

The Mechanics of Share Repurchases or How I Stopped Worrying and Learned to Love Stock Buybacks

Law Working Paper N° 650/2022

July 2022

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Abstract

Stock repurchases by issuing corporations have always been controversial and have become even more so recently because of the perception that the excess funds used to finance buybacks have come from tax cuts and other sources (such as government bailouts) that were intended to stimulate reinvestment or enhanced wages and benefits for workers. As a result, critics have proposed that tax law be amended to discourage buybacks (and possibly dividends as well) on the theory that the benefits of such distributions go mostly to executives (who are compensated in large part with equity) and to already wealthy stockholders. The controversy is fueled in part by the sheer size of distributions, which are equal in the aggregate among S&P 500 companies (and including both dividends and repurchases) to almost all of their operating earnings and in part by the idea that the motivation must be tax-related because corporations do most of what they do because of the tax consequences. The crucial fact missed by the critics is that almost all (95%) of the funds distributed by repurchase are reinvested by the recipient stockholders in the shares of other public companies. Indeed, stockholders are effectively required to reinvest such funds in order to generate the higher returns that one expects from equity. (Those who fail to reinvest do no better than bondholders.) For this process to work, there must be a supply of new shares in which the proceeds of buybacks can be invested. Thus, most of such funds go (1) to newly public companies or existing public companies that issue additional shares or (2) to buy stock issued by existing public companies to acquire private companies (whose sellers sell the shares with which they are paid). And small portion of the money goes (3) to control for dilution caused by shares issued in connection with equity compensation. The remainder is reinvested in other public companies in a continuous process that redistributes value (and thus ultimately capital) among public companies according to the prospects of each. Moreover, this process results in a chain reaction of sales and purchases by investors that has the effect of multiplying the taxes paid. So it quite wrong to assert either that stock buybacks avoid taxes or that they result in more consumption by already wealthy stockholders. Rather, the process effectively delegates the question of where to reinvest the money to investors collectively – the market -- and away from the companies that generate the return and almost certainly reinvest mechanically in their own lines of business. It borders on miraculous that the system has evolved to induce management to distribute almost all of the profits generated by the largest corporations rather than to retain them as was the practice as recently as the early 1980s. While efforts to address wealth and income inequality are laudable, the critics misunderstand how share repurchases work and their proposals would probably make matters worse. The real worry is that we might cause companies to reinvest in underperforming acquisitions or simply to retain excess cash for no reason at all.

Keywords: repurchase, buyback, dividend, reinvestment, distribution, dilution, mergers and acquisitions, initial public offering, seasoned equity offering, equity compensation

JEL Classifications: G34, G35, H25, H26, K22, K34

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Stock repurchases by issuing corporations have always been controversial and have become even more so recently because of the perception that the excess funds used to finance buybacks have come from tax cuts and other sources (such as government bailouts) that were intended to stimulate reinvestment or enhanced wages and benefits for workers. As a result, critics have proposed that tax law be amended to discourage buybacks (and possibly dividends as well) on the theory that the benefits of such distributions go mostly to executives (who are compensated in large part with equity) and to already wealthy stockholders. The controversy is fueled in part by the sheer size of distributions, which are equal in the aggregate among S&P 500 companies (and including both dividends and repurchases) to almost all of their operating earnings and in part by the idea that the motivation must be tax-related because corporations do most of what they do because of the tax consequences. The crucial fact missed by the critics is that almost all (95%) of the funds distributed by repurchase are reinvested by the recipient stockholders in the shares of other public companies. Indeed, stockholders are effectively required to reinvest such funds in order to generate the higher returns that one expects from equity. (Those who fail to reinvest do no better than bondholders.) For this process to work, there must be a supply of new shares in which the proceeds of buybacks can be invested. Thus, most of such funds go (1) to newly public companies or existing public companies that issue additional shares or (2) to buy stock issued by existing public companies to acquire private companies (whose sellers sell the shares with which they are paid). And small portion of the money goes (3) to control for dilution caused by shares issued in connection with equity compensation. The remainder is reinvested in other public companies in a continuous process that redistributes value (and thus ultimately capital) among public companies according to the prospects of each. Moreover, this process results in a chain reaction of sales and purchases by investors that has the effect of multiplying the taxes paid. So it quite wrong to assert either that stock buybacks avoid taxes or that they result in more consumption by already wealthy stockholders. Rather, the process effectively delegates the question of where to reinvest the money to investors collectively – the market -- and away from the companies that generate the return and almost certainly reinvest mechanically in their own lines of business. It borders on miraculous that the system has evolved to induce management to distribute almost all of the profits generated by the largest corporations rather than to retain them as was the practice as recently as the early 1980s. While efforts to address wealth and income inequality are laudable, the critics misunderstand how share repurchases work and their proposals would probably make matters worse. The real worry is that we might cause companies to reinvest in underperforming acquisitions or simply to retain excess cash for no reason at all.

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THE MECHANICS OF SHARE REPURCHASES

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How I Stopped Worrying and Learned to Love Stock Buybacks

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Introduction

Stock buybacks – repurchase by an issuing corporation of its own outstanding shares – have always been controversial. In the old days, there was some doubt that it was even possible (legally speaking) for a corporation to buy or hold its own stock.¹ In the 1970s, the worry was that repurchase was inherently unfair to selling stockholders – that it was equivalent to insider trading by the corporation: Presumably, a corporation would not buy back its shares unless it thought them underpriced – in which case stockholders

¹ See, e.g., I. Maurice Wormser, *The Power of a Corporation to Acquire Its Own Stock*, 24 Yale L. J. 115 (1915) (distinguishing between situations in which its shares are somehow thrust upon a corporation and situations amounting to return of capital). See also Joseph F. Mahoney, *Backsliding Convert: Woodrow Wilson and the Seven Sisters*, 18 American Quarterly 71 (1966) (discussing a collection of bills introduced to the New Jersey legislature in 1912 by out-going governor Woodrow Wilson – at the behest of Justice Louis Brandeis – restricting the ability of NJ corporations to hold stock).

The traditional view is that a corporation has no interest in the trading of its own stock – in what happens to its shares once they are issued. See *Brophy v. Cities Serv. Co.*, 31 Del. Ch. 241, 70 A.2d 5 (1949) (finding that buy-side insider trading by a high-level corporate officer gave rise to a disgorgement claim by the company as a misappropriation of business information but not as any breach of duty to the sellers of the shares).

might not sell if they knew.² In the 1990s, the worry was that repurchases had replaced dividends as the primary means of distributing cash to stockholders – although it is not clear why it should matter.³ But some saw buybacks as manipulative – as intended to

² See Victor Brudney, *A Note on Going Private*, 61 Va. L. Rev. 1019 (1975). Thus, going public was seen in effect as a one-way street. This notion is also evident in the origin of SEC Rule 10b-5 (which was originally adopted to outlaw fraud in connection with the purchase of stock because the statutes spoke only to the sale of stock) and the 1968 Williams Act (by which federal law came to regulate tender offers – the wholesale purchase of publicly held shares – which were theretofore totally beyond federal jurisdiction).

To address the structural problem – that a repurchase might be seen as deceptive or manipulative simply because the issuer (or an affiliate) is the buyer – the SEC adopted Rule 10b-18 in 1982, creating a safe harbor for open-market repurchases (OMRs). To summarize: The rule requires that all purchases be made through a single broker-dealer on any given day, that a repurchase may not be made at the opening of trading for the day, that repurchases may not exceed 25% of average daily trading volume (ADTV), and that the purchase price may not exceed the highest independent bid or the last independent trade price reported in the consolidated system. To be clear, the rule does not protect the company against liability for trading while in possession of material non-public information. Finally, the rule covers only trading in common stock. It does not apply to purchases of options or preferred stock or convertible debt.

Note also that it is not insider trading to refrain from buying because one has material non-public information. Nevertheless, knowing when not to buy (or when not to sell) is half the battle. A trader who can avoid bad trades will invariably do better over time than traders who win some and lose some (as every trader does without access to inside information).

³ See Eugene F. Fama & Kenneth R. French, *Disappearing Dividends: Changing Firm Characteristics or Lower Propensity to Pay?* CRSP Working Paper No. 509 (June 2000). Although it was once more or less the rule that an established public company would pay dividends, Fama & French found that the percentage of firms paying dividends decreased from 66.5% in 1978 to 20.8% in 1999. Moreover, they found that during the period 1973 to 1977, share repurchases equaled 3.4% of aggregate earnings, but during the period 1983 to 1998, corporations repurchased shares to the tune of 31.4% of earnings. *Id.* at 23-24. In terms of aggregate payout, the companies in the S&P 500 paid dividends equal to 5.59% of market capitalization in 1979 but just 1.79% in 2005. To some extent this trend may be a result of generally higher stock prices. Aggregate market P/E increased from 7.42 to 18.27 over the same period. But that does not fully explain the decline in dividends. See Richard A. Booth, *Appraisal Rights and Economic Growth*, 73 Bus. Law. 1011 (2018).

increase (or merely maintain) share value for the benefit of executives whose compensation comes primarily in the form of equity.⁴

Since the 2008 credit crisis – and ensuing bail-outs – and the 2017 tax cut for corporations, the worry has been that corporations have misused funds that should have been reinvested in growth or higher wages.⁵ Thus, in a 2020 New York Times opinion piece, Senators Schumer and Sanders proposed to curtail corporate stock buybacks by public companies that fail to beef up employee benefits.⁶ The senators argued that “stock buybacks don’t benefit the vast majority of Americans ... because ... stockholders tend to be wealthier” and because “many corporate executives are compensated through stock-based pay. So when a company buys back its stock, boosting its value, the benefits go overwhelmingly to shareholders and executives, not workers.” Further, they asserted that “when corporations ... buy back shares on this scale, they restrain their capacity to reinvest profits more meaningfully ... in terms of

⁴ See Roger Lowenstein, *Microsoft and its Two Constituencies*, Wall St. J., December 4, 1997, at C:1:3 (noting that MSFT had distributed by repurchase amounts equal to almost all of its reported earnings for the previous year in order to control for the number of shares issued to its 21000 optionee employees). I happened to attend an ALI-ABA conference on executive compensation shortly after publication of this piece, where Robert Monks (who was then an outspoken and highly visible critic of executive pay) predicted that these revelations would shock the market and suggested that investors would revolt as word of such practices spread. Guess not.

⁵ There is no evidence of borrowing (and soaking up available credit) to buy back stock given that the aggregate balance sheet for the largest US corporations does not show any increase in leverage since 2008.

⁶ Chuck Schumer & Bernie Sanders, *Schumer and Sanders: Limit Corporate Stock Buybacks*, NY Times, Feb.3, 2019. For a reply from the former governor of Pennsylvania, see Richard E. Thornburgh, *Here’s Why Senators Schumer and Sanders are Wrong on Stock Buybacks*, CNBC FA Playbook, May 15, 2019.

<https://www.cnbc.com/2019/05/14/heres-why-sens-schumer-and-sanders-are-wrong-on-stock-buybacks.html>

R&D, equipment, higher wages, paid medical leave, retirement benefits and worker retraining.”⁷

The critics also argue that buybacks (as opposed to dividends) enable tax avoidance.⁸ While dividends are taxed at 20% when received by individual taxpayers, buybacks are taxed at the same 20% but only to the extent the selling stockholder realizes a gain as compared to the price paid for the stock in the first place.

