On Financial Accounting Measurement: A Reconsideration Of SFAC 5 By The FASB Is Needed

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Abstract

This paper attempts to reinforce by means of social theory the procedure and property (attribute) of financial accounting measurement advanced by Salvary [1985, 1989, 1992]. The procedure entails estimating the amount of cash flows derivable from existing investment projects; and the measurement property (attribute) is identified as recoverable cost. The "cash-in and cash-out" principle establishes financial capital maintenance as the appropriate capital maintenance concept to be followed in the measurement of periodic income. An analogy between a bank savings account and an equity security is used to identify the measurement property (attribute) and validate the additivity of financial accounting numbers. Problems with the monetarist model were used to demonstrate the appropriateness (stability) of the measurement scale (monetary unit). The logical analysis developed in this paper makes a compelling case for a reconsideration of Statement of Financial Accounting Concept No. 5 by the FASB.

Introduction

In Statement of Financial Accounting Concepts 5 [1984, para. 66, 67], the Financial Accounting Standards Board (FASB) maintained that five different attributes (historical cost/historical proceeds, current [replacement] cost, current market value, net realizable (settlement) value, and present (or discounted) value of future cash flows) are used to measure the items which are currently reported in financial statements; and the use of a particular attribute depends on the nature of the item and the relevance and reliability of the attribute. The FASB [1984, para. 70] stated that: "Rather than attempt to characterize present practice as being based on a single attribute with numerous exceptions for diverse reasons, this concepts Statement characterizes present practice as based on different attributes. Rather than attempt to select a single attribute and force changes in practice so that all classes of assets and liabilities use that attribute, this concepts Statement suggests that use of different attributes will continue, and discusses how the Board may select the appropriate in particular cases." Likewise, the Special Committee [1994,p.95] concluded that standard setters should continue to use a *mixed model*, whereby assets and liabilities are measured in fi-

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nancial statements at cost, lower of cost and value [market] and fair [realizable] value. However, following the logical analysis presented by [Salvary, 1992], the FASB's position on "different attributes" and the AICPA's position on a "mixed model" cannot be supported. One attribute has been identified by Salvary [1985/1989/1992] and this attribute leads to a unique model which is not mixed. The various valuation rules in financial accounting (which give rise to the appearance of different attributes) are necessary for the convergence of a heterogeneous groups of items into a homogenous measure.

This paper attempts to reinforce by means of social theory the process of financial accounting measurement and the uniqueness of the measurement property/attribute as set out in Salvary [1985/1989/1992]. Since the FASB has the responsibility for setting financial accounting standards, it is very important for the FASB to give due cognizance to the single attribute/property of existing financial accounting measurement which has been identified. (Throughout the rest of this paper, the term "property" will be used instead of "attribute".) In describing the financial accounting model, Salvary [1985] identifies "recoverable cost" as the measurement property underlying financial accounting measurement. This property, linked to investments and explicated by the capital budgeting model, provides the logical explanation of the apparent diverse rules in financial accounting. Under the described valuation process, the heterogeneity of resources converges to a homogeneity of value; thus an estimation of an entity's aggregate recoverable cost of investments as of a specific point in time is made possible [Salvary, 1992, pp. 236, 263]. "Recoverable cost" permits the portrayal of a nominal money recovery process which occurs under conditions of uncertainty. Other values (replacement cost, current value, and realizable value) are signals. Collectively, these signals constitute a signaling system for an operating system (the production plan in a changing environment). Investment decisions are guided by these signals [Salvary, 1989, pp. 41, 52, 91].

The Social Evolutionary Process Of Adaptation

The history of society reveals that there exists an evolutionary process of adaptation which is oriented toward the maximization of the social welfare. The social process is continually evolving as a consequence of the learning efforts and adaptive mode of society. Furthermore, various institutions and adaptive mechanisms have been introduced by society at various points in time in its attempt to enable a more efficient and effective execution of social exchanges. (The term "social exchanges" is used instead of "economic activities" because it is a more general term.) The firm, money, a money economy, and the capital market have evolved over time providing clear examples of the social welfare maximizing adaptive process. In this evolutionary setting, the "procedure" and "property" of financial accounting measurement can be identified.

The Firm

The firm is an intermediary adapted by society to reduce the cost to society of transacting among its members. According to Coase [1937, p. 388] and Arrow [1974], the firm constitutes an alternate mode to the market in the organizing of economic activities.

...[A]s firms become large they supplant the market's exclusive reliance on price as an allocation device and resort to other methods. In a world filled with transaction costs, exclusive reliance on a market-generated price to allocate goods could well be inferior to other nonprice allocation methods [Carlton, 1986, p. 655].

