price minus amortization
Valuation of claims (accounts receivable)	Liquidation value	Lowest market price	Face value minus depreciation
Valuation of inventory	Liquidation value	Lowest market price	Purchase price minus depreciation

Practices of valuation...

...In big firms

The study of 19th-century bookkeeping practices in manufacturing reveals a variety of methods for calculating the value of assets (LEMARCHAND 1993). They fall, however, into the categories defined by Richard (1996, 2005).

Let us contrast two distinctly different companies. The first, Schneider, founded in 1836, had a stable group of shareholders and seldom turned to external sources for financing. The second, L'Air Liquide, had a very different profile. From its foundation in 1902, its need for substantial financing forced it to look for external sources; to attract new investors, it had, therefore, to be able to distribute dividends.

Schneider's approach to keeping its books was based on entering investments as operating costs. Investments were thus amortized in full at the time of purchase. This kept them from being entered as assets, or else they were recorded as such but only as a reminder. This practice rested upon appraising assets at their liquidation value, which can be likened to the market value. The intent was to enter investments by using the price to be obtained by selling each good or piece of equipment individually. This method had two immediate implications. First of all, it confused expenses on durable goods and on current consumption. This confusion did not stem from a lack of knowledge but from an extreme form of prudence:

"We did not want to forget that transformations are the essence of industry, and we do not think that the present should be embellished to the detriment of the future" (Manager's Report, 1854, p. 8).

Moreover, this valuation method failed to take into account intangible investments. The latter could not be appraised at liquidation value, since there was no market for them. Considered to be "fictive assets", they were immediately "entered as charges" (Manager's Report, 1868, p. 18). The company held to this position from 1836 to 1939.

The other major method of valuation during the period under study was to subtract from the cost value the annual decreases owing to amortization or depreciation (LEMARCHAND 1993; RICHARD 1996). Fixed assets were thus recorded at purchase price (or production cost for inventory), and the values thus entered on the books did not change. Despite the absence of rules about how to calculate amortization (fixed, variable or as depreciation), only the annual amount set aside for it affected earnings during the financial year. This method did not exclude entering on the books intangible goods (such as the initial outlay for setting up a business), even though the meaning of the latter varied depending on the business or branch of industry (LEMARCHAND 1993).

L'Air Liquide's financial statements contained, as of 1903, several items under intangible assets. Their value was not to be overlooked since they amounted to more than 20% of all fixed assets. Patents and organization expenditures (setup costs) were the two major items under intangible assets. Although these two items appeared in the books, they were rapidly amortized (Annual Report, 1905) and, for this reason, were not fully acknowledged as such. To be precise, the full amortization of organization expenditures should not be seen as an immediate amortization, which would have meant that they were to be entered as operating costs during the year reported. In fact, organization

expenditures were entered as an asset on L'Air Liquide's balance sheet in 1902 but did not undergo amortization till starting in 1905. As for patents and expenses on new studies and lines of business or even on experiments and tests, they were also recorded as assets but at purchase cost; they were not depreciated.

Entrepreneurs were highly interested in the question of valuation methods, since it was closely related to the amount of profits to distribute (the dividend payout ratio). It is, therefore, worthwhile observing the methods chosen by entrepreneurs during the period under study. When interpreting balance sheets, bear in mind that the exclusion of intangible investments or the appraisal of tangible goods, each at its liquidation value, meant that assets were underestimated.

Valuation methods were not chosen to draw a picture of what the firm owned. Instead, the intent was to offer safeguards to third parties by informing them about the company's solvency — to determine the degree to which the sale of goods with a definite resale price would cover debts. Entering investments as operating costs was an extreme form of prudence that decreased earnings significantly and, as a consequence, the profits up for distribution. In other words, it deprived shareholders of potential dividends. We can see these bookkeeping practices as a way of building up substantial reserves for the purpose of self-financing. Accountancy practices at Schneider fit fully into this static bookkeeping model.

In contrast, the choice made at L'Air Liquide was not motivated by this determination to reserve profits for the firm. This company chose bookkeeping practices for other reasons. It faced hard times when it started; funds were scarce. By appraising tangible and intangible investments at purchase cost decreased by annual amortization, the impact on earnings was limited to the amount set aside each year for amortization. While allowing for reserves, this practice aimed at distributing dividends on a regular basis (table 2).