⁷ *Id.* Others have suggested that companies might have used bail-out loans from the 2008 credit crisis to fund distributions to stockholders. See Aneil Kovvali, *Countercyclical Corporate Governance*, 101 N.C. L. Rev. xxx (2022)(arguing that principles of corporate governance might be modified during difficult economic times to require that excess funds be used for the benefit of employees and other constituencies). Aside from the fact that many such loans prohibited recipients from making distributions to stockholders, there is no evidence that aggregate leverage increased following 2008. Moreover, based on the analysis that follows, one might argue that making distributions would have been a very good use of the money. See *infra* text at note xxx. Cf. *Morgan Stanley & Co. v. Archer Daniels Midland Co.*, 570 F. Supp. 1529 (S.D.N.Y.1983) ((covenant not to refinance bonds did not preclude borrowing for other purposes and call of bonds using other corporate funds).

Note that repurchase is a uniquely US practice. Most other countries seem to frown on the practice. In any event, nowhere else are repurchases used routinely as a way of distributing available cash to stockholders.

⁸ See Jonathan Weisman & Peter Evans, *Democrats Eye Taxing Stock Buybacks and Partnerships to Pay for Agenda*, NY Times, September 10, 2021.

Today, big companies distribute twice as much in buybacks as in dividends in some years as shown in the following table based on data for the S&P 500 (SPX).⁹

TABLE I

YEAR	MKT CAP	% GAIN	REP EARN	OP EARN	OE YIELD	DIVIDENDS	BUYBACKS	TOTAL	% YIELD	% DIV	% BB
2020	31658.70	0.1831	1019.04	784.12	0.0293	480.40	519.69	1000.09	0.0374	0.0180	0.0194
2019	26759.69	0.2726	1304.76	1158.22	0.0551	485.48	728.74	1214.22	0.0577	0.0231	0.0347
2018	21026.90	-0.0786	1281.66	1119.43	0.0491	456.31	806.41	1262.72	0.0553	0.0200	0.0353
2017	22821.24	0.1844	940.86	1066.00	0.0553	419.77	519.40	939.17	0.0487	0.0218	0.0270
2016	19267.93	0.0764	818.20	920.20	0.0514	397.21	536.38	933.60	0.0522	0.0222	0.0300
2015	17899.56	-0.0189	762.74	885.38	0.0485	382.46	572.16	954.62	0.0523	0.0210	0.0314
2014	18245.16	0.1061	909.09	1004.22	0.0609	350.43	553.28	903.71	0.0548	0.0212	0.0335
2013	16494.78	0.2945	892.76	956.01	0.0750	311.77	475.59	787.36	0.0618	0.0245	0.0373
2012	12742.44	0.1192	777.56	870.19	0.0764	280.69	398.91	679.60	0.0597	0.0247	0.0350
2011	11385.01	-0.0039	790.52	876.76	0.0767	240.20	405.08	645.27	0.0565	0.0210	0.0354
2010	11429.83										
AVERAGE					0.0578				0.0536	0.0217	0.0319

Indeed, SPX companies in the aggregate make distributions that are on average equal to almost all of their operating earnings. As shown in the above chart, the average total yield from distributions (including both dividends and buybacks) over the ten-year period 2011 to 2020 was 5.36% while average operating earnings were 5.78% for the same period.¹⁰ This is an extraordinary fact that runs counter to the conventional wisdom that big corporations rely on internally generated funds as a source of capital. So even in the absence of questions about whether buybacks are motivated by tax avoidance, the idea that big corporations make distributions to the extent of almost all of their operating earnings calls for an explanation.¹¹ But before we address the question of why big corporations are so generous, we must dispense with the idea that buybacks are motivated by tax avoidance.

⁹ The figures in the chart are taken from Howard Silverblatt, S&P Dow Jones Indices, S&P 500 Q2 2021, *Buyback and Related Data*. SPX accounts for about 80% of the aggregate market capitalization of publicly traded US stocks – about xxT out of xxT.

¹⁰ Calculations are based on operating earnings as a percentage of market capitalization at the beginning of the year (or end of previous year). The chart uses operating earnings for this calculation rather than reported earnings because the latter reflect gains and losses from sources other than operations.

¹¹ To be clear, earnings are not cash and cannot be distributed to stockholders. See SV Investment Partners, LLC v. Thoughtworks, Inc., 7 A.3d 973 (Del. Ch. 2010). Thus, one possible explanation for seemingly generous distributions may be that big companies generate a lot more in cash flow than indicated by GAAP earnings. But this turns out not to be true. For example, as of June 30, 2021, the SPX market capitalization was almost 29X cash flow but 27X earnings. See S&P Dow Jones indices (Dec. 23, 2021).

The Tax Angle

Although there is some surface appeal to the idea that buybacks must be motivated by the prospect of tax benefits, this hypothesis does not withstand analysis. For example, suppose Acme Blasting Cap Corporation (ABC) begins the year with an aggregate value (market capitalization) of \$10M and generates income of \$1,000,000 (after-tax) for the year, thus increasing in value to \$11M as measured by market capitalization.¹² If ABC has one million shares outstanding, one would expect their value to increase from \$10 per share to \$11 per share. If ABC then pays out \$1,000,000 as a dividend, its stockholders will pay \$200,000 in tax (at the 20% dividend rate), and aggregate company value will fall back to \$10M or \$10 per share.¹³ But if ABC uses that same

¹² It is important to understand that undistributed returns generate dollar-for-dollar gains in stock price (or should do). As in the ABC example above, if the company begins the year worth \$10M and books return of \$1,000,000, it will be worth \$11M (before tax) at the end of the year all else equal. Needless to say, the market may bump that figure up or down depending on what it thinks of the company's performance and prospects. But all else equal, a dollar in return generates a dollar in added value.

It is also important to understand that dividends and repurchases are simply two different ways of distributing funds to stockholders. The economic effect on the corporation is the same (all else equal). In the example, ABC parts with \$1,000,000 and is worth \$10M thereafter. But if the distribution is by dividend, the company thereafter has 1,000,000 shares outstanding that are worth \$10 each, whereas if the distribution is by repurchase, the company has 909,091 shares outstanding worth \$11 each. Either way, the aggregate value of the corporation – its market capitalization – is \$10M.

Thus, both tax law and corporate law treat cash dividends and repurchases as if they are more or less interchangeable alternative methods of distributing returns to stockholders. For example, tax law treats a pro rata repurchase of shares (a proportional amount from each stockholder) as if it is dividend. See IRC 302(b). And corporation law generally tests the legality of both forms of distribution by the same (or very similar) rules. See MBCA 6.40. But note that the old MBCA (as it stood before 1980) included three separate rules for distributions depending on whether they were made by ordinary dividend or repurchase or by redemption of redeemable shares. Similarly, Delaware law includes separate sections for dividends and repurchases, which use somewhat different terminology, but which are interpreted almost identically. See DGCL §160 (repurchases) §173 (dividends). See *In re Chemours Co. Derivative Litig.*, 2021 Del. Ch. LEXIS 258.

Note that the MBCA uses the word *distribution* to comprehend both repurchases and pro rata distributions of cash, which in lay terms are usually called dividends, while reserving the word *dividend* for stock dividends, that is, the distribution of additional shares on existing shares. No doubt this nomenclature was chosen so as to emphasize the unified regulation of cash payouts to stockholders, but it has also causes corporation law lingo to diverge further from tax law lingo. See IRC 317.

¹³ This *ex dividend* effect is well understood by the markets. Indeed, the financial media regularly report when a stock goes ex dividend so that investors will not mistake such a sudden drop in price as somehow caused by bad news for the company.

\$1,000,000 to buy back its own stock, stockholders will pay tax only if they choose to sell and only to the extent they have gain.¹⁴

Note that \$1,000,000 is enough only to buy back about 90,909 shares at \$11 per share. Note also that by retiring those shares, stock price should remain at \$11 per share. If we assume that the selling stockholders all bought at 10 at the beginning of the year and sold at 11 after holding the stock for a year (as required to qualify for the 20% long-term capital gain tax rate), then they would pay that 20% tax on gain of \$90,909 for \$18,182 tax in the aggregate as compared to \$200,000 if the same funds were distributed as a dividend.¹⁵

The difference in the aggregate tax paid appears to be significant. Or is it? The answer depends on what selling stockholders do with the proceeds of sale. The above analysis would be correct if investors simply spent the cash – if they used the proceeds to fund their wealthy lifestyle as the Times suggested they might do.¹⁶ But data indicate that

¹⁴ One can quibble with whether return is best measured by income (for tax purposes) or earnings (for reporting purposes under GAAP) or cash flow (as most analysts prefer and as the courts use in appraisal proceedings). Thus, I tend to use the neutral term *return* in this piece.

¹⁵ See IRC 1001. To be sure, it is likely that many of the selling stockholders will have held their shares for longer than a year and thus will realize larger gains from over the years. So the figures here constitute a worst-case scenario from a government point of view.

¹⁶ See Jonathan Weisman & Peter Evans, *Democrats Eye Taxing Stock Buybacks and Partnerships to Pay for Agenda*, NY Times, September 10, 2021. Spending on consumption is not necessarily bad from a policy perspective. Indeed, it may be preferable since it drives the economy and creates jobs more directly than does investment. Moreover, the more investors consume, the less they invest, ultimately narrowing wealth and thus income inequality. See WSJ piece on importance of luxury goods in redistribution of wealth.

96% of the proceeds are reinvested in the market.¹⁷ If the proceeds are reinvested in other stocks, it must be that other stockholders sell the shares that are bought by the reinvesting stockholders. So what happens to the proceeds of those sales? Presumably 96% of those funds are reinvested in other stocks. And so forth....

The result is akin to the money multiplier you may recall from Economics 101. As the process spreads through the market, it will eventually generate about \$19M in proceeds from sales for every \$1,000,000 distributed by buyback (assuming a 95% reinvestment rate). If we assume that about 10% of that is taxable at 20% (as in the first buyback), the \$19M in aggregate sales will generate gain of \$1.9M and tax of \$380,000 – almost

¹⁷ See INVESTMENT COMPANY INSTITUTE (ICI), 2021 INVESTMENT COMPANY FACT BOOK, Tables 29 & 30 (providing data for dollar amount of dividends and gains and of reinvestment amounts – which I use to calculate the reinvestment rate). The figure is a slightly lower 92% for dividends – which is to be expected since some investors treat dividends as a source of ordinary income. Needless to say, mutual fund investors may differ in some systematic way from investors who hold shares directly. But it seems likely that individual investors – especially those who seek out dividend-paying stocks – are even more likely to treat dividends as if deposited in a pocket for spending because they receive the checks directly and must affirmatively choose to reinvest rather than simply checking a box instructing fund managers to do so. See also Samuel M. Hartzmark & David H. Solomon, *The Dividend Disconnect* (April 25, 2017) (finding that investors see dividends as distinct form of return unconnected to changes in stock price and that they rarely reinvest dividends back into the payor company); Malcolm Baker, et al., *The Effect of Dividends on Consumption*, 1 Brookings Papers on Economic Activity 231 (2007) (finding that household spending increases in lock-step with dividend increases and attributing effect to mental accounting based on spend-income-but-not-principal principle). Although Hartzmark & Solomon seem to argue that is ultimately irrational not to reinvest dividends in the same stocks from which they came (which behavior may be motivated by several known pocketing fallacies), they do not seem to consider the logic of diversification (which would seem to counsel spreading new investments as one would irrespective of the source of the cash) or the information implicit in a cash dividend (that the firm does not have any use for the cash that would return more than WACC).

