
INSIGHTS

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THE TROUBLE WITH CORPORATE DISCLOSURE

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It is a safe bet that, when he was inventing double-entry accounting, Luca Pacioli did not have actively traded, publicly owned companies in mind, or security analysts or portfolio managers. What he created was an ingenious theory of value. We should not think less of him for failing to distinguish between macro- and micro-variables, between measurements and forecasts, between the known past and the uncertain future.

Graham and Dodd urged investors to incorporate accounting numbers into their analysis because these numbers were the only ones available. But in so doing, Graham and Dodd stood logic on its head: instead of letting accountants tell investors how to analyze, they should let the investors tell the accountants what to report.

In other words, the logical way to proceed is as follows:

1. Think through the economics—macro and microeconomics—of the process required to analyze a company’s value.

2. Tell the accountants what input numbers this process requires.

To encourage the broadest possible investment comparisons, the process should focus on a single analytical model of investment value containing all the explanatory variables that might be relevant for any company. The variables will be of two types:

1. variables specific to the company that distinguish it from other companies (“micro” variables), and
2. variables potentially common (but with widely ranging importance) to all companies (“macro” variables).

The “micro” variables should be measurable facts: capacities and out-of-pocket operating costs for plant, market shares, etc. All information about the future should be confined to the “macro”-variables. All corporate reporting should be confined to micro-variables. No accounting “principles” are required because the companies are reporting testable facts.

Think of the “micro” numbers as explanatory variables and the future-related “macro” numbers as undetermined coefficients. Then, the value of a company is the price estimated by this model for the undetermined coefficients that best explain

the observed market prices of all actively traded companies at that moment.

When we reduce share valuation to a multiple regression problem, we eliminate any timing

Table 1 Percent S&P Earnings change, regressed against itself, 1 year earlier.

Year	S&P	P/E	\hat{E}	$\Delta\hat{E}/E$	Year	S&P	P/E	\hat{E}	$\Delta\hat{E}/E$
1926	1349	1088	1240		1957	3999	1187	3369	(12)
1927	1766	1591	1110	(105)	1958	5521	1910	2891	(142)
1928	2435	1764	1380	243	1959	5989	1767	3389	172
1929	2145	1332	1610	167	1960	5811	1777	3270	(35)
1930	1534	1581	970	(398)	1961	7155	2243	3190	(24)
1931	812	1331	610	(371)	1962	6310	1719	3671	151
1932	689	1680	410	(328)	1963	7502	1866	4020	95
1933	1010	2295	440	73	1964	8475	1862	4549	132
1934	950	1939	490	114	1965	9243	1781	5190	141
1935	1343	1767	760	551	1966	8033	1447	5551	70
1936	1718	1684	1020	342	1967	9647	1810	5330	(40)
1937	1055	934	1130	111	1968	10386	1803	5760	81
1938	1321	2064	640	(434)	1969	9206	1593	5779	3
1939	1249	1388	900	406	1970	9215	1796	5131	(112)
1940	1058	1008	1050	167	1971	10209	1791	5700	111
1941	869	749	1160	105	1972	11805	1839	6419	126
1942	977	949	1030	(112)	1973	9755	1195	8163	272
1943	1167	1241	940	(87)	1974	6856	771	8892	89
1944	1328	1428	930	(11)	1975	9019	1133	7960	(105)
1945	1736	1808	960	32	1976	10746	1084	9913	245
1946	1530	1443	1060	70	1977	9510	870	10931	103
1947	1530	950	1611	520	1978	9611	779	12338	129
1948	1520	664	2289	421	1979	10794	726	14868	205
1949	1676	722	2321	14	1980	13576	916	1482	(3)
1950	2041	719	2839	223	1981	12255	804	1524	28
1951	2377	974	2440	(141)	1982	14064	1110	1267	(169)
1952	2657	1107	2400	(16)	1983	16493	1180	1398	103
1953	2481	988	2511	46	1984	16724	1076	1554	112
1954	3598	1299	2770	103	1985	21128	1149	1839	183
1955	4548	1256	3621	307					
1956	4667	1369	3409	(59)					

problems, because we are using the market's macroeconomic expectations—rather than the portfolio manager's, the analyst's or, worst of all, the accountant's. (Can the accountant assign values to inventory, accounts receivable, depreciation reserves without making explicit—or, worse yet, implicit—macroeconomic judgments?)

We can get an inkling of how serious the timing problem is for accountants by asking the following question: does an earnings time series behave like a time series reflecting levels of rivalry, plant capacities, etc., or does it behave like a time series of forecasts? Forecasts have distinctive time series properties because forecast changes—their first differences—are random.

The first two columns in the Table 1 are taken from Ibbotson and Brinson's 1987 book, *Investment Markets* (McGraw-Hill, New York). If the second column (P/E) equals the first (P) divided by the S&P average earnings (E), then, we have

$$\frac{P}{P/E} = P \left(\frac{E}{P} \right) = E.$$

Our third column is our estimate \hat{E} of the earnings number consistent with the first two columns. The fourth column displays the fractional changes from year to year in \hat{E} . Figure 1 speaks (loudly) for itself.

Then, I consulted top-ranking accounting experts:

Ray Ball and Ross Watts performed a runs test (for randomness) on the earnings changes of 714 firms.

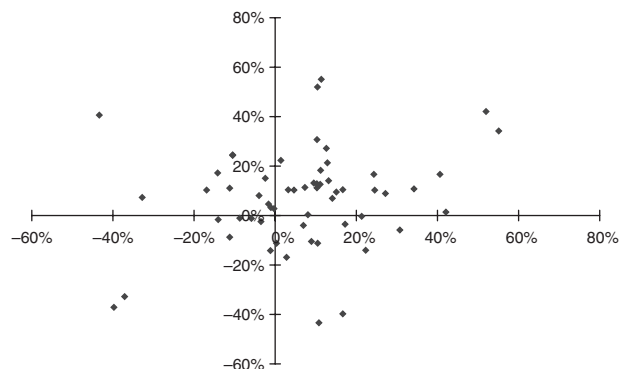


Figure 1 Percent S&P Earnings change, regressed against itself, 1 year earlier.

They found

Actual number of runs 6522

Random number of runs 6524

Ball and Watts, "Some Time Series Properties of Accounting Income." *Journal of Finance*, June 1972, p. 670.

"An important implication is that any concept of earnings that is valuation based is no longer a well-defined concept." W. H. Beaver, *Financial Reporting: An Accounting Revolution*, Prentice-Hall, 1981, p. 102.

"The primary problem of accounting is that our figures do not have empirical referents... We must rid ourselves of the belief that accounting cannot be an empirical science." R. R. Sterling, *Toward a Science of Accounting*, Scholars Book Co., 1978, p. 213.