The firm is one means by which society maximizes its welfare by reducing uncertainty and increasing its efficiency in its output decisions.

Money

Money is "a vehicle for transferring purchasing power over time" [Davidson, 1972, p. 62]; it was introduced by society as a cost effi-

cient means of transacting. Paper (nominal) money has a demand and supply function; however, the cost for its use as an agent is not to be confused with its nominal value. Paper money is priced in terms of itself (e.g., $1.00 = 100 cents), and its *use* is compensated for in terms of itself. The cost for the use of money is expressed as a rate (viz: interest rate). The liquidity cost of money, the expected change in the nominal value of money, and the carrying cost of money are all zero. In its domestic economy, money is an "unchanging standard against which all other durables (readily reproducible capital goods) and titles to capital goods and debt contracts can be measured" [Davidson, 1972, pp. 62-64]. In the economic system, all other items are measured against this "unchanging standard." Since money is the stock in trade of financial institutions, change in the general level of prices (which is the result of changes in the relative prices of all goods and services) constitutes the primary measure of change in factor cost for financial institutions. Consequently, financial institutions adjust their lending rates to incorporate anticipated changes in the general level of prices.

One may argue that paper (nominal) money is a commodity;[1] but it is its use--credit--which is the commodity; and the price of credit is the interest rate. Paper money, on the international scene, is construed to be a commodity because it is traded. However, it is argued, that at best that view is only partially correct since it is the goods and services (output productivity) and the prevailing relative prices (price level) of the domestic economy that determines the rate of exchange of that economy's paper money vis-a-vis every other economy's nominal money. Paper money, in international trade, is akin to representative money or bills of exchange.

"By using money, individuals reduce the amount of information they must acquire, process, and store, and they reduce the number of transactions in which they engage to exchange their initial endowments for optimal baskets of goods [Brunner and Meltzer [1989,p.250]." Furthermore, "[i]n a well-developed market economy, most of the net *marginal* productivity of money probably results from the saving of costs of transacting, while the *total* productivity of money depends on the reduction in cost of acquiring information and costs of exchanging [Brunner and Meltzer, 1989,p.251, FN #19]."

A Money Economy

Nominal money constitutes the medium of exchange in a money economy, and units of *uncertain* purchasing power are held in the form of nominal money [Keynes, 1930, pp. 55-56]. Since all members of society invariably remit and receive nominal sums of money; nominal money flow is the critical dimension in a money economy.

The characteristics of a money economy are: (1) the monetization of the economy and (2) the socio-economic adaptations to monetization. The interconnection of all parts of the economic system through the flow of nominal paper money constitutes the monetization of the economy. The storing of services is made possible by monetization, which permits an investment in the process of production and gives rise to the concepts of: *money-capital, finance, earnings,* and *profit*. Money savings available for investment purposes--the inflow of money into the capital market--is *Money-Capital.* The raising of money-capital for production in the commodity market--the outflow of money-capital from the capital markets--is *Finance.* The gross monetary inflows and outflows which cause the activities in the commodity market to expand and contract are induced by the consumption and production decisions of the individual members of society. In the commodity market, factor claims emerge in the process of securing and storing the services of factors (agents) used in production. Factor claims constitute *Earnings* (the returns to original and durable agents engaged in production); part of which is saved and fed into the capital market. The remainder, which is used for consumption, flows directly into the commodity market.

Nominal money permits the storing of uncertain purchasing power in nominal terms,

and monetary exchanges to accumulate money as one motivation for the production process is an adaptation to this socio-economic stimulus--the ability to store uncertain purchasing power. Given a surplus-oriented money economy, the concept of *Profit/Loss* (the difference between inflows of money into the commodity market representing consumption decisions and the portion of money investment in production consumed during a given period) emerges as a consequence of the production process in which the firm (producer) is concerned with the accumulation of a stock of money [Boulding, 1950, pp. 106, 112; Georgescu-Roegen 1971, p. 216].

Money-Capital, Earnings and Profit interacting through the price mechanism are the forces which drive the money economic system. Relative prices, expressed in nominal money terms, act as signals: information flow and feedback in this system; and money fulfills its signaling function because money prices reflect changing conditions. This condition obtains, though not in the special case of 'fully informed agents', who "have no need for a price mechanism to inform them about what is happening. Prices [in this case are redundant, since they] merely reflect what ... [fully informed agents] already know [Leijonhufvud, 1981,p.149]." Evidently, the effect of changing prices on the individual's nominal budget--vis-a-vis the individual's expectations of nominal returns (cash flows) from his/her earnings/investment portfolio--is knowable only to that individual.