Note also that an investor in stocks who presumably seeks the higher returns available from equity investments must reinvest dividends to achieve such returns. Otherwise, the return on stocks (without reinvestment of dividends) is about the same as the return on bonds. So why should one take the extra risk entailed by stocks? See Elroy Dimson, et al., *Equity Premia Around the World*, at 8-9 (London Business School, October 7, 2011).

To be sure, mutual funds (and other investors) typically hold some portion of assets under management (AUM) in cash – which may retard the reinvestment rate at the fund level, but presumably the percentage level of cash is determined based on market conditions that are not affected except very indirectly by the level of stock buybacks.

twice the tax that would have been paid if the original distribution had come in the form of an ordinary cash dividend that was then spent by the recipient.¹⁸

Admittedly, the total tax paid by the initial selling stockholders in the above example (where the corporation distributes \$1M by repurchase) is a mere \$18,182 rather than the \$200,000 in tax that would be paid on a dividend of the same amount. But that is because the corporation repurchases only 90,909 shares out of the one million shares outstanding before the repurchase. The other 909,091 shares are still worth \$11 per share – or one dollar more per share than they were worth at the beginning of the year. And that one dollar in gain per share – or \$909,901 – will generate tax at 20% when that stock is eventually sold for a total of \$181,818 (and change).

Thus, the government will eventually collect the full \$200,000 in tax (even without the multiplier effect discussed above). To be sure, the market may fall before that happens. But it also may rise, augmenting the tax to be paid. And on average the market goes up over time. To be sure, the government must wait for its money. That might be worrisome if we were thinking about adopting a new tax system by which the government might not collect some taxes for many years. But the existing tax system – as it relates to capital gains – has been in place for many years. We need not wait for the pig in the python. Indeed, to change the rules today in order to collect more tax sooner would be akin to eating our seed corn. Or mix your own metaphor.

The Herring Gets Ever Redder

Even if one remains unpersuaded by the foregoing argument from the multiplier effect, the question whether buybacks may be motivated by tax avoidance or evasion (rather than mere tax planning) is largely moot. The elephant in the room is the fact that most stock is held in tax free accounts such as pension plans, 401(k) or 403(b) accounts, and IRAs. (And that is not to mention non-profit organizations such as foundations and

¹⁸ To be sure, a similar multiplier effect is generated by dividends albeit at a somewhat lower 92% reinvestment rate for the initial distribution.

Incidentally, this multiplier effect also helps explain why there is as much trading as there is. For example, the aggregate volume of trading in SPX stocks was xxx for the Year 2020. See *infra* note 39.

The effective overall tax rate on returns from an investment in stock is somewhat higher than the rate applicable to ordinary income even after the 2017 tax act – which reduced the corporate tax rate from a 35% maximum to a 21% flat tax on every dollar of corporate income. For example, if ABC generates \$1,000,000 in taxable income, it will pay tax of \$210,000 at the corporate level. If the remaining \$790,000 is distributed as a dividend, stockholders will pay 20% of that or \$158,000 at the individual level for a total of \$368,000 in tax – an effective 36.8% overall tax rate on returns. But note some low-bracket individual taxpayers pay a lower 15% rate on dividends. See IRC 1(h).

endowments).¹⁹ For these stockholders, it makes no difference how we tax distributions because they pay no tax anyway – at least until cash is withdrawn by owner of the account or their heir. Thus, the fact that repurchases permit some investors to defer tax until they choose to sell their stock makes no difference to most investors. Moreover, when such investors do withdraw cash from their accounts, it is taxed at ordinary income rates (up to 35%) irrespective of whether it came from an employer contribution or from a voluntary salary reduction or from return on investment (which would have been taxed at 20% but for being held in a tax deferred account).²⁰ In other words, the government gets a pretty good deal – one that is about to pay off big-time now that Boomers are well into retirement age.²¹ Although the government must wait for its money, most investment returns end up taxed like ordinary income.²²

Another similar problem (or non-problem) derives from the growth of index funds. As much as 20% of all equity is held in such funds, which mimic the holdings of an index such as the value-weighted version of the S&P 500 (ticker: SPX) in order to maximize diversification and thus to minimize risk as well as management expenses.²³ To be specific, an SPX index fund holds the stocks it holds in proportion to their market capitalization as measured by public float.²⁴ This strategy of capitalization weighting provides maximum diversification (and minimum risk) because it assures that funds are invested in proportion to the universe of return-generating opportunities in the economy. In addition, capitalization weighting also minimizes trading because the only reason for an index fund to trade is to keep its portfolio in balance. In practice, portfolio balance

¹⁹ See Steven M. Rosenthal & Lydia S. Austin, *The Dwindling Taxable Share of U.S. Corporate Stock*, Tax Notes, May 16, 2016, at 923 (finding that 24.2% of US corporate stock was held in taxable accounts compared to 83.6% in 1965).

²⁰ Cf. *International Brotherhood of Teamsters v. Daniel*, 439 U.S. 551 (1979) (asserting that pension plan is more a form of savings than investing and is thus not a security).

²¹ Moreover, given that one who inherits such an account must cash out within five years, one might argue that tax free accounts are the new estate tax. See NYT piece on stepped-up basis and discuss rationale for estate tax.

²² See *supra* text preceding note 19 (noting pig-in-the-python effect).

²³ There are many indices and matching index funds. And some index funds are based on bespoke (or idiosyncratic) indices that may be motivated other than by a strategy to maximize diversification and minimize management expenses. But the largest aggregate holdings are in funds that track SPX. Thus, the discussion here focuses on SPX funds.

²⁴ See Richard A. Booth, *Capitalist Manifesto: How Index Funds Work, Why Ordinary Investors Should Invest in Index Funds, and What to Expect from Index Fund Managers* (forthcoming). Float does not include shares held by insiders such as control shares and is thus seen as a better measure of the value of a company (or portion thereof) that subject to market pricing. Before 2005, the S&P 500 included all outstanding shares.

trading (PBT) entails turnover of 4% or less per year compared to about 80% per year for actively managed stock-picking funds.²⁵

Moreover, PBT dictates that one sell stocks that have declined in market capitalization and buy stocks that have increased in market capitalization. In other words, and somewhat paradoxically, an index fund makes it a practice to buy high and sell low.²⁶ Since index funds hold onto stocks that have increased in value and sell stocks that have decreased in value they tend to recognize more losses than gains. Thus, PBT is one of the reasons – perhaps the primary reason – that index funds are said to be tax efficient. PBT minimizes trading and thus the number of transactions in which gain may be recognized, and it skews the outcome toward trades that result in a loss. So the trend toward indexing may exacerbate the problems (if any) caused by stock repurchases.

How Buybacks Work

The above story remains incomplete. It assumes that in the end some investors will disinvest. Think musical chairs. It would seem that *eventually* someone must drop out. But the data indicate that almost all investors reinvest almost all of the proceeds. How can that be? Where does the money go unless some investors take the money and run?

To be sure, some of the money may be invested in other markets. For example, equity investors may move their money into the bond market or into private equity funds or venture capital funds or even into real estate or crypto. But this ebb and flow is no answer. The public equity market may grow or shrink over time relative to other markets, but as with the conservation of matter and energy, a gain for one market must be a loss for another market.²⁷ It explains nothing. So there must be some way for all of the money to remain in the public equity market. There must be some source of new

²⁵ *See id.*

²⁶ One might say that an index fund eschews the so-called practice of profit-taking and follows instead a practice of loss-taking. But profit-taking is an old-timey concept (that one does not hear much these days) that was offered as an explanation for why the market may have dipped when there did not seem to be any obvious reason for it to do so. In other words, it was something for market analysts to say when they did not have anything else to say.

²⁷ *See supra* note 13. This explanation is akin to the idea that the Earth sits on the back of a giant turtle: When a believer is asked about what the surface upon which the turtle stands, the answer is that it's turtles all the way down.

shares or a way that existing shares can absorb more cash. The answer is likely a mixture of both possibilities.²⁸

Before we venture further into the weeds of how buybacks are absorbed by the market, it is important to understand that there are several methods by which a corporation may repurchase its own shares. The focus here is on open-market repurchases (OMRs) – repurchases that are effected (in effect) by a company calling its friendly broker-dealer and placing an order to buy just as an individual investor (or trader) might do.²⁹ It is also possible for a company to repurchase shares (privately) from a particular stockholder.³⁰ And it is possible for a company to make a tender offer for its own shares by

²⁸ This puzzle first occurred to me in writing a recent article. See Richard A. Booth, *Appraisal Rights and Economic Growth*, 73 Bus. Law. 1011 (2018). In gathering the data for that piece, I noted that the SPX companies in the aggregate reinvest almost none of the returns they generate as measured by GAAP earnings – because they distribute amounts equal to almost all of the return they generate, which suggests that growth in value must come from some other source. As noted above, it seems unlikely that the difference between GAAP earnings and cash flow explains much. If anything it cuts the other way. See *supra* note xx. I was thus left with the unsatisfying explanation that growth must come from reinvestment by the stockholders who receive distributions – which is consistent with the idea that stockholders do no better than bondholders unless they reinvest distributions. See *infra* note xx. But the idea that stockholders would (or could) simply reinvest distributions was troubling since none of the money would go to the company. Thus, this piece explores the question of how distributions get reabsorbed by the market – a question that does not seem to have prompted much (if any) scholarship. But see Samuel M. Hartzmark & David H. Solomon, *The Dividend Disconnect* (April 25, 2017).

²⁹ See *supra* note 2 (discussing Rule 10b-18 which addresses OMRs).

³⁰ For the record, such negotiated repurchases – which often involve payment of an above-market price to induce the seller to sell -- are much more worrisome for other stockholders (as well as the population at large) because they are often associated with efforts by incumbent management to entrench themselves – to fend off potential acquirors who often have identified the target company as one that is poorly managed. Thus, such targeted repurchases – AKA greenmail – may make a bad situation worse by diverting assets disproportionately to the recipient. See, e.g., *Grobow v. Perot*, 539 A.2d 180 (Del. 1988). The *Grobow* court upheld the decision by the board of directors (BOD) of General Motors to repurchase shares of Ross Perot a major stockholder and himself a director (and subsequent candidate for president of the United States) because he was outspokenly critical of management policies and was seen by the BOD as impeding their progress (so to speak) if not as a takeover threat. Perot himself stated that the price paid reflected an obscene premium – which he did not refuse – and agreed to stop badmouthing the company. Thus, the deal was often described as *hushmail*. See also *Cheff v. Mathes*, 199 A.2d 548 (Del. 1964) (upholding repurchase of shares at a premium because recipient was seen as threatening business policies and thus as based on a business purpose). But see *Heckmann v. Ahmanson*, 214 Cal. Rptr. 177 (1985) (imposing constructive trust on greenmail proceeds from Disney where BOD sought to avoid takeover by investing in money-losing land deal).

announcing that it will buy some specified number of shares from anyone who wants to sell.³¹

To be clear, OMRs do not cause or induce sellers to sell (as might be the case with other methods of repurchase such as by tender offer). Sellers sell for their own reasons. And they do so in a largely anonymous market where they do not know the identity of

³¹ In contrast to greenmail as discussed in the preceding note, self tender offers (STOs) are generally seen as stockholder friendly in large part because they are quite public and afford stockholders an informed choice whether to sell. Moreover, STOs are heavily regulated under the Williams Act which regulates tender offers generally. But SEC rules afford considerable flexibility in connection with STOs. For example, whereas a third-party tender offer must be made at a stated price (albeit one that can be increased if necessary), a STO may be conducted as a Dutch Auction where the company offers to buy some specified number of its own shares at a price to be set by the last seller to offer their shares for repurchase.