...In bankruptcy proceedings

Besides corporate balance sheets, the problem of valuation also cropped up during bankruptcy proceedings. Legal procedures for insolvency required three balance sheets depending on the issue to be discussed (DALLOZ & VERGÉ 1877). The insolvent party drew up the first one when filing for bankruptcy. The trustee (receiver) made the second in view of an eventual agreement (*concordat*) on rescheduling debts. The third was also drawn up by the trustee but for the purpose of liquidation (called *union* at the time).

The second and third of these balance sheets had the goal of revealing the percentage of claims that ordinary debt-holders might recover. Though prepared by the same party, they used different valuation methods. The second, in view of reaching an agreement, set estimates at 22% (file 13751) or 7% (file 7311), whereas the third, for the purpose of liquidation, set them at between 7% (file 13751) and 5% (file 7311). These variations depended on the objective. Several trustees quite clearly said so, for instance Heurtey in 1847: "*I must say that items in the inventory were appraised in view of continuing business and that judicial liquidation would decrease considerably the asset's value*" (file 7221). Battarel (file 13732) bore out these variations in appraisals.

As a consequence, asset valuations differed. On balance sheets for reaching an agreement, the valuation was to serve as the basis for fixing a price for a settlement between creditors and defaulter, whence an appraisal at market value with, eventually, depreciation. On balance sheets prepared for liquidation, the goal was to set a liquidating value that was all the lower insofar as the losses were steep.

With reference to Richard's categories (1996), these two balance sheets had a static perspective but with nuances setting them apart. The third balance sheet, by proposing a liquidation value for assets, came very

Table 2: Methods of asset valuation at Schneider and L'Air Liquide (1890-1939)

	Balance sheet based on static bookkeeping	Balance sheet based on dynamic bookkeeping
	Schneider	L'Air Liquide
Main objective	Principle of radical prudence Financial autonomy	Control the earnings reported while forming a reserve and regularly distributing dividends
Principle of asset valuation	Liquidation value	Purchase price and the prudential principle
Valuation of intangible fixed assets (goodwill, patents, etc.)	Entered as "charges" (operating costs)	Amortized purchase price
Valuation of tangible fixed assets (land, buildings, machines, etc.)	Entered as "charges"	Amortized purchase price
Valuation of claims (accounts receivable)	Face value minus depreciation	Face value minus depreciation
Valuation of inventory	Production cost minus depreciation	Production cost minus depreciation

close to a purely static approach to bookkeeping. Based on a (nonliquidative) market value, the second balance

sheet, since it was made for the purpose of reaching a settlement, appraised certain assets at slightly more than their liquidation value. It reflected a prudential, static approach.

In contrast, the balance sheet filed by the defaulter used values based on purchase prices without taking depreciation into account. Poor accounting practices (LABARDIN 2011) and a three-day term set by law (DALLOZ & VERGÉ 1877) limited the insolvent party's possibilities. The balance sheets presented by defaulters often contained, therefore, lists (COQUERY & PRAQUIN 2008, p. 59) of items appraised at purchase price without amortization or provisions (usually left out for the greatest of ease). By contrast, the balance sheets made by trustees would soon take into account factors related to depreciation, for both fixed assets and claims. Based on costs, the balance sheet prepared by the defaulter verged on a dynamic model of bookkeeping — but still, without amortization, since the defaulter's choice of a valuation method when petitioning for bankruptcy was motivated by the simplicity of using the historic cost (table 3).

...In jurisprudence

The Code of Commerce of 1807 did not detail the methods of asset valuation, but it did present, in an appendix, a model of a balance sheet that suggested appraising assets “at [current] prices” (*aux cours*). Although practitioners and theoreticians agreed on the need for asset valuation, their opinions diverged about the methods.

The first commentators on the Code of Commerce seemed to prefer a valuation of all assets at the liquidation value (DELAPORTE 1808, p. 122 quoted in RICHARD 2005, p. 91). This opinion was apparently shared by Vincens (1837 quoted in LEMARCHAND 1993, p. 430), the head of the Bureau of Commerce

in the Home Office. This former merchant referred indirectly to the liquidation value but preferred the phrase “current value supposedly realizable”: he recognized that the liquidation value was subjective. Nonetheless, it gained approval by jurists during the 19th century. When used in “soundly organized organizations”, it was, in their view, the only way to protect creditors and shareholders. The liquidation value amounted, in effect, to a means for underestimating assets and forming reserves, since the liquidation value was entered at the lowest market price. However this method might lead to distributing paper profits (derived from counting as income the potential capital gains entered on the books following an increase in an item's value).