In general, nominal dollars are received by economic agents and nominal dollars are advanced by and returned to financiers. No where in this economic setting is real money to be found: only nominal money exists and *real money is a function of nominal money*. The real sector influences the monetary sector and the monetary sector influences the real sector. This interdependency of the monetary and real sectors may explain why Morishima [1992,p.184] maintains that: "[T]he method of analysis dichotomizing economics into two specialized departments, real and monetary, is harmful and defective."

The Capital Market

The firm is entrusted with money to bring about the desired result, which is measured in money terms. The firm's ability to engage in long-term planning is enhanced by money-capital; hence, cashflow constitutes a dominant theme. In this environmental setting, the *capital market* emerged to enable the intertemporal transfer of risks among the suppliers of finance. In this transfer, money (savings) is exchanged for claims against future earnings expected from business enterprises. The money which is exchanged constitutes a price. Thus, *a pricing process* was established with the capital market for the transfer of future cash flows for current cash. Essential to this *pricing process* is *a measurement of current earnings and residual money commitments,* which is provided by financial accounting. Such measurement (information) is used as input in financial analysis *to estimate future earnings and residual value*.

Resources are contracted for by the firm in nominal money terms resulting in financial quantity flows through the economy. The process of production and consumption involves the storing by the firm of financial inputs at one moment and then the releasing of those financial inputs at another moment. Such data is captured by financial accounting. Essentially, cash flow in its entirety is a direct result of monetary commitments related to investment plans of the firm and the ability of the firm to recover such monetary amounts through plan gestation. After investment plans have been implemented, then cash flow measurement ensues. *Measuring cash flows is the critical aspect of economic reality which is embedded in the accounting framework.* The firm uses managerial accounting to generate planning (ex ante) data for estimating future cash flows, and financial accounting to document factual or realized (ex post) data on current cash flows.[2]

The "Cash-In And Cash-Out" Principle And Capital Maintenance

The measurement focus in financial ac-

counting is upon *estimating the amount of cash flows derivable from existing investment projects*--the estimated recoverability of committed resources (in part the organization's risk exposure). Financial accounting enables a mapping of cash commitments. Under conditions of certainty, cash flows are predictable because the approach employed in financial accounting is based on the model: $K_f = M_d$ (where, K_f = Committed Finance/Money Outlays; and M_d = Money Recoveries Discounted over the Recovery Period at the Firm's Internal Rate of Return). Evidently, while the cash flow prediction can be accommodated by a financial capital model of cash flows, it cannot be accommodated by a physical capacity capital model. The adjustment (transformation) of K_f (financial capital - committed finance) to reflect K_p (physical capital) alters the current period's earnings to reflect a residue - distributable income. Since the current period's earnings is a composite of current actual cash flow and estimated future cash flow, then the adjustment to portray physical quantities in financial terms results in a distorted view of the period's earnings. To shed light on this issue, the basic transaction cost model of organizing economic activities--the special case of the general case: social exchanges--is presented below.

Transaction Costs and Social Efficiency

In the transition from a sustenance economy to a monetary (surplus exchange) economy, the individuals with savings (money capital) were approached by other individuals with ideas and managerial know-how. Those individuals with money available (savers) were interested in increasing their sums of money, and those with ideas and managerial talents convinced savers that they could do just that. Savers/financial backers assessed the risk inherent in each venture (one time project) and demanded a return commensurate with the risk accepted. The concern of the savers/financial backers (then and now) is the amount of money to be committed (cash input) to the venture and the amount of money to be returned (cash output) from the venture. Thus, at the end of each venture, every item was converted into cash and all savers/financial backers who had contributed to the venture received their proportionate share of cash. Replacement of non-monetary assets was not a consideration.

The benefit to society, of financing ventures in this fashion--amassing large sums of money-capital--was in the economies of scale. However, society recognized that further benefits could be derived if two types of transaction costs (start-up and termination costs) associated with a venture approach could be eliminated. The need to eliminate the start-up and termination (transaction) costs was important for two reasons: (1) many savers after receiving their cash returns, recommitted such money to the same venturers, and (2) there was an unnecessary loss of time and effort on the part of the venturers to repay and then recollect to start new projects. Importantly, however, the principle of "cash-in and cash-out" was not to be altered, only the elimination of the start-ups and terminations of the economic activities was to be effectuated.

Limited Liability and The Capital Market

The cost reduction (elimination of the two transaction costs) was effectuated as a matter of public policy with the introduction of limited liability in the form of a permanent organization (the corporation) and the creation of a securities (capital) market to permit transferability of ownership (termination of the saver's commitment in that risk/return package). With the capital market, the cash-out was made possible without terminating the entire organization; thus, society reduced considerably the cost of transacting.

So the form of organization does not alter the "cash-in and cash-out" principle; the institutional arrangement of the corporation merely changed the manner in which the cash-out was to be accommodated: intersavers' transfer of risks - the exchanging of relative risk position among savers. Although this analysis has advanced the case for financial capital maintenance, there is still the need to demonstrate the validity of such a measurement process in terms of the additivity of accounting numbers from the standpoint of:

(1) the measurement property and (2) the measurement scale.

The Measurement Property And The Additivity Of Financial Accounting Numbers

A major criticism of conventional financial accounting measurement is that the numbers so produced cannot be meaningfully added together: (1) given the use of different attributes and (2) the monetary unit in periods of changing prices. The identification of recoverable cost as the measurement property in financial accounting eliminates criticism #1 [Salvary 1992]. The essence of criticism #2 is that since prices do change (in response to supply and demand) then the value of money does change (the unit of measure does change). However, the argument maintains that for addition to be meaningful one must add apples with apples and oranges with oranges; therefore, adding dollars from different years is adding unlike things. Unfortunately, in the accounting literature [e.g., Myddleton, 1984], the special case of simple enumeration is equated with the general case of measurement.

In *measurement*, however, one is dealing with *a specific property of an object.* For instance, if one is dealing with a meal one may measure the caloric content of that meal. A calorie is defined as "the fuel or energy value of food" [Mosby's, 1986, p. 174]. A diet is defined as "food and drink considered with regard to their nutritional qualities, composition, and effects on health" [Mosby's, 1986, p. 346]. So given the fact that a meal may consists of apples and oranges, one will add what would apparently be unlike things--apples with oranges--and wind up with a very proper measurement of that diet; that is, the calories contained in each orange will be added with the calories contained in each apple. In a similar vein, one finds that when merchandise is being transported, the cost of transportation is based either on the volume (space occupied) or weight. Here again is another case where apparently unlike things are being added together. Freight transported by rail, truck, or air, generally involves the movement of heterogeneous items. Nevertheless, a measurement is made either of volume or weight of the heterogeneous items. In measurement, it is a specific property (attribute) which is common to all the items in questions that is being added together. So the objection to the summation of nominal dollars when it represents the summation of the recoverable cost property is invalid, since such summation of the measurement property observed in a heterogeneous group of items is unmistakably consistent with measurement theory.

Analogy Between A Bank Savings Account And An Equity Security

In the discussion which follows, an analogy between a bank savings account and an equity security is used to identify the measurement property and demonstrate the validity of the additivity of financial accounting numbers. One may argue that the comparison is being made between money capital (cash) and non-money capital (nonmonetary assets). However, it must be understood that the acquisition of non-money capital (nonmonetary assets) is a process of *the storage of financial capital* - nominal money. What logically comes to mind is the liquefaction of natural gas for transportation; upon the arrival at the destination there is the conversion of the liquefied gas back to its gas form. Since the form does not change its substance, it would be inappropriate to say that in one state one is dealing with a gas and in the liquefied state one is dealing with non-gas. As pointed out by Salvary [1992, pp. 264-265] drawing upon the analogy between financial accounting and physical chemistry, real gases constitute different states of the perfect gas, similarly nonmonetary assets constitute different states for storing nominal money, which is considered as the ideal state.

The analogy between a bank account and an equity security is valid because both situations reflect the use of savings. On one hand, when one individual puts money into a bank savings account, it is referred to as savings. On the other hand, when another individual places money in the equity securities of a firm which uses the money to acquire a piece of productive equipment, it is referred to as investment. It is

quite true that the former is considered to be a passive use of money, while the latter is considered to be an active use of money. Nevertheless, the difference in the terms used is primarily a reflection of the riskiness associated with the use of one's money. In either case, each individual is expecting a return. However, the main difference is that the savings account is less risky than is the investment in the piece of productive equipment. Therefore, the expectation is that the return on savings (the savings account) would be less than the return on investment (the equity security reflecting an interest in the piece of equipment) as a result of the difference in the risk accepted. In both cases, the individuals are saving their money but are simply using two different vehicles to accomplish their objectives.

Money is a unit of account and a store of value. Let x = unit of account, and y = store of value; therefore, x = y. While x does not change in rendering service as a unit of measure, the service of y changes with the changes in the supply and demand of goods and services. When money is used as a medium of exchange, the two preceding functions are now combined into the latter function. To argue against the analogy between a savings account and an equity security would be inconsistent, because such an argument would imply that: the summation of x (Σx_n) is improper - the case of financial accounting, while the summation of y (Σy_n) is proper - the case of the savings account. The fact remains that x and y are only different ways of expressing relationships (x = counting relationship; y = exchange relationship) of money to objects.

In reality, the individual saver's financial model conforms to the financial accounting model shown above. The present value of the saver's deposits is the amount deposited; it is quite similar to K_f above. However, unlike holders of savings deposits, shareholders do not expect to receive an amount equivalent to interest that is obtainable from a banking institution, but a rate of return (profit rate) which should be higher than the rate of interest to compensate for the risk inherent in the particular type of industry in which they own equity securities. The degree of risk voluntarily accepted by shareholders is far greater than that accepted by bank depositors.

The additivity of intertemporal bank deposits supports the validity of the additivity of intertemporal investments in (addition to) the firm's portfolio of assets. Each year the depositor adds new cash to the old cash, but banks do not adjust savers' accounts to compensate for price level changes. By not making price level adjustments to savers' accounts, banks are not considered as violating the rules of addition by improperly adding in individual savers' accounts nominal money from an old period to nominal money of a new period. This condition holds simply because the decision to put money into a savings account reflects a particular risk/return trade-off. Since in both cases one is looking at the same measurement property - recoverable cost of the investment, in like manner, new acquisitions of assets represent new nominal money additions to the previous stock of invested nominal money; therefore, no adjustment is necessary to financial accounting data. In both cases: (a) the returns (interest on savings and profits on investments) are added to the asset balances less any withdrawals, and (b) any returns (interest or profit) retained in the particular savings program are reinvested at the obtainable rate of return.

The return on the savings account serves as a check on the efficiency in the use of money-capital. The profit rate is compared to the interest rate. If the profit rate is too low, then investment in productive equipment will not be forthcoming.

The banking firm is an intermediary in society, and so is each and every other business firm. The firm is but one means by which society accomplishes its objectives. With the adoption (evolution) of a money economy by (in) society, the storing of uncertain purchasing power in the form of nominal money units was made possible. Money is entrusted to the firms to bring about desired results which are measured in nominal money terms; however, some firms may fail to deliver desired or alternatively avail-

able results. Rising factor costs (increase in specific factor costs) may render some firms inefficient in the sense that they cannot transfer the additional costs to end consumers; thus, such firms will be terminated.

In a surplus-oriented economy, the production process is motivated by monetary exchanges to accumulate money (the storing of purchasing power and not the storing of physical objects). In this setting, the firm is concerned with the accumulation of a stock of nominal money. On one hand, the bank is involved in the intermediation of money which is its stock in trade. Hence, "[b]anking is warehousing of money instead of real goods [Davisson and Harper, 1972,p.156]." Furthermore, in the absence of a currency revaluation, the nominal value of money cannot change while in the possession of the bank. On the other hand, the nonbank business firm is involved with the intermediation of consumable goods or services. As such, *a firm's non-money (nonmonetary) asset is merely a repository of cash with a greater degree of risk than that associated with a bank savings account.*

Nonmonetary Assets: Stores of Recoverable Cost

Planning cash flows calls for an understanding of the environment and the existing circumstances. Many firms use their accounts receivable to increase their monetary returns. They prefer credit sales to cash sales. This preference is based upon two considerations: cost effectiveness and efficiency in cash management. The need to find an outlet to invest cash inflows from sales is eliminated and the risk associated with unrelated investments is minimized. Good managers attempt to understand and anticipate the conditions that would produce change. Those who do understand and anticipate changes are those who lead their companies in the right direction. So it is not the values of the assets and liabilities of the business firm that is valued by the capital market but the management and the nominal money earnings that they generate.

Failure to give due cognizance to the process by which nonmonetary assets comes into existence and the reason for their existence *can lead one to argue* that nonmonetary assets take on a role that is entirely different from that of monetary assets, therefore the analogy with the bank savings account is invalid. The individual nonmonetary assets (*cash flow generators which are stores of recoverable cost*) are not acquired to be resold individually, and their replacement is not a function of the past but the existence of a future that warrants a new investment in those nonmonetary assets. All assets represent in the aggregate the amount of invested nominal money expected to be recovered. All liabilities represent in the aggregate the amount of nominal money expected to be discharged. Participants in the capital market do not place a value on the individual assets of the firm; they place a value on the cash flow plan that management has set in place. So with respect to any change in value of a nonmonetary asset in the used goods market, the change in the value of a firm is zero if such change is not a reflection of a change in the particular firm's cash flow related to that type of nonmonetary asset which it holds.

The fact that the firm can sell some pieces at random while other pieces have no resale value are issues which are irrelevant to the cash flow plan. Nonmonetary assets come into existence for no other reason but to augment the initial nominal money invested by the firm. As a collective group, and not as individual pieces, they reflect the cash flow generating plan that management has put in place. The production process occurs when financial capital undergoes a change of state. The financial capital passes from the initial state--the acquisition of productive assets--to the final state--when the products or services generated have been converted into monetary claims. The acquisition of productive assets and the production of goods and services require time for their accomplishment; thus, they are both path functions and their numerical values are completely dependent upon the cash flow process followed in moving from the initial state to the final state. Indubitably, the "cash-in and cash-out" principle prevails!

The Measurement Scale (Monetary Unit) And The Additivity Of Financial Accounting Numbers

Due to the primacy of the function of financial accounting information in providing a description of the state of being *for the purpose of risk-sharing*, the recoverable cost as the *single value* makes financial accounting valuation a *cumulative* process.[3] This cumulative process, the nominal money commitments in resources and obligations as embodied in financial accounting information, is projected throughout the markets of the socio-economic system [Salvary, 1985, pp. 44-45]. However, this nominal unit (the measurement scale) is considered to be unstable based upon monetarism - the monetarist school of thought. The FASB [1984, para. 71] maintains:

The monetary unit or measurement scale in financial statements in current practice is nominal units of money, that is, unadjusted for changes in the purchasing power of money over time. An ideal measurement scale would be one that is stable over time. At low rates of change in general purchasing power (inflation or deflation), nominal units of money are relatively stable. However, as rates of change in general purchasing power increase, financial statements expressed in nominal units of money become progressively less useful and less comparable.

This assessment of the nominal unit of measurement is explored in the following section. It will be argued that the criticism level at the measurement unit stems from an economic model which has been demonstrated to be flawed.

Monetarism and Relativism

In a money economy with competition prices, Y and M are heavily interdependent. The monetarists argue for causation from M→Y, but causation would run in the direction of Y→M, the reverse.[4] The reason being that Y is an exogenous variable, while M reflects the extent to which goods are exchanged for money rather than goods for goods. The higher the degree of monetization of an economy, the greater is the interdependence of Y and M. Furthermore, Y exists in the absence of M [Arrow, 1981,p.140]. The monetarists hold that: M is exogenous, changes in M (ΔM) dictate the price level, and only M produces a change in the price level. The quantity of goods and services is treated as some constant so that any increase in M produces an increase in the price level. The reasoning is that there are more dollars chasing the same quantity of goods. In this situation, it is argued that money loses value. This position is grounded tautologically in the quantity theory view that "the nominal money supply at time t is the nominal value of all assets" [Sargent and Wallace, 1982,p.1219]. This view of money as being the value counterpart of assets permits the calculation of constant real balances; it establishes "perfect proportionality between money and the price level" [Sargent and Wallace, 1982,p.1219].

The fallacy of monetarism became very obvious in the 1980s, when the monetarist model crashed--relatively small increases in the general level of prices became associated with more rapid growth of the money supply. From 1975 to 1982, while the GNP implicit price deflator rose on average at a rate of 9 percent, growth in the money supply (M1) averaged slightly over 7 percent per year [Boschen, 1990,p.84]. Since 1982, however, the average annual growth of M1 has accelerated to 9.5 percent, while growth in the general price level has averaged just 3.5 percent" (Walsh, 1990, pp. 8-9,186) and the velocity of money has declined (Fisher, 1989, pp. 156-158).

Relativism, as a competing theory, maintains that it is the net effect of changes in relative prices which causes a change in the general price level [Salvary, 1996a, 1996b]. Benjamin Friedman [1990,p.71] has stressed that stability in the rate of change in the general level of prices can be and have been accompanied by price instability; that is while wide changes in individual commodity prices have been observed over time, the rates of change in the general

level of prices have been relatively stable.

It must be emphasized that money is a device for expressing in an uniform manner the purchasing power relationships of the many commodities that are available for exchange [Salvary, 1993, 1996b]. Therefore, just as time puts events into perspective [Reichenbach, 1963, p. 144], money--the unit of account--puts events into perspective [Montague, 1925, pp. 129,255].

An individual today can do much more in one year than an individual who lived one hundred years ago. The difference in accomplishments is staggering due to technological advances (e.g., computers, airplanes, etc.). Does it mean that the time measure is defective, and there is need for a dichotomy of real time versus nominal time? Not really!

Time is a relative reference frame: it is a coordinative definition supplied by the equations of mechanics [Reichenbach, 1963,p.147]. Likewise, money is a relative reference frame

Money and Changes in the General Level of Prices

It is well established in the literature that, in periods of changing price levels, each financier in his/her valuation (pricing) model makes an adjustment to the rate of discount, by which the future earnings (cash flows) would be discounted, to compensate for any difference between what is perceived to be the 'real' rate of interest and the 'nominal' rate of interest. Thus, if firms' earnings are adjusted by a price index then the adjusted earnings information would result in distorted market prices for securities - claims against firms' future earnings. Despite the foregoing, some accountants, relying on the arguments presented by the monetarists, maintain that the monetary unit is unstable and financial accounting measurement is defective.

Under the definition of inflation as the sustained increase in nominal money prices--increase in the general level of prices, the unit of measurement--money--is not stable; thus, it is necessary to hold the money unit constant in order to measure. The difference between the unadjusted and adjusted measurements would constitute the impact of inflation. In this fashion, agents are supposedly informed of the impact of price level changes on their ability to consume, and the maintenance of physical capital emerges as the critical concern. However, adherence to physical capital maintenance in the measurement of business income reflects a misapplication of a social income concept (See Appendix).[5] The problem is one of perception. Changes in commodity prices alter the physical relation underlying dollar values, this condition engenders a perceived need to preserve the physical quantity relationship and real terms calculation is advocated. However, for financial capital allocation decisions, the alteration of the financial data to reflect physical volume data introduces a problem of misinformation into the system. This condition obtains because any adjustment of the money value assigned in an exchange transaction (which reflects a change in price) may produce an alteration of the signal generated by the system. Such information alteration could reduce the informedness of agents [Salvary, 1996a].

Summary And Conclusion

The analysis has established the fact that society, while experiencing economies of scale as the benefit of financing ventures by amassing large sums of money-capital ("cash-in"), experienced diseconomies at the time the ventures were terminated ("cash-out"). After venturers returned cash to savers/financial backers ("cash-out"), many of those savers/financial backers made such money immediately available to the same venturers ("cash-in"), who therewith undertook new projects. In this setting, two sets of transactions costs were witnessed--*start-up and termination* resulted in an unnecessary loss of time and effort with the repayment and subsequent recollection of cash. The elimination of those two types of transaction costs lead to the corporate form of organization and enabled society to enjoy further benefits with permanent financial capital for mass scale operations. Despite changes in the institutional arrangement, the

"cash-in and cash-out" remains a fundamental principle of social exchanges; only the manner in which the cash-out (the exchanging of relative risk position) by savers/financial backers has changed. As presented in this paper, the "cash-in and cash-out" principle establishes financial capital maintenance as the basis for periodic income determination.

The accumulation of money by means of monetary exchanges is the motivation underlying the production process. The stock in trade of the banking firm is money; its involvement in the social process is the intermediation of money. The non-bank business firm is involved with the intermediation of consumable goods or services. This involvement gives the appearance that storing of physical objects is the ultimate objective of the non-bank business; whereas, it is actually storing nominal purchasing power, that amount of nominal money which is estimated to be recoverable--estimated recoverable cost. In this environmental setting, regardless of the type of firm, each and every firm is engaged in the accumulation of a stock of nominal money. Thus, nonmonetary assets simply constitute repositories of nominal money with varying degrees of risks usually greater than the risk identified with a bank savings account. Accordingly, the analogy drawn between a bank savings account and an equity security permits an identification of the measurement property (recoverable cost) consistent with the "cash-in and cash-out" principle and enables a demonstration of the validity of the additivity of financial accounting numbers.

In addition, the additivity issue of the instability of the unit of measurement arising from adherence to the monetarist model was addressed and the stability of the unit of measurement was presented in terms of the relativist model. The origin of the physical capital maintenance concept was explored to demonstrate its inapplicability to a micro unit in a money economy.

This research using social theory has reinforced the earlier works on "recoverable cost" as the measurement property/attribute in financial accounting. The logical analysis as developed provides a solid basis to enable the FASB to reconsider its position, which is that financial accounting measurement involves the use of many different attributes.

Implications For Future Research.

Statement of Financial Accounting Standards 95: Statement of Cash Flows and *Statement of Financial Accounting Standards 115: Accounting for Certain Investments in Debt and Equity Securities* are two statements which should be reconsidered by the FASB. In the case of SFAS 95, the FASB replaced an accrual based statement--the statement of changes in financial position (SCFP) which focused on an "all resources" concept--with a cash basis statement--the statement of cash flows (SCF). The SCF was adopted to correct a deficiency which allegedly existed with the SCFP. If the SCF was an improvement over the SCFP, then why does the FASB require a reconciliation of net income to net cash provided by operating activities to be presented when the direct method of the SCF is used? Is it to preserve the information content of the accrual feature of the SCFP that otherwise would be lost? In the case of SFAS 115, while there is an improvement over *Statement of Financial Accounting Standards 12: Accounting for Certain Marketable Securities* (SFAS 12) in the treatment of debt securities and clearer terminology and treatment for classification of debt and equity securities, the problem is the abandonment of the application of the lower of cost and market valuation which had been coupled with the disclosure feature for market values. The information on market values under SFAS 12, which had been provided in the notes or parenthetically in the body of the balance sheet, was useful to readers of the financial statements. The readers provided their own interpretation of this information. The FASB has chosen to add "noise" to the income statement by including the changes in the market values of the "available for sale" securities as a component of operating income. The inclusion of changes in the market values constitutes an accrual. It is somewhat ambivalent of the FASB to require the SCF, which is a statement that purges accruals from the informa-

tion pertaining to income from operating activities, yet it has added another accrual component to operating income.

Endnotes

1. An interesting observation is made by Hayek [1932, p. 44], that money [if it] is a commodity it is unlike all others, for it is incapable of satisfying final demand.
2. E (earnings/profit) as measured in financial accounting, is comprised of two elements: (1) *a current cash flow component* (C_{cf}) (earnings realized in the form of cash - current cash returns) plus (2) *a future cash flow component* (C_{ff}) (earnings realized in the form of credit - an accrual of estimated discounted future cash flow: $E = C_{cf} + C_{ff}$).
3. The role of nominal money recovery and the concept of being as-well-off is aptly discussed by Johnson [1954, p. 247], Norris [1944], and Eiriksson [1954, pp. 119-120].
4. Samuelson [1965, p. 103] is quite sanguine on this issue and maintains: "Historically, M has lagged behind Y at turning points [in the business cycle]. Crude cause and effect would then lead to the inference that Y is the cause and M effect. But those who want to reverse the direction of causation can always take foolish comfort in the fact that the rate of growth of M, dM/dt, will for a quasi-sinusoidal fluctuation turn down one-quarter cycle before M itself--and thus the causal sequence $dM/dt \rightarrow Y$ may help save the appearances."
5. See Salvary [1979, pp. 366-368] for an historical setting on the emergence of the business income concept of 'capital maintenance'.

Appendix: The Consumption Model and Social Income

A problem in measurement presents itself; it is: what should be maintained--financial (money) capital or physical (real) capital? The preference for physical (real) capital stems from the carryover from the classical economists of the analysis of a subsistence economy. Corn, in their analysis, was both the capital and the consumable good. Given the role of corn, the only way the society in a subsistence economy could survive is by ensuring that the *physical quantity* of corn at the beginning of the period is withdrawn at the end of the period from the current harvest. After *this withdrawal, what is left is social income--that which is available for consumption by (or is distributable to) the laborers in the subsistence economy* [Mill, 1830,p.89]. The importance of maintaining the physical capital in such an economy cannot be overemphasized. If physical capital (the physical quantity of corn) is not preserved at least (and increased at best), then the inhabitants would be faced with famine, and continued diminution of the physical capital would mean annihilation of that society [Mill, 1844,p.242].

The Hicksian *consumption model* (consumption definition of income), which is derived from the corn analysis, has resulted in the concept of distributable operating flow as developed by Revsine [1973, Chap.V]. This latter concept was further refined as a distributable income concept by Vancil and Weil [1976, p.58]. Titled as "distributable income" or "sustainable income", the *consumption model,* which applies to society as a whole, serves as the rationale for the espousal of *real terms calculation*. For any particular firm, which is but one innovation by society in its maximizing adaptive process, there is no basis for producing a constant supply of goods and services. This is particularly true in a surplus-oriented money economy motivated by a concept of surplus (profit) in which the firm (producer) is concerned with the accumulation of a stock of money [Boulding, 1950, pp. 106, 112; Georgescu-Roegen 1971, p. 216].

Hicks [1942, p. 133], upon recognizing the many fruitless debates which have resulted from uses of his (1939 - *Value and Capital*) definition of income in an unintended manner, agonized and cautioned about the limitations of his

income definition. Hicks' definition appears to have been derived from John Stuart Mill's [1830, p. 89] and James Mill's [1844, pp. 75-84] definitions of social income which established the purpose of maintaining physical capital as a nation, hence Hicks' caution is not surprising.

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