Like greenmail, STOs have been used as defensive tactics in takeover battles because they reduce the number of shares available for the bidder to purchase in seeking control. But because STOs also have the concomitant effect of increasing the proportional interest of bidder, they tend to be seen as consistent with maintaining a level playing field allowing the stockholders to determine the outcome of the contest. *Compare* Hanson Trust PLC v. SCM Corp., 774 F.2d 47 (2nd Cir. 1985) (STO subject to Williams Act rules because time limited with stated price) *with* SEC v. Carter Hawley Hale Stores, Inc., 760 F.2d 945 (9th Cir. 1985) (STO not subject to rules because open indefinitely at prevailing market prices). On the other hand, in one notable case, the target offered to repurchase its own shares but excluded shares held by the bidder. See Unocal Corp. v. Mesa Petroleum Co., 493 A.2d 946 (Del. 1985). Although the Delaware Supreme Court upheld that tactic as justified by a business purpose to avoid the supposed danger of looting by the offeror (one T. Boone Pickens who was said to be known as a greenmailer), the SEC promptly changed the rules under the Williams Act, adopting Rule 14d-10, which requires that a tender offer be open to all stockholders.

the buyer: No one knows when the buyer is the company itself, although market makers may sometimes suspect as much.³²

Moreover, there is no evidence that such buybacks *cause* a significant increase in stock price.³³ OMRs simply exploit some of the volume that is created by sellers who sell for their own reasons. Admittedly, the process may result in a marginal reduction in the supply of stock available to fill orders to buy, which may be felt by market makers, who

³² To be sure, the fact that a company plans to repurchase its own shares might well be material from an investor point of view. But there is no law that mandates disclosure simply because enquiring minds want to know. Although Rule 10b-18 provides a safe-harbor for OMRs from charges of manipulation or fraud, there is no requirement that a company disclose that it intends to buy back its own shares but it does require after-the-fact disclosure within 60 days. Moreover, disclosure is effectively required in financial statements that must show the number of shares outstanding.

Moreover, it can be risky for a company to announce that it intends to to buy back shares. What happens if the company does not follow through? The announcement may cause stock price to rise and thus to make repurchase less attractive. But the company might then be charged with manipulating its market price. Moreover, if the company does change its mind (as it were) and decide not to buy back shares, it would be required required to disclose that fact. Although there is no requirement to speak to the market, the company must speak the truth when it does speak, and thus must correct any past announcement that may be rendered false if its effects linger in the market. See *In re Time Warner, Inc. Securities Litigation*, 9 F.3d 259 (2d Cir. 1993). Besides, everyone knows that the company is free to buy back its own shares. So what does such an announcement really add to the total mix of information?

³³ To be sure, I have argued to the contrary in the past. See Richard A. Booth, *The Efficient Market, Portfolio Theory and the Downward Sloping Demand Hypothesis*, 68 N.Y.U. L. Rev. 1187 (1993). But with the growth of index investing, I am persuaded that relatively little ordinary trading is prompted by differing opinions as to the value of individuals stocks. On the other hand, in extraordinary situations such as where control of a corporation is in play, it is entirely possible for diverse opinions to emerge and indeed dictate the outcome. See Richard A. Booth, *Majority-of-the-Minority Voting and Fairness in Freeze-Out Mergers*, 59 Villanova L. Rev. Tolle Lege (September 1, 2014). See also Richard A. Booth, *The Proper Role of Index Funds in Corporate Governance* (forthcoming) (discussing circumstances in which index fund managers have a duty not to remain passive).

may adjust their quotes upward accordingly.³⁴ And that increase in price may absorb some of the free cash added to the market by repurchases effected by other corporations.³⁵

To be sure, there is some evidence that repurchases are *associated* with subsequent increases in stock price. Again, this effect may be a function of decrease in supply. Although one might characterize that as a form of manipulation, it is an unavoidable structural form thereof and is insulated from attack by Rule 10b-18 (assuming the conditions thereof are satisfied).³⁶ One might also argue that this could be seen as evidence of insider trading. But it can easily be explained as the natural result of knowing when not to buy. The corporation will never buy when it thinks stock price is likely to fall.³⁷ And choosing *not* to buy is not insider trading.³⁸ Nevertheless, knowing

³⁴ Studies have shown that the market reacts to significant orders. Indeed, the implied cost of a trade (the change in price for the next such trade) is slightly more than the cost from commissions. For example, if one seeks to buy (say) 10,000 shares of ABC at the current price of \$10 per share, the first 100 shares might entail a commission of about one dollar (about the average one cent per share paid by institutional investors), but the next 100 shares might cost 10.01 per share, and so forth.

One subtle complication in any effort to measure the price enhancing effects of repurchases is that the proceeds thereof are by almost always re-invested in other stocks. Thus, the buyback of one stock likely causes prices in other stocks to rise. But the effect may be so diffuse as to be almost non-detectable. *But see* Samuel M. Hartzmark & David H. Solomon, *The Dividend Disconnect*, *supra*.

To be fair, repurchases may support stock price (as distinct from causing it to rise) by absorbing excess supply and possibly discouraging short selling, although payment of generous dividends is probably a better defense since a short seller must compensate their stock lender out of their own pocket, thus raising the cost of maintaining a short position. *See infra* text at note 118ff for a catalogue of other incidental benefits of repurchases.

See Amedeo DeCesari, et al., *The Effects of Ownership and Stock Liquidity on the Timing of Repurchase Transactions*, 18 J. Corp. Fin.1023 (2012) (finding average 0.2% increase in stock price following repurchase). It is unclear whether these gains are attributable to reduction in supply or timing. As others have noted, companies are unlikely to buy when they know price is likely to fall. *See* sources collected in Bibliography.

³⁵ *See infra* note xxx.

³⁶ *See supra* note 2.

³⁷ For a stark counterexample that proves the point, *see Jander v. Retirement Plans Committee of IBM*, 910 F.3d 620 (2018), *vacated and remanded*, 140 S. Ct. 592, *reinstated*, 962 F.3d 85 (2d Cir. 2020).

³⁸ *Cf. Blue Chip Stamps v. Manor Drug Stores*, 421 U.S. 723 (1975) (holding that one must buy or sell the subject security to have standing to sue under Rule 10b-5).

when not to buy is half the battle. If one can avoid some losing trades, it stands to reason that over time and on average corporations will do better at trading in their own stock than outside investors. In other words, by avoiding even some of the losing trades that outsiders are certain to suffer, it follows that corporations must do better at trading their own stock than ordinary investors would do. But it does not follow that the corporation has engaged in insider trading unless the difference is quite significant – which it is not.

On the other hand, by reducing the number of outstanding shares, repurchase may enhance earnings per share (EPS) -- albeit at the cost of any value added to share price by the cash used to effect the repurchase. As discussed further below, buybacks – unlike dividends – do avoid causing any *decrease* in the price of individual shares. And this is undoubtedly one reason why companies prefer to distribute excess cash by repurchase. But managing EPS is a complex process that implicates many competing interests as discussed in more detail below.³⁹

³⁹ See *infra* text at note xxx.

Follow the Money

To return to the puzzle of where the money goes when a corporation repurchases its own shares, one destination is new shares created when companies go public via an initial public offering (IPO) or when an already public company raises additional capital via an offering of new shares (sometimes called a seasoned equity offering (SEO)). But this source of shares is too small to absorb all of the cash so infused into the market. During the year 2020 (for example), the companies comprised by the Standard & Poor's 500 – the S&P500 – distributed about \$1000B in the aggregate.⁴⁰ In addition, non-financial corporations alone distributed another \$296B to retire target shares in

⁴⁰ See *supra* Table I, text at note 9.

connection with mergers and acquisitions.⁴¹ But new issues of stock totaled only about \$335B.⁴² So where else might the money go?

TABLE II
(billions of dollars)

YEAR	A	B	C	D	E	F	G	H	EYE	J	K	L	M	N
	MKT CAP	OP EARN	DISTRIBS	DIVIDENDS	BUYBACKS	NEW ISSUES	NF ISSUES	ALL ISSUES	NF IPO	NF SEO	TOTAL	DIFFERENCE	NF REPO	NF M&A RET
	(1)	(1)	(1)	(1)	(1)	(3)	(3)	(2)	(2)	(2)	(EYE + J)	(H - K)	(2)	(2)(4)
2020	31658.70	784.12	1000.09	480.40	519.69	335.11	187.13	550.44	48.63	138.51	187.14	363.30	423.25	296.12
2019	26759.69	1158.22	1214.22	485.48	728.74	168.60	102.42	423.74	35.85	66.58	102.43	321.31	474.15	407.68
2018	21026.90	1119.43	1262.72	456.31	806.41	176.96	88.48	398.41	22.47	66.01	88.48	309.93	565.70	450.26
2017	22821.24	788.96	546.02	212.62	333.40	178.86	89.43	458.70	18.21	71.22	89.43	369.27	348.03	436.21
2016	19267.93	588.00	355.30	193.18	162.12	174.84	87.42	440.10	9.62	77.80	87.42	352.68	387.91	548.05
2015	17899.56	374.75	493.83	237.30	256.53	221.16	110.58	469.30	23.12	87.46	110.58	358.72	444.15	478.62
2014	18245.16	675.79	835.09	249.77	585.32	183.16	91.58	402.03	32.22	59.36	91.58	310.45	438.85	265.13
2013	16494.78	803.48	679.26	229.92	449.34	203.54	101.77	355.85	37.56	64.21	101.77	254.08	380.08	253.06
2012	12742.44	716.32	573.58	206.22	367.36	125.98	62.99	278.03	21.89	41.10	62.99	215.04	300.25	277.79
2011	11385.01	647.75	424.25	187.64	236.61	117.50	58.75	233.56	20.01	38.74	58.75	174.81	310.30	305.84
(1) SPX														
(2) FRB Equity Issuance & Retirement -- NonFinancial Businesses Only (See Table F.103)														
(3) FRB New Security Issues, US Corporations -- 2020 & 2019 from Table III / 2018 and before calculated at 2X NF issues. IPO & SEO only.														
(4) Dollar value of shares retired in M&A deals.														

There are at least two other sources of new shares. One such source is mergers and acquisitions (M&A) in which public companies issue new shares to purchase privately held corporations. FRB data indicate that about \$363B was so issued during the year 2020.⁴³

Another source is new shares issued in connection with equity compensation, including both grants of restricted stock and exercise of stock options.⁴⁴ Data indicate that executive (officer) compensation equals about 6% of corporate income in the aggregate and that about two-thirds of that comes in the form of equity compensation.⁴⁵ Thus, new shares equal to about 4% of aggregate income are injected into the market annually from this source. Given that SPX earnings for the year 2020 were about \$1019B, it follows that about \$41B in new shares would have been added to the market for the year.⁴⁶ But note that this figure reflects only named executive officer (NEO) compensation. Many companies such as as MSFT and GS compensate all of their professional workforce with equity.⁴⁷ So the total may be much higher.

Perhaps the best example of how this process works is Apple, Inc. (AAPL). AAPL went public on December 12, 1980 with an offering of 4,600,000 shares, upon the completion of which it had 52,396,928 shares outstanding. (The 47.8M difference is attributable to founder shares – including grants to early-stage participants -- as well as shares owned by venture capital investors.) AAPL has never made another public offering of shares, but the outstanding shares have split on five occasions such that each share outstanding in 1980 now equals 224 shares. Thus, one might think that AAPL should now have 11.74B shares outstanding today. But as of October 15, 2021 it had 16,406,397,000 shares outstanding. What accounts for the extra 4.67B shares? The answer is acquisitions and equity compensation. Ironically, AAPL has been cited as possibly as abuser-in-chief of the buyback binge.⁴⁸ But it stands to reason that it would be so since it is by far the largest company in the SPX with a market capitalization of almost \$3T (or about 6.80% of index value).⁴⁹

⁴¹ See Table II (column N). Table II is derived from FRB data found in *New Security Issues, US Corporations* (Table 1.46) (January 28, 2022) (which gathers data for all US corporations but only for 2019 through 2021) and *Equity Issuance and Retirement* (October 1, 2021) (which gathers data from 1998 to date but only for non-financial corporations). The latter so-called Enhanced Financial Account is intended to provide additional detail relating to Table F.103 of the Financial Accounts of the United States. Because the former data set covers only 2019 through 2021, the figures shown in Table II for NEW ISSUES (IPOs plus SEOs) (Column F) are estimated for the Years 2011 through 2018 based on the data in Table III which indicates that on the average Financial Companies issue about the same amount of new stock (by IPO and SEO) as do non-financial companies.

TABLE III
(millions of dollars)

FRB New Security Issues, US Corporations (Table 1.46)			
	ALL ISSUES	NF ISSUES	FIN ISSUES
2021	419,241	170,064	249,177
2020	335,110	187,126	147,984
2019	168,598	102,419	66,179
AVG		153,203	154,447

Thus, the figures in Column F for the Years 2011 through 2018 are simply two times the numbers in Column G. Needless to say, this provides only for a very rough estimate of this source of new shares. But the idea here is only to provide a very rough back-of-the-envelope order-of-magnitude estimate of how distributions are absorbed by the market. So the data are good enough for our purposes.

<https://www.federalreserve.gov/data/corpsecure/current.htm>

<https://www.federalreserve.gov/releases/efa/efa-project-equity-issuance-retirement.htm>

Although payments to target stockholders are not (strictly speaking) distributions as a matter of corporation law, they are effectively subject to the same rules governing distributions – which is why (for example) the buyer in a leveraged buyout (LBO) must worry about whether the surviving business will remain solvent after target stockholders are bought out. *See, e.g.,* In re Nine West LBO Sec. Litig., 505 F. Supp. 3d 292, 20 MD. 2941 (JSR) (S.D.N.Y. 2020) (opinion by Rakoff); Crowthers McCall Pattern, Inc. v. Lewis, 129 B.R. 992 (S.D.N.Y.1991); Wieboldt Stores, Inc. v. Schottenstein, 94 B.R. 488 (N.D.Ill.1988). While the foregoing cases rely mostly on the law of fraudulent, some courts have avoided the fraudulent transfer argument by holding that payments to stockholders are settlement payments for securities transactions that are statutorily excluded from the fraudulent transfer statute. *See* Kaiser Steel Corp v. Charles Schwab & Co., Inc., 913 F.2d 846 (10th Cir. 1990); Kaiser Steel Corp. v. Pearl Brewing Co., 952 F.2d 1230 (10th Cir. 1991); Zahn v. Yucaipa Capital Fund, 218 B.R. 656, 675 (D.R.I. 1998). *But see* Munford v. Valuation Research Corp., 98 F.3d 604 (11th Cir. 1996) (finding that such payments were not protected). *See generally* Robert Charles Clark, *The Duties of the Corporate Debtor to its Creditors*, 90 Harv. L. Rev. 505 (1977) (arguing that fraudulent transfer law provides as much or more protection for creditors as does corporation law).

⁴² See Table II (column G).

⁴³ See Table II (Column L). The \$363B figure assumes that the figure in Column H (ALL ISSUES) includes all new issues including public offerings (IPOs and SEOs) as well as shares issued in acquisitions but not other shares issued such as equity compensation (for example) for which there is no obvious system of reporting on which the data might be based. See FRB, New Security Issues, U.S. Corporations (Table 1.46), Note 1. Moreover, the fact that the FRB data include repurchases and shares retired in M&A deals suggests the same if only because of its symmetrical approach. Again, this net \$363B figure is for non-financial companies only and does not include shares that may be issued by financial companies in connection with acquisitions. Thus, it is possible that this \$363B figure reflects only about half of the dollar value of shares issued in M&A deals. But it turns out that financial companies (other than ETFs) issue very little new stock. See Table F.223 Corporate Equities, FRB, Financial Accounts of the United States (Z.1) (March 10, 2022).

Note that since the figures reported in Table F.223 are net (of repurchases and other retirements) they are not of much use for present purposes. Nevertheless, the most recent edition of the table (March 22, 2021) reports net issues of corporate equity for the year 2020 of \$573B from all sources and (\$168B) from non-financial corporate business. That figure is almost quite close to $H - (M + N)$ in Table II – which tends to confirm the interpretation of the data here.

In addition, it seems reasonable to assume that most if not all of this amount derives from acquisitions of privately held companies by public companies using their own stock as consideration, thus injecting new shares into the market (rather than merely substituting one company's shares for those of another). Most big deals between public companies are done using cash as consideration in part because target stockholders (naturally) prefer cash and in part because acquiring companies are reluctant to issue a large amount of equity for any one deal (both because of concerns about control and because the issue may require a stockholder vote). Witness the recent MSFT acquisition of ATVI for \$68.7B (net) in cash. Note that when the deal was announced on January 18, 2022, MSFT shares fell by 1.9% while ATVI shares enjoyed a 25.4% increase. See Sabrina Escobar, *Microsoft to Acquire Activision Blizzard for Nearly \$70 Billion*, Barron's (January 18, 2022, 1:14 PM ET).

<https://www.barrons.com/articles/microsoft-buys-activision-blizzard-stock-acquisition-51642513147>

As noted above, the cash acquisition of one public company by another public company will add to the pool of cash seeking new shares in which to invest (net of any disinvestment) – which is why such amounts should be aggregated with distributions. Moreover, since such deals typically involve the payment of a premium over the market price of the target company, it stands to reason that the value of the acquiring company will fall a bit. Thus, the buyer may also be prompted to buy back some shares so as to increase EPS, adding still further to the pool of cash seeking investment opportunities. See *infra* text at note 80 ff (discussing importance of managing EPS).

In contrast to acquisitions of one public company by another typically for cash, it seems likely that investors in private companies will prefer to be paid in stock so that the deal can be done tax-deferred or even tax-free. Such stock deals also add to the pool of shares available to absorb distributions – while at the same time generating the need for issuer companies to buy back shares on the open market to control for potential dilution. See *infra* note 55 for further discussion.

One might argue that these sources of new shares are really no different from existing shares held by existing investors and that sellers thereof must find other shares in which to invest the proceeds. In other words, one might argue that shares issued as consideration for acquisitions or as compensation are an investment in the issuer

One problem with the data presented in Table II is that the dollar amount of repurchases for 2020 (for example) is almost \$100B less than the figure reported by S&P for SPX. It is not especially troubling that SPX is limited to 500 stocks while FRB data appears to include all stocks (possibly including even non publicly traded stocks although there is no obvious source for such data) since the very biggest companies likely account for almost all repurchase activity.

⁴⁴ I use the phrase restricted stock here and hereafter not because the stock granted as compensation is any different from other stock issued by the corporation but rather because the stock granted typically cannot be sold for some specified number of years. Sale may also be precluded under SEC rules. See SEC Rule 144. But such legal restrictions are usually much shorter in duration than the contractual limitations imposed by compensation plans. The rationale for contractual restriction is that the stock thus serves as both deferred compensation that induces the recipient to remain with the company and as an incentive to grow the value of the stock. Similar ends are achieved with options by setting the exercise price at the market price on the date of grant (an at-the-market (ATM) option) and by prohibiting exercise until some date in the future – typically one to five years hence. As discussed further below, the incentives created by these forms of equity compensation differ in subtle but important ways. See *infra* text at note xxx.

⁴⁵ See Richard A. Booth, *Executive Compensation, Corporate Governance, and the Partner-Manager*, 2004 U. Ill. L. Rev. 269 (finding that aggregate officer compensation from all sources is remarkably stable at about 6% of taxable income among the largest corporations based on IRS data); Semler Brossy & The Conference Board, *CEO and Executive Compensation Practices in the Russell 3000 and S&P 500* (2021) at 12 (indicating that Russell 3000 CEOs were paid about 50% with stock and 16% with options as of 2020). Two other sources of new shares are conversion shares (from convertible bonds or preferred stock) and PIPE deals (private investment in public equity).

⁴⁶ See Howard Silverblatt, *S&P Dow Jones Indices, S&P 500 Buyback and Related Data* (through Q2 2021). Note that the \$1019B figure is operating earnings as compared to \$784B in reported earnings – an unusually significant discrepancy for the year. I use operating earnings for purposes of calculations herein because repurchases are part of normal operations and are thus likely to be coordinated with ordinary business activity.

⁴⁷ See *supra* note xxx. See also *In re Goldman Sachs Group, Inc. Shareholder Litigation*, Civil Action No. 5215-VCG (October 12, 2011), 2011 Del. Ch. LEXIS 151 (discussing compensation practices).

⁴⁸ See Jonathan Weisman & Peter Evans, *Democrats Eye Taxing Stock Buybacks and Partnerships to Pay for Agenda*, NY Times, September 10, 2021 ("Over the past decade, Apple has been the king of the stock buyback, spending \$423 billion to retire its stock. Microsoft, in a distant second place, spent nearly \$129 billion.")

⁴⁹ See S&P 500 Top Ten Issues Annually by Percent of Market Value 1980 to 2020.

corporation and that recipients thereof (like other investors) will either hold the stock they receive, or if they sell, they will reinvest in the shares of other companies.

Not so.

First (and just to be clear), recipients of equity compensation are free to sell as soon as they receive such shares.⁵⁰ Indeed, recipients are effectively compelled to sell at least some of any award as soon as possible in order to cover the taxes they will owe thereon.⁵¹ Failure to do so can have devastating consequences if stock price declines following exercise because the tax is calculated based on the value of the stock (less the exercise price) as of the date of exercise – as many MSFT optionees discovered in the wake of the 2001 dotcom bust.⁵²

Second, equity compensation is ultimately *compensation* – albeit *deferred* compensation – and as such presumably has been offset to some extent by a reduction in ordinary compensation and a concomitant reduction in consumption by the recipient. We should thus expect some or all of it to be spent and not saved. No one needs to save two-thirds of their income. Indeed, we want people to spend most of what they make because consumption drives the economy.

