

The Dow Jones Industrial Average Amended

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BECAUSE THE DOW JONES IS the most widely used average, it carries more weight and prestige than it should be entitled to on the basis of accuracy. As Harry Comer has indicated the Standard & Poor's index is a much more accurate one than the Dow Jones because the price of each stock is multiplied by the number of shares outstanding and a constant divisor is used. This takes care of stock splits and stock dividends. Since the Dow Jones Industrial Average is simply the addition of the prices of 30 different stocks, the divisor has to be changed every time shares are split. Thus the divisor of 30 which was used in 1928 has now been reduced to 6.16. This technique tends to distort the average, because a stock selling at 150 has 10 times the weight of a stock selling at 15, regardless of the size of the enterprise.

Table 1. Dow Jones Industrial Average with Suggested Change
December 31, 1951

30 Dow Jones Stocks	A Market Price	B Shares Outstanding, Thousands	C Total Market Value, Millions
Allied Chemical & Dye	75½	8,856	668.6
American Can	113¾	2,474	281.4
American Smelting	47½	5,260	250.5
Am. Tel. & Tel.	156¼	32,832	5,130.0
Am. Tobacco	62¼	5,378	334.8
Bethlehem Steel	51½	9,583	493.5
Chrysler Corp.	70	8,702	609.1
Corn Products	70½	2,652	187.0
Du Pont	92	45,141	4,153.0
Eastman Kodak	46	16,537	760.7
Genl. Electric	59½	28,846	1,716.3
Genl. Foods	44¾	5,575	250.2
Genl. Motors	52	87,453	4,547.6
Goodyear	44	4,131	181.8
Intl. Harvester	35	13,131	459.6
Intl. Nickel	42¼	14,578	615.9
Johns-Manville	68	3,162	215.0
Loews	17¼	5,143	88.7
Natl. Distillers	34¾	8,489	289.6
Natl. Steel	53⅞	7,362	391.1
Proctor & Gamble	66½	9,615	639.4
Sears Roebuck	56	23,647	1,324.2
Std. Oil of Calif.	50¾	28,673	1,458.7
Std. Oil of N. J.	75¾	60,571	4,588.3
Texas Co.	56⅞	27,521	1,544.6
Union Carbide	63⅞	28,806	1,832.8
United Aircraft	31⅞	3,186	100.8
U. S. Steel	39⅞	26,110	1,041.1
Westinghouse Electric	39⅞	15,458	616.4
Woolworth	42¾	9,704	411.2
Total	1,758.12		35,181.9
Divisor	6.53		130.7
Dow Jones industrial average	269.2		269.2

Although the Standard & Poor's average is used by a great many security analysts and others as a truer method of measuring market conditions, it is not so acceptable to many in the financial community and others outside of it. My suggestion (which is the reason for this article) is simply to have the Dow Jones adopt the principle of multiplying each stock by the number of shares outstanding and of dividing through by a fixed divisor.

To adopt this new method of computation, a certain time would have to be fixed for the change-over, and henceforth this new method would be used. If necessary, for, say, 6 months the new and old averages could both be published to show that over a short period of time there is relatively little difference between the two. Many chartists and others could see that this new method would

Table 2. New Average 11 Months Later
Month End November 28, 1952

30 Dow Jones Stocks	D Market Price	E Shares Outstanding, Latest Date, Thousands	F Total Market Value, Millions
Allied Chemical & Dye	76¾	8,856	679.7
American Can	34½	10,886	375.6
American Smelting	41	5,260	215.7
Am. Tel. & Tel.	160¼	34,406	5,513.6
Am. Tobacco	64¾	6,454	417.9
Bethlehem Steel	53	9,583	507.9
Chrysler Corp.	83¾	8,702	728.8
Corn Products	71	2,652	188.3
Du Pont	95⅞	45,290	4,319.8
Eastman Kodak	44⅞	16,532	737.7
Genl. Electric	70¼	28,846	2,026.4
Genl. Foods	52⅞	5,569	291.7
Genl. Motors	64¼	87,291	5,608.4
Goodyear	49	4,145	203.1
Intl. Harvester	33	13,132	433.4
Intl. Nickel	43¼	14,578	630.5
Johns-Manville	73¼	3,166	231.9
Loews	12⅞	5,143	64.9
Natl. Distillers	22¼	8,500	189.1
Natl. Steel	48½	7,348	356.4
Proctor & Gamble	68½	9,615	658.6
Sears Roebuck	59⅞	23,647	1,410.0
Std. Oil of Calif.	56⅞	28,673	1,616.4
Std. Oil of N. J.	75¾	60,571	4,588.3
Texas Co.	56⅞	27,492	1,543.0
Union Carbide	68⅞	28,806	1,984.0
United Aircraft	36½	3,192	116.5
U. S. Steel	41¼	26,110	1,077.0
Westinghouse Electric	46¼	15,664	724.5
Woolworth	44⅞	9,704	430.6
Total	1,747.38		37,869.7
Divisor	6.16		130.7
Dow Jones industrial average	283.7		283.7
New average			289.7
Difference			*2.1%

result in little relative change except over a much longer period of time.

In Table 1, I have assumed that the Dow Jones people decided to change over as of December 31, 1951. As of that date each stock is multiplied by the number of shares outstanding according to the latest published reports. Since the Dow Jones closed on December 31, 1951, at 269.2, it is obvious that the new average would have to start at the same place. This can be easily done by dividing the total market value of all the stocks by 269.2. The quotient would be the new divisor which would remain constant unless a stock in the average were removed.

In this way over the years the Dow Jones average would reflect stock splits. Therefore, not the highest-priced stocks but rather the total market value of each of the common stocks involved would determine their weights. Although the tremendous differences that have resulted since 1929 between the Standard & Poor's and Dow Jones averages would not be eliminated, the important fact to bear in mind is that the Dow average would be much more accurate in the future than in the past. One further fact should be kept in mind. The Dow Jones average includes most of the largest industrial corporations in the United States. If at some future time these large corporations do not act market-wise in the same way as many lesser corporations, then the Dow Jones may be misleading. For now, however, its general popularity can be accepted and used as a guide, provided it is changed along the lines suggested.

If the Dow Jones method of computation is not changed to reflect the outstanding shares, then it is probable that

the Standard & Poor's index will gradually be accepted by more and more of the financial fraternity as well as by others. When the divisor gets down to 3 or 4, a flood of articles pointing this out will appear, if not sooner, and after these criticisms it is to be expected that there will be a gradual shift to a more accurate barometer.

On the assumption that the Dow Jones people decided that December 31, 1951, was a good time to change their average, Table 1 shows the old method and alongside of it the new method which simply multiplies the number of shares of stock by the market price. As we know that the Dow Jones closed at 269.2 on December 31, we simply total up column C and divide by 269.2 to get the new divisor which is 130.7.

In Table 1, we selected November 28, 1952, as the date to use. This was purely arbitrary; it happened to be the last month end before the writing of the article, and it provided a convenient period of time to illustrate the difference between the old average and the new one.

In column F of Table 2, one sees the total market value of the 30 stocks divided by 130.7. The net result is 289.7. As the old Dow Jones average was 283.7, the difference in the 11-month figures is 2.1%.

Though it is undoubtedly true that the new average would take slightly longer to compute, with a good calculating machine it should be only a matter of minutes to compute the hourly results.

If the financial community were to demand action now along the lines suggested, an average that dates back over half a century would become a more useful instrument of measurement, meeting today's needs.