Only the courts, which had to handle a growing number of lawsuits against corporate directors, were competent for defining fundamental concepts, such as the methods for calculating the earnings to be disbursed (PRAQUIN 2003). Through the jurisprudence made in the Mirès and Pereire cases in 1865, the concept emerged of the earnings to be distributed. This payout ratio was constructed so as to avoid two stumbling blocks: overestimation (by taking into account unrealized capital gains) and dissimulation (by forming secret reserves). The methods used to calculate payout had a direct impact on the methods used for asset valuation. In effect, assets can be entered at their liquidation value only if capital gains are entered as frozen reserves or else if the lowest (market) price is applied (RICHARD 2005). The conceptions underlying these judicial rulings, which made jurisprudence, fit into a pure type of static bookkeeping.

Questions began being raised about appraising assets at the lowest price. In comments on a decision by a tribunal in Rouen in 1909:

“Fixed objects (factories, equipment, machines) are recorded on the balance sheet not at the price for which

Table 3: Asset valuation in cases of bankruptcy (1847-1887)

	Defaulter's balance sheet	Trustee's balance sheet in view of a settlement	Trustee's balance sheet in view of liquidation
Authorr	bankrupt	Syndic	Syndic
Main objective	Describe the situation at the time of bankruptcy	Negotiate an agreement	Divide assets among debt-holders
Principle of asset valuation	Purchase price	Purchase price and the prudential principle	Liquidation value
Valuation of intangible fixed assets (goodwill, patents, etc.)	Purchase price	Entered as “charges” (operating costs)	Liquidation value
Valuation of tangible fixed assets (land, buildings, machines, etc.)	Purchase price	Purchase price minus depreciation	Liquidation value
Valuation of claims (accounts receivable)	Face value	Face value minus depreciation	Liquidation value
Valuation of inventory	Production cost	Production cost minus depreciation	Liquidation value

they could be sold but at the value of the services that they could render to the company, at their business value in contrast with the liquidation value" (AMIAUD 1920, p. 8, quoted in RICHARD 2005, p. 102).

This jurisprudence made a break with the predominance of the liquidation value and put in its stead the "use value" of fixed assets. This change can be set down to a shift in the purpose assigned to bookkeeping.

Appraising the worth of goods would no longer have the goal of seeing to it that the company's debts be paid off but, instead, of measuring the company's efficiency. In this respect, the Rouen court decision corresponds to a dynamic conception of bookkeeping. The idea of applying the "use value" started circulating in the early 20th century, but the methods for calculating amortization still reflected quite divergent positions. The provisions of the 1917 Fiscal Act strongly oriented bookkeeping practices by letting amortizations be deductible when they were calculated by dividing a

good's purchase price by the number of years of use (RICHARD 2005).(table 4)

...In bookkeeping manuals

Several authors of books on accountancy took an interest in problems related to valuation. The first court decisions issued in the 1860s stimulated the debate on bookkeeping methods, a topic several authors would address forthright. Table 5 summarizes the positions adopted by three authors around the turn of the 20th century. (table 5)

We notice two rationales. At the top of balance sheets, opinions converge on a position that was not self-evident at the time: these authors preferred the cost, or purchase price with amortization. This solution increased values at the top of balance sheets, in particular for intangible fixed assets.

At the bottom of balance sheets however, opinions diverged about whether to take into account unrealized

Table 4: Asset valuation in three court decisions

	The Mirès (1862) and Pereire (1865) decisions	The Rouen court decision (1909)
Main objective	Protect debtholders	Measure efficiency
Principle of asset valuation	The lower of the two: the amortized purchase price or liquidation value	Use value (amortized)
Valuation of intangible fixed assets (goodwill, patents, etc.)	Entered as "charges" (operating costs)	Purchase price
Valuation of tangible fixed assets (land, buildings, machines, etc.)	Liquidation value	Purchase price minus depreciation
Valuation of claims (accounts receivable)	Face value minus depreciation	Face value minus depreciation
Valuation of inventory	Production cost minus depreciation	Production cost minus depreciation