Moreover, equity compensation is not invested in employer-company stock by choice. So there is no reason to expect it to remain so invested. It is sometimes argued that recipients of equity compensation need to sell at least some of the shares they receive to diversify. Indeed, one might argue that they should sell all such shares since as recipients of equity compensation they are already heavily invested in their jobs (in terms of human capital). So they are doubly compelled to diversify their financial assets. Moreover, to be effectively diversified one should hold at least twenty different stocks – with no more than about 5% of one's portfolio in any one stock.

To be sure, some companies encourage employees to *hold* company stock – or discourage its sale through peer pressure or even less subtle means, treating it as a

⁵⁰ Shares are typically registered under a shelf registration statement pursuant to Securities Act Rule 415 for sale at-the-market (rather than at a fixed price as with IPOs) although it is unclear that it is necessary that they be registered in order to be sold other than by a holder who can be deemed to have control. See Securities Act Rule 144.

⁵¹ I use the word AWARD rather than GAIN even though one might be tempted to think of options as generating gain when they work out – because the optionee gets paid (as it were) only if stock price increases relative to the exercise price established at the time of grant.

⁵² Recount MSFT tax stories as reported in WSJ.

test of loyalty. Enron comes to mind.⁵³ So the argument that one needs to sell some shares to be prudently diversified may often be used as an excuse by recipients who fear repercussions.⁵⁴ But these arguments presuppose reinvestment. The bigger point is that there is no reason to expect most – or indeed any – of the proceeds of equity compensation to be reinvested.

A similar argument applies as to shares issued as M&A consideration. There is no reason to expect investors in a small company acquired (say) by Apple (AAPL) in exchange for stock to leave the proceeds invested in AAPL. Why would the entrepreneur-founder of such a company want to become an AAPL stockholder? Rather, one would expect the proceeds to be re-invested in other small companies in an effort to repeat the process. That process will likely entail sale of most of the stock received without much of any reinvestment in other publicly traded companies.⁵⁵

In short, distributions (including both pro rata dividends and repurchases) are a vital source of capital for businesses *other* than those who make the distributions. Indeed, all of the new capital in the public equity market can be funded by such distributions.

⁵³ For a recent case illustrating some of issues that can arise in connection with employee stock ownership via employee stock ownership plans (ESOPs), see *Jander v. Retirement Plans Committee of IBM*, 910 F.3d 620 (2018), *vacated and remanded*, 140 S. Ct. 592 (Jan. 14, 2020), reinstated 962 F.3d 85 (2d Cir. 2020).

⁵⁴ On the other hand, the need to diversify is presumably one reason why the SEC saw fit to adopt Rule 10b5-2, which provides a safe-harbor from charges of insider trading for insiders who sell pursuant to an a preëxisting plan.

⁵⁵ Indeed, it has been estimated that (worldwide) as much as \$6T in capital is managed by so-called family offices that derive much of their wealth from such sources. See Katie Rass, *Family Office Growth Surges in US and Globally* (Aug. 2, 2019).

<https://www.law.com/private-client-global-elite/2019/08/02/family-office-growth-surges-in-us-and-globally-424-492/>

See also Capgemini, *The Global State of Family Offices* (2012) (estimating that there were about 3200 family offices with almost \$2T AUM as of 2012).

Again, many such acquisitions are likely to be done as tax-deferred reorganizations under IRC 368. See *supra* note 43. So there is often no need to sell the shares so received just to pay taxes. In addition, US tax law provides an exemption for up to \$10M in gain from the sale of small business stock (under IRC 1202) and deferral of any gain reinvested in the stock of another small business within six months (under IRC 1045). But where realized gain cannot be so exempted from tax, and cash is required to make other investments, it might be tempting to hold stock issued by the acquiror and to borrow against it (using acquiror stock as collateral). As with optionees who neglect to sell enough stock following exercise, such a strategy can be disastrous if acquiror stock declines in price (albeit for somewhat different reasons). See, e.g., *Smith v. Waste Mgmt., Inc.*, 407 F.3d 381 (5th Cir. 2005) (unsuccessful claim by seller of acquired business who borrowed against WMT shares received in sale and was bankrupted when share price declined causing loans to be called).

Aggregating the numbers above for 2020, distributions by SPX companies totaled \$1000B (for SPX companies alone) plus \$296B to retire equity of acquired companies, while new issues of equity totaled about \$698B (not including shares issued in connection with equity compensation plans and shares that may have been issued by non-financial companies in connection with acquisitions).⁵⁶ If we assume that equity compensation totaled about \$100B (including about \$40B for officers and another \$60B for lower level employees), there remains about \$500B before disinvestment. Even if we assume that (say) 10% of the total goes to consumption, there is at least \$450B for which we have not accounted. It seems likely that at least that much could be absorbed by the increase in SPX market capitalization from \$26,760B as of EOY 2019 to \$31,659 as of EOY 2020 – a gain of \$4899B. If stock prices in generally increase, it stands to reason that one will pay higher prices to reinvest.⁵⁷ So the multiplier effect noted above could easily turn \$450B in new cash into \$4500B or more in new aggregate value given that total turnover in the market as a whole is about 100% per year.⁵⁸

⁵⁶ See *supra*, note 41 (explaining data): TABLE I (showing total distributions) and TABLE II (showing new issues of \$335B in the forms of IPOs and SEOs and \$363B in connection with acquisitions).

⁵⁷ The bigger mystery is what is the source of growth in value? Does \$300B get reinvested back into the distributing companies just because it needs to be invested somewhere (thus raising value through a giant Ponzi scheme) or does the increased value in fact reflect the prospect of increased return? Cf. Richard A. Booth, *Appraisal Rights and Economic Growth*, 73 Bus. Law. 1011 (2018). Some increase from inflows and direct listings. Growth from reinvestment. Moreover, P/E has generally increased over time. See *id.* There may be a chicken-and-egg problem in this datum since the evolution toward generous distributions and buybacks may have caused investors to have more confidence in corporations. Cf. Rafael LaPorta, et al., *Legal Determinants of External Finance*, NBER Working Paper 5879 (January 1997). See also JOHN MCMILLAN, REINVENTING THE BAZAAR 178-81 (Norton 2002).

⁵⁸ It also stands to reason that there must be some idle cash in the system (slack if you will) that gives traders time for analysis – to search out the best opportunities. It may also be that this pool of cash combined with the shortfall in investment opportunities explains the emergence (or resurgence) of offerings by SPACs – special purpose acquisition companies – who raise money in the equity markets and then seek to find a business in which to invest.

The multiplier effect is also consistent with the growth of program trading in the form of index arbitrage – which many blamed (quite unfairly) for the market crash of October 1987. See Richard A. Booth, *The Uncertain Case for Regulating Program Trading*, 1994 Colum. Bus. L. Rev. 1. Indeed, the founder of Susquehanna International Group (SIG), which has been the single largest source of program trading volume, has said that the business of program trading is really nothing more than a service to mutual funds. Presumably what he meant was that program trading cleans up the pricing discrepancies left behind when actively managed (stock-picking) mutual funds move money from one stock to another. In other words, program trading – which has accounted in the aggregate for half or more of NYSE volume – is itself part of the multiplier effect.

The important point is that distributions are the fuel of growth because they fund new entries into the public market for equity. As such, distributions provide a crucial incentive for entrepreneurs (and venture capitalists) who want most of all to be able to exit their investments and repeat the process. And it is well known that most growth – and jobs – are generated by the small(ish) businesses that are the primary beneficiaries of the redistribution of capital effected by buybacks and dividends.⁵⁹

In the end, if big (public) corporations did not routinely buy small (private) corporations, entrepreneurs would be less inclined to form new businesses. So the idea that companies should retain and reinvest excess cash – whether in new facilities or research and development or even higher wages – is a throwback to the days of stagflation. Arguably, the takeover wars of the 1980s were prompted by empire building and suboptimal investment that were aggravated by tax policies (among other things) prevailing before 1986.⁶⁰ In the meantime, we have seen dramatic increases in equity compensation accompanied by equally dramatic increases in buybacks to offset dilution therefrom and from acquisitions.

Buybacks Versus Dividends

The foregoing arguments say little about (1) why big companies (nowadays) distribute so much more by repurchase than they do by dividend, (2) why buybacks are any better than dividends for the redistribution of capital (or not), and (3) why big companies distribute such a large proportion of the returns they generate.

For some critics, the first question is beside the point. For example, Senators Schumer and Sanders worry that taxing buybacks will simply cause companies to pay dividends. Thus, they propose increasing the tax rate on both forms of distribution because they favor reinvestment above all. They seem to have missed the memo that distributions actually facilitate reinvestment.⁶¹ Or maybe they think that there is some reason to prefer plowback – reinvestment by the same company that generated the return in the first place. If so, they should say why.

On the other hand, many critics seem to focus on buybacks as more worrisome than dividends – perhaps because dividends are public while buybacks are hidden from

⁵⁹ Thus, the function of public corporations as a source of capital may be more important than any innovation or growth they engender. It is too strong to say that the public market is where companies go to retire or die.

⁶⁰ See generally Richard A. Booth, *Five Decades of Corporation Law – From Conglomeration to Equity Compensation*, 53 Villanova L. Rev. 459 (2008).

⁶¹ See Akane Otani, et al., *Boom In Share Buybacks Renews Question of Who Wins from Tax Cuts*, Wall St. J., March 1, 2018, 11:32 PM (quoting Treasury Secretary Mnuchin as stating "Even if people buy back stock, that is money that goes back into the economy that lets investors take that money and allocate it to other things. It's a complete system.").

view.⁶² So the question is whether we should prefer companies to make distributions by dividend rather than repurchase. One might argue that the proceeds from ordinary dividends could be used just as well to reinvest in other shares and might generate just as much in tax (if not a bit more). But as noted above, the reinvestment rate for dividends is a somewhat lower 92% of aggregate distributions. This is almost certainly due to the fact that many investors seek out dividend-paying stocks as a source of regular income.⁶³ Thus, buybacks nudge investors to reinvest.⁶⁴ While it is easy to rationalize spending dividends, it is not so easy to spend the proceeds of sale because it runs counter to the never-invade-principal principle -- the preservation-of-capital ideal.⁶⁵ Still, the difference between 92% and the 96% reinvestment rate for capital gains is not huge.

⁶² The latest proposal seems to be to levy a tax on the corporation equal to the tax that would have been paid by stockholders had they received a dividend (because the stockholders do not pay). Indeed, it has also been suggested that the tax should be so high as to force companies to make distributions by dividend -- to make repurchases uneconomic. See Jonathan Weisman & Peter Evans, *Democrats Eye Taxing Stock Buybacks and Partnerships to Pay for Agenda*, NY Times, September 10, 2021.

⁶³ See supra note xx. To be clear, this fact of investor behavior (as found by the ICI) does not mean that investor preferences differ depending on whether the proceeds derive from buybacks. Indeed, neither investors nor fund managers have any way of knowing if gains from the sale of portfolio stocks come from transactions in which the company was the buyer. Fund managers choose to sell individual stocks for their own reasons. So the data relate to general preferences of investors about whether to reinvest or take the cash.

One nice question is how do we know this fact about investor behavior? That is, how does anyone know what individual investors do with their money other than by aggregate data. The answer is that this particular fact is (or can be) derived from the choices of mutual fund investors as expressed in instructions given to their fund managers about what to do with proceeds. Thus, It does not necessarily indicate the preferences -- or more important, the choices -- of investors who hold shares directly and may choose otherwise when the question arises. On the other hand, it may be better data precisely because it reflects what investors want to do.

⁶⁴ Cf. RICHARD H. THALER & CASS R. SUNSTEIN, *NUDGE* (Yale 2008). This is more than a nudge. In most cases investors have no way of knowing when they sell that they have sold to the issuer. To be clear, the data as to reinvestment of dividends versus capital gains comes from ICI reports as to investor choices about whether to withdraw or reinvest their share of dividends and capital gains realized by investment companies.

⁶⁵ Cf. Restatement of Trusts. Note that the seller in a repurchase does not know the identity of the buyer or thus that the trade is a repurchase. So there is no reason to think stockholders might follow a practice of spending the proceeds in such cases. Indeed (and somewhat ironically), a seller who tenders into a repurchase tender offer (RTO) and sells of their shares in the offeror company would seem quite likely to reinvest the proceeds. Ironically, Thaler & Sunstein tend to pooh pooh the idea that one should eschew invasion of principle.

The third question is the most puzzling. Why do big companies distribute so much of the return they generate (irrespective of how they do so)? In the aggregate over the last ten years, the companies of the S&P 500 have generated total returns averaging 5.78% of market capitalization and have distributed 5.36% of the same base amount. In other words, they have distributed (one way or the other) about 93% of returns as measured by operating earnings.⁶⁶

These are three different questions. But the answers seem to be inextricably intertwined with the rise in equity compensation for executives (as well as lower-level employees).⁶⁷ That will come as no surprise to many critics who argue that buybacks are designed to raise stock price to make options and stock more attractive as compensation. In other words, they see buybacks as manipulative. But again, there is no evidence that buybacks cause any significant increase in stock price, although it is quite clear that buybacks can prevent any decrease in stock price and are intended to do so.

Thus, it is arguable that the critics have the explanation exactly backwards. A much better explanation for the growth in repurchases is that equity compensation necessitates buybacks to control for the dilution that would otherwise occur when options are exercised (or indeed when they are granted) or when restricted stock is granted. In other words, buybacks are logically subsequent to equity compensation – which may be seen as a but-for *cause* of the trend. Buybacks make up for the dilution that stockholders might suffer from the issue of new shares. They should not be seen as part of a nefarious plot to make equity compensation more lucrative.

Consider the earlier example involving ABC Corporation. ABC begins the year with an aggregate value (market capitalization) of \$10M with one million shares outstanding. Thus, ABC stock trades for \$10 per share, indicating that the market assigns a 10% discount rate to (prospective) returns to be generated by the company. The BOD grants to the CEO options to buy 100K shares (exercisable one year hence) at an exercise price of \$10 per share. During the year, ABC generates after-tax income of \$1,000,000, thus increasing in value to \$11M.⁶⁸

ABC stock should now trade for \$11 per share all else equal. But all else is not equal. Because of the options granted to the CEO – which are now in the money – the company would have 1,100,000 shares outstanding (fully diluted). To be sure, it would

⁶⁶ See *supra* Table I.

⁶⁷ Thanks to Charlie Black for this construction.

⁶⁸ This is the flip-side of the ex dividend effect.

Note that this and subsequent examples focus on CEO compensation although equity compensation is often spread among all high-level officers (HLOs) and even many lower-level employees (LLEs). We do not here address the important question of how to divvy up the compensation pot because our primary concern is the effect on stockholder returns.

also have another \$1,000,000 in cash from the CEO's exercise of options.⁶⁹ So its aggregate value would be \$12M. Nevertheless \$12M / 1.1M shares equates to a market price of \$10.91 per share – which is consistent with reported earnings of \$0.91 per share (fully diluted). That might be good enough for the stockholders, assuming they understand that the reason why the company did not make its numbers – did not report the expected \$1.00 EPS – was dilution and not underperformance. In other words, the market might not treat this as an earnings surprise and might not punish the stock any further. But ABC can avoid the danger that the market might not be so understanding by buying back 100,000 shares to undo the dilution caused by the newly issued shares. If it does so, it can report earnings of \$1.00 per share, thus meeting market expectations.⁷⁰

Admittedly, this scenario depends on a bit of financial legerdemain. Specifically, ABC will have used at least \$1,000,000 to buy back 100,000 shares. Indeed, it will likely have used even more (or bought back fewer shares) if the repurchase happens later in the year as stock price creeps up toward the \$11 mark. Assuming (for example) that the company buys back 100,000 shares at \$11 per share (for \$1,100,000) it should be

⁶⁹ Obviously, this assumes exercise although the CEO may choose not to do so. But financial reporting rules require the same assumption that figures are fully-diluted. And there is no reason to think that the market does not factor in such factors.

⁷⁰ In practice (and under SEC rules), EPS must be reported based on the average number of shares outstanding for the year. But it is not clear that stockholders care much about such rules. Rather, they will likely focus on the number of shares outstanding at the end of the year or as of any more recent date for which information is available. As noted elsewhere, most companies report the number of shares outstanding as of a date later than the date on the financial statement where it appears – typically about xx days before distribution.

For the record, there is no requirement that the company report the number of shares repurchased, or the date or prices of such trades. But some of this information is imbedded in the item Treasury Shares (if reported).

worth \$10,900,000 in the aggregate or \$10.90 per share.⁷¹ As with the ex-dividend effect, we might expect aggregate value (and market capitalization) to decline by the amount of the cash distribution. Or maybe not. The difference in the context of a repurchase is that the corporation gets something in return for the distribution, namely, shares of its own stock. To be sure, the law says that shares of an issuing corporation have no value in the hands of the issuing corporation -- which seems to imply that the corporation has received nothing in return.⁷² But the market is not obliged to agree. As far as the market is concerned, the corporation has paid a fair market price for its own shares. The \$1.1M in cash has been exchanged for an asset (of sorts) in the form of reverse dilution of shares. That is, the remaining stockholders have benefitted from *not* being diluted – from maintaining their proportional interest in the corporation by virtue of the corporation paying a fair market price for its own shares.⁷³ There is no reason to think that the market will see the corporation as worth any less than it would have been

⁷¹ To expand: If ABC uses \$1,000,000 to buy back shares after the price has already increased to \$11 to reflect results, it will be able only to buy back 90,909 shares, leaving 1,009,091 shares outstanding and stock price should settle at \$10.90 per share. Thus, in practice the company must use a bit more cash to buy back a few more shares to manage EPS as it will ultimately be reported to the stockholders. (This may explain why for many companies the number of shares outstanding tends to decrease over time.)

If the company does the buyback earlier in the year – in anticipation of an increase in stock price and optionee exercise later (thus hoping to minimize cash outlay) – it must forgo interest that would have been earned on such funds. To be sure, the interest is likely to be minimal in the current economic climate. But this factor might be more important with higher prevailing rates and concomitantly lower returns on equities. Thus, equity compensation will cause *some* dilution for other (outside) stockholders no matter what (even though it does not cause any decrease in reported EPS).

There is a subtle problem with this example: The company would never need to pay as much as \$11 per share if its stock price rises only to \$10.90 per share to reflect dilution. Thus, the effort to manage dilution gives rise to an iterative process that will presumably play out over the course of the year as the CFO juggles expected results against ever fluctuating market prices. This reinforces the idea that stockholders rely implicitly on management to do the right thing (so to speak).

As discussed further below, the dilutive effect of shares issued in connection with acquisitions is different: Since the acquired company may contribute additional earnings to the resulting combined entity, it may not be necessary to repurchase as many shares as are issued in the acquisition.

⁷² See, e.g., MBCA 6.31.

⁷³ Cf. *Unocal Corp. v. Mesa Petroleum Co.*, 493 A.2d 946 (Del.1985) (illustrating reverse dilution).

worth if no options had been granted in the first place and the corporation had performed just as well.⁷⁴

In any event, ABC is effectively compelled to buy back shares if options are to work as intended for the benefit of both optionee officers – inside investors – and outside investors. So there is little doubt that the rise of equity compensation has accelerated the trend toward buybacks although it does not seem to be a complete explanation for why companies distribute cash equal to almost all of operating earnings.⁷⁵ In short, buybacks come logically second in the process. They make up for the dilution that would otherwise be suffered by the stockholders. They have nothing (necessarily) to do with trying to *inflate* stock price to make options more lucrative (although one can imagine abuses as discussed below). But the idea that buybacks must be intended to *boost* stock price for the benefit of fat cats who get equity compensation is simply wrong.

Indeed, it is arguable that equity compensation has the opposite effect – or at least the potential therefor – since it effectively obligates the company to overcome its dilutive effects. In effect, officers who accept equity as compensation bet that they can meet expectations even with adjusting for dilution – with one hand tied behind their back (as it were).⁷⁶ Thus, equity compensation serves a vouching function in that it requires recipient officers to put their money where their mouth is (so to speak).

In other words, equity compensation has quite the opposite effect as the supposed buy-back inflation of stock price cited by critics. It has the effect of requiring the recipient officers to do a bit better than expected (or get lucky) in order to collect the potential

⁷⁴ See *infra* text at note xxx (discussing potential for dilution of return from higher CEO salary and possibility that return would not be as good in the absence of incentives inherent in equity compensation – as well as impossibility of ever knowing for sure).

⁷⁵ Again, if we assume that equity compensation (for officers) equals about 4% of earnings in the aggregate, then it would seem to explain about \$40B of buyback activity. But when a company buys back a share of its stock it must buy back the whole share and not just the growth in value. On the other hand, when an option is exercised, the optionee must pay the exercise price – which replenishes almost all cash distributed (albeit to capital stock and not retained earnings). So options entail much less cash outlay. It is a win-win for the company and the recipient officers. But given the extra risk with options, CEO will insist on more. If stock is likely to increase in value by 10% over the year, one will need options on 11 shares to match the value of one share of restricted stock.

⁷⁶ Note also that an outright grant of (restricted) stock results in dilution and/or buyback no matter what.

bonus that goes with equity compensation.⁷⁷ If they do not do so, they run the risk of market opprobrium. In short, equity compensation is like spotting the other side points on a bet as to how the year will turn out. It requires management to play catch-up.⁷⁸

While the foregoing arguments have focused on equity compensation, similar arguments apply to the use of stock as consideration for acquisitions – which is a much more significant source of new shares. Indeed, the worry about satisfying the expectations of the market – about the company making its numbers (so to speak) – might be an even more powerful incentive in this connection since target companies will be less inclined to accept stock as consideration (all else equal) if issuer-buyers routinely suffer a decrease in price for failure to address the dilutive effects of such acquisitions.⁷⁹

Moreover, it seems likely that still more buybacks are prompted by cash acquisitions. Although cash acquisitions do not entail the issue of new stock, they nonetheless can (and often do) dilute the value of acquiring company stock because they drain cash (or potential cash) and because such acquisitions typically involve the payment of a premium price – which translates into a decrease in the price of acquiring company shares. As a result, the contribution to earnings from such acquisitions is almost by definition somewhat inferior to a market rate of return for the acquiring company. One way to deal with that problem is to repurchase some shares to reduce the denominator in the the earnings per share calculation.

In short, it almost goes without saying that the use of stock for purposes of equity compensation and as currency for acquisitions necessitates buybacks. Again, these uses aggregated about \$400B in the year 2020 or probably accounted for about half of total distributions. And these figures do not reflect the effects of cash acquisitions noted immediately above. It should be quite obvious to anyone who thinks about it that one cannot control for dilution by paying dividends. Indeed, dividends make matters worse.

Spotlight on EPS

⁷⁷ As noted above, it helps the process if repurchases can be made when market prices dip a bit.

⁷⁸ As such, options naturally address the pay-without-performance critique. We do better only if you do better.

⁷⁹ Unlike stock options, such uses do not involve any inflow of cash (as for exercise). But as noted, they do involve some inflow of earnings from operations.

One important implication of the foregoing analysis is that stockholders must focus on EPS (as based on operating earnings) as the primary measure of performance and thus as the primary indicator of value. Since the number of shares outstanding will vary and stockholders cannot know for sure how many shares are outstanding at any given time, it follows that they will (or should) focus on EPS. The value of a share depends on two things: The aggregate value of the company and the number of shares outstanding.⁸⁰ Although the examples used here are stated mostly in terms of the lump-sum value of the company – which is then divided by the number of shares outstanding – the value of a company depends primarily on the return it generates as most commonly measured by GAAP earnings. While stockholders might also want to know how the company has used its cash (whether to buy back shares or for other purposes or simply to be held for a rainy day), this information is ambiguous. Again, reasonable minds can differ as to the value of shares bought back by the company.⁸¹

It is helpful to think about what a chief financial officer (CFO) would do to cope with the dynamics described here. The answer is almost certainly that the CFO will try to meet (or beat) the expectations of the market in terms of EPS. Assuming the company will make what it will make from operations – that the CFO cannot do much to affect aggregate return – the CFO will focus instead on assuring EPS as ultimately reported will be consistent with analyst predictions. With regard to equity compensation, the situation may require getting lucky with the timing of buybacks or using a bit more cash than would have been necessary if shares had been repurchased as of the grant date.⁸² With regard to acquisitions using stock, it is likely that fewer shares will need to be bought back than the number of new shares issued. But it is also likely that more buybacks will be required to offset the expenses associated with acquisitions using cash.

To be sure, the SEC frowns on the practice of earnings management.⁸³ But the process described here should not be confused with earnings management of the sort that worries the SEC. Rather, one should think of it as capital management in the sense that a well managed company should continually monitor how much equity it needs to do what it does. In any event, the bottom line is that stockholders will focus on EPS and must trust companies to manage the number of outstanding shares.

⁸⁰ Note appraisal cases on this subject.

⁸¹ See *supra* text at note 72. This suggests that it may be important to keep track of treasury shares even though the trend has been to treat the concept as a bit archaic and dispensable. See MBCA 6.31. Indeed, the very ambiguity of the information militates for its maintenance and disclosure.

⁸² It is also possible to buy exchange-traded options (calls) to hedge against this risk, but that entails the outlay of the option premium – which will be at least as much as the interest payable over the same period.

⁸³ See generally SAB 99.

As suggested above, there is a possible dark side to the dynamic described here.⁸⁴ Although the logic of buybacks has nothing necessarily to do with efforts to inflate stock price, it is nonetheless *possible* that buybacks might sometimes be used to such ends (and under cover of legitimate dilution control).

One curious implication of focusing on EPS is that market capitalization can become disconnected therefrom. Consider (again) the earlier example.

Suppose that ABC begins Year One with an aggregate value of \$10M and one million shares outstanding. Over the course of the year, ABC generates after-tax income of \$1,000,000 – or \$1.00 per share – thus increasing in aggregate value to \$11M and presumably \$11 per share (assuming no distributions to stockholders).

Now suppose that during Year Two, ABC again generates \$1,000,000 in return but also repurchases 200,000 shares. EPS will have increased to \$1.25 – and stock price may increase accordingly to \$12.50 per share (if not more).⁸⁵ But even if so market capitalization will have decreased to \$10M.

Suppose further that ABC's CEO chose to exercise stock options that had been granted at \$10 per share at the beginning of Year One. She would enjoy a gain of \$2 per share even though market capitalization has decreased. To be sure, that decrease does not undo the fact that ABC booked income of \$1,000,000 for each of the the past two years.⁸⁶ But the fact remains that the CEO enjoys a nice payday even though market capitalization has shrunk.

⁸⁴ See *supra* note xxx.

⁸⁵ This seems quite likely if EPS is reported (perhaps in a press release) before the number of outstanding shares is reported (when the 10K is filed possibly several weeks later).

⁸⁶ There is a subtle problem with this example: When the CEO exercises her options, the number of shares outstanding will increase. Suppose the CEO exercises options to buy 100,000 shares at \$10 per share. The number of shares outstanding increases to 1,100,000. But the CEO also pays \$1,000,000 for those shares. So market capitalization increases by that amount. The result is that after the buyback of 181,818 shares there will be 918,182 shares outstanding and the aggregate value of the company will be \$10M rather than \$9M. So market price should be \$10.89 per share. Indeed, assuming the market knew all along about the number of options outstanding, market price should never have risen above \$10.89 per share. In other words, the market should price the stock as if the options would be exercised – on a fully diluted basis.

Some may be troubled by the fact that ABC stockholders would have had shares worth \$11 each rather than \$10.89 but for the fact that the CEO had been granted the options in the example. But that worry presupposes that the company would have done as well as it did in the absence of such incentive compensation. One will never know.

To add insult to injury, many investors will be effectively forced to sell: As much as half of all stock is held by index funds that hold portfolio stocks in proportion to the market capitalization. Accordingly they will reduce their holdings of ABC by about 9% (all else equal) since ABC has shrunk from \$11M to \$10M in market capitalization.⁸⁷ But such selling index funds will recognize a gain of 25% on the shares they sell in respect of the increase in per share price from \$10 to \$12.50 over the two years.⁸⁸

Needless to say, the foregoing example requires the company to distribute cash in excess of reported earnings for the year. It is unusual for a company to do so. But one would not call it rare.⁸⁹ Nevertheless, it is not clear that the foregoing scenario is worrisome. The fact that companies may sometimes distribute more than they generate is mostly a matter of curiosity. It is not a pattern that can be sustained. In the end, companies cannot distribute more than they make without eventually going out of business. But the survival instinct is strong. And it is arguably a good thing that ABC has returned some of its capital to the system – which capital it presumably does not need. Moreover, the sales of stock by index investors will have the effect of increasing the supply of ABC stock – as if ABC had made an offering of additional stock (akin to an SEO as in Table I). But the CFO presumably understands these effects and will manage the situation accordingly. Still, the question remains why corporations have become generous to fault – at least where stockholders are concerned.

The answer may be that companies will distribute as much as they can without reducing their market capitalization simply because – like most consumers – they will spend just about all of the disposable income they generate – but not more. All else equal, investors presumably prefer to choose how and where to invest their money. So it is the more the better when it comes to distributions by public companies. But only up to the

⁸⁷ The assumption here is that other companies in the market have increased in value in proportion to the increased price of ABC. It must be somewhat worrisome for the managers of index funds not to know for sure how many shares are outstanding for each portfolio company. But it may be good enough to rely on quarterly reports (10Qs) even though the data therein may be as much as forty days old by the time it is published by the largest companies. Then again, neither does the market know for sure how many shares are outstanding even though the single most important fact that an investor would want to know is EPS. This is not a problem with dividends, which may be one reason why some scholars of corporate finance seem to favor dividends as a mode of distribution.

⁸⁸ The fund itself (as a pass-through entity) does not pay this tax but rather reports it to investors who pay the tax at the individual level. Thus, it is not quite accurate that PBT causes index funds to sell losers and buy winners. *See supra* note xxx. It is entirely possible for a stock to increase in per-share value but for the company to decrease in market capitalization precisely because of stock buybacks. IOW, an index fund might need to sell a stock whose market price has increased – and so to recognize a gain for tax purposes – even though the issuer company has decreased in market capitalization.

⁸⁹ Corporation law generally permits distributions of any amount up to all of retained earnings assuming the corporation remains able to pay its bills as they become due. Note conversion adjustment practices.

point that distributions might cause index investors to disinvest. The bottom line is the situation we have: The largest public companies distribute amounts pretty much equal to the total return they generate.

Optimizing Compensation

Admittedly, the foregoing defense of buybacks begs the question whether corporations *should* use their stock as compensation and currency for acquisitions. It is no response to the critics to say that such uses of equity necessitate buybacks if the causal circumstances are a matter of choice and cannot be defended on their own merits. In other words, two wrongs do not make a right.

For example, dilution would not be a problem if CEOs were paid by a traditional cash salary and bonus system. Then again, such cash compensation would necessarily be more than the cash compensation paid to the same CEO who also gets options. So the question is whether stockholders are better off if the company pays out more cash – and presumably reports somewhat lower earnings. The answer is complicated by the ultimately unknowable incentive effects of equity. Intuitively, it seems likely that earnings will be a bit higher – all else equal – if CEOs know they will get a share thereof through equity compensation rather than a cash bonus to be determined after the fact by a compensation committee.⁹⁰ Which would you prefer? In short, reasonable minds can differ about whether equity compensation is a good idea – not to mention best practices in connection therewith.

It is also important to remember that the impetus for equity compensation was to align the incentives for corporate officers with the interests of stockholders. It is thus no coincidence that equity compensation emerged from the takeover wars of the 1980s – at a time when management seemed often to resist deals that stockholders favored. In the 1980s, the central problem was that corporations tended to hoard cash and to reinvest in suboptimal expansion of existing operations.⁹¹ So the idea was to reward corporate executives consistent with the interests of stockholders. Many (including Senators Schumer and Sanders) would argue that equity compensation has worked all too well. Indeed, it is quite remarkable that the biggest corporations today distribute cash in amounts almost equal to reported earnings from operations.

Although one might well conclude the discussion of buybacks here – having shown that they are part of an elaborate and well-oiled system for the recirculation of capital – it

⁹⁰ In other words, striking an upfront deal based on objective measures of performance precludes hindsight opportunism. *But see* Kamin v. American Express Co., 383 N.Y.S.2d 807 (1976) (illustrating possibility that salary and bonus scheme may incline management to pursue strategies to maximize reported earnings even though contrary to stockholder interests). As in the larger economy, it is easy to share growth and keep everyone happy.

⁹¹ *See, e.g.*, Unocal Corp. v. Mesa Petroleum Co., 493 A.2d 946 (Del.1985).

would be a waste of context not to consider the implications (if any) for the design of executive compensation. Specifically, the foregoing discussion of how buybacks fit into the system should inform the choice as between compensation with stock and compensation with options because it will affect how and when dilution occurs and thus how the company addresses it.

As explained at length above, equity compensation necessitates repurchases to make up for the dilution that would otherwise be suffered by outside stockholders. This reality implies that equity compensation is inherently self-limiting – or should be so – in that corporate decision-makers (CDMs) should satisfy themselves that there will be sufficient cash on hand to repurchase shares when the time comes.⁹² This