Table 5: Methods of asset valuation recommended in three bookkeeping manuals

	Chevalier (1896)	Léautéy (1897)	Croizé (1902)
Principle of asset valuation	Amortized purchase price	Amortized purchase price and market value	Purchase price and market value
Valuation of intangible fixed assets (goodwill, patents, etc.)	Purchase price minus amortization or else annual amortization (pp. 40-41 & 51)	Purchase price minus amortization (pp. 77 & 110-111)	Purchase price minus amortization (p. 147)
Valuation of tangible fixed assets (land, buildings, machines, etc.)	Purchase price minus amortization (pp. 41 & 51)	Purchase price minus amortization (pp. 110-111)	Purchase price minus amortization (p. 109)
Valuation of claims (accounts receivable)	Purchase price minus potential capital losses (p. 51)	Purchase price plus or minus unrealized capital gains/losses (p. 110)	Purchase price plus or minus unrealized capital gains/losses (p. 110)
Valuation of inventory	Production cost minus possible capital losses (p. 51)	Production cost plus or minus unrealized capital gains/losses (p. 110)	Production cost plus or minus unrealized capital gains/losses (p. 161)

capital gains. Whereas Léautey and Croizé were for, Chevalier was against. Lower values were, therefore, entered at the bottom of balance sheets.

The approaches adopted by Léautey and Croizé reflect a prudential, static conception of bookkeeping, since unrealized capital gains and losses were entered at what resembles their market value. On the contrary, Chevalier proposed taking into account only unrealized capital losses, an approach characteristic of a more dynamic conception of bookkeeping. The proposals made by these authors should be set in the light of the professional competition between them. This helps us interpret certain contradictions.

Findings and conclusion

The origins of bookkeeping standards

Historians of bookkeeping have often studied standardization in accountancy, the focus being on the driving forces in this process. Let us mention three types of studies. The first has raised questions about the conditions underlying this standardization (COLASSE and STANDISH 1998) and about possible German influences (OURIEMMI 2010; TOUCHELAY 2011). The second has inquired into the origins of the profession of accountant (BOCQUERAZ 2001; RAMIREZ 2001). The third has analyzed the first attempts to consolidate accounts and organize the profession at the turn of the 20th century (LEMARCHAND 1995; LEMARCHAND, NIKITIN & ZIMNOVITCH 2008).

Despite the many forces pushing for a chart of accounts and the organization of the accountancy profession, several rationales impeded the trend. They were at work in the four settings under consideration herein. Firms did not all have the same interest in defending the same valuation method. This holds, too, for cases of default. However these rationales did not just come into play in a single setting, among, for instances, the authors of bookkeeping manuals or the decisions issued by judges. The rationales at work in a given setting might be contradictory. Bookkeeping manuals, for instance, adopted one valuation method for the top of balance sheets (amortized purchase price) and another for the bottoms (market value). In contrast, we do not observe

this difference between the top and bottom of balance sheets in companies or in bankruptcy cases.

We can set these differences down to several factors. First of all, strategies: big firms chose a valuation method in line with the method for raising funds (FABRE 2008). Furthermore, the authors of bookkeeping manuals did not all have an interest in proposing the same solution, since each author could present his method as an innovation in an effort to justify it. Strategy does not explain everything however. Other factors were the lack of knowledge and poor habits, especially among defaulters. For their part, commercial court judges, through their successive decisions, formulated a series of rulings that reflected the prevailing legal view at that moment.

Mention must also be made of the perspective adopted for asset valuation. Turning aside from the interest of the parties involved, let us bear in mind that a value has meaning only in relation to an objective. Evidence of this comes from the appraisals made by trustees during bankruptcy proceedings. When an agreement was reached on a settlement, goodwill, an intangible fixed asset, was appraised at liquidation value, since the goal was to know how much profit it would, if sold in the coming years, yield. If the company was to be liquidated however, valuation was based on the actually realized value, which was very low for intangible assets.

Given these various factors, we can propose another interpretation of the standardization of bookkeeping in France: the reason this process deployed so slowly in the country had to do with the force behind the aforementioned rationales.

The theories of static and dynamic bookkeeping

This research furthers Richard's (1996) work. Table 6 presents the bookkeeping practices we have observed in relation to Richard's categories.

This study of items on balance sheets has brought to light differences in bookkeeping practices.

At the bottom of balance sheets, the choice in favor of market value was seldom made. There are two exceptions. The first figured in the two bookkeeping manuals (LÉAUTEY 1897; CROIZÉ 1902) that recommended taking into account both unrealized

Table 6: Summary of the methods of asset valuation in relation to Richard's (1996) typology

	Static bookkeeping		Dynamic bookkeeping	
	<i>Pure</i>	<i>Prudential</i>	<i>Cost</i>	<i>Cost minus amortization/depreciation</i>
In big firms	Schneider			L'Air Liquide
In bankruptcy proceedings	Balance sheet in view of liquidation	Balance sheet in view of an agreement	Defaulter's balance sheet	
In the jurisprudence	Mirès and Péreire rulings			The Rouen ruling
In bookkeeping manuals		Léautey & Croizé		Chevalier

capital gains and losses — recommendations that were apparently ignored. The second was to enter assets at their liquidation value, as trustees did when preparing balance sheets in view of liquidation. The values thus set differed significantly: the traditional market value increased total assets in comparison with the amortized purchase price whereas the liquidation value had the opposite effect.

At the top of balance sheets, other choices were made. In the case of intangible fixed assets — and even more so for tangible ones — the choice was to enter such items as assets or else as operating costs (“charges”). If the decision had been made to spread expenditures out over several financial years, they were entered as assets — the preferred method in dynamic bookkeeping. At Schneider, in contrast, there were no fixed assets, whether tangible or intangible, since such expenses were entered as operating costs. During bankruptcy proceedings, when the balance sheet in view of reaching an agreement was drawn up, the solution was less extreme: only intangible fixed assets were entered as operating costs whereas tangible fixed assets were appraised at the purchase price depreciated for wear and tear. The 1909 ruling by the commercial court in Rouen also adopted this method, based on the depreciated purchase price. Another solution was to enter fixed assets as such but at their liquidation value, as trustees did when preparing balance sheets in view of liquidation or as in the court decisions (table 7).

The impact of valuation methods on earnings during the period under study becomes clearer. In most cases, the choice of a method based on the purchase price with amortization/depreciation (dynamic bookkeeping) led to higher values than the method using “market prices” (static bookkeeping). This stems from how markets were organized around the turn of the 20th century. Companies were often liquidated at a cheap price under conditions that inevitably incurred steep losses. In contrast, the methods based on the purchase price resulted in a higher valuation.

The prudential principle, static and dynamic bookkeeping

This diachronic study sheds light on points of continuity and difference with the current situation. Continuity clearly rested upon a broad agreement on the “prudential principle”, which very often determined conduct. The

19th-century jurists mentioned by Richard (1996) invoked this principle to defend static bookkeeping practices, since the methods based on “market value” definitely resulted in a lower (more prudent) valuation than those referring to the purchase price.

The shift from industrial to financial capitalism has reversed the meaning of the differences between static and dynamic bookkeeping. In situations where few markets are well organized, a valuation based on the purchase price is usually higher than one based on the “market value”. The situation is reversed once financial assets have market quotations: the choice of a method based on the market value (instead of the purchase price) no longer satisfies the prudential principle. Nowadays, in organized markets, defending a static approach to bookkeeping, instead of a dynamic one, means that profits will be entered on the books much faster than in the earlier period, when this choice had the opposite effect. It is tempting to say that, underlying the long-term trend in asset valuation is an attempt to generate profits over a shorter period. In other words, we are gradually abandoning the prudential principle.

This overview has shed light on the reasons underlying the problems of asset valuation. Given the linkage between the distribution of dividends and the existence of profits, corporate directors have looked for ways to enhance the value of assets and thus distribute dividends faster. As a consequence, a new valuation method has emerged in both corporate practices and the jurisprudence.

Another lesson to be drawn from this historical study is the gradual decline of the prudential principle, from a very prudential approach (in pure, static bookkeeping) to an option for measuring the firm’s performance (dynamic bookkeeping). The abandonment of this principle can be explained by the rise of a “long-term” industrial capitalism, since investments become profitable several years after they are made.

From the legal discipline embodied in static bookkeeping (with the goal of protecting creditors), bookkeeping has gradually slipped toward a managerial conception whereby accountancy must try to provide an exact picture of earnings.

Table 7: The impact of methods of asset valuation

Balance sheet	Static bookkeeping		Dynamic bookkeeping	
	Pure	Prudential	Cost	Cost minus amortization & depreciation
Haut de bilan	--	-	++	+
Bas de bilan	--	+	++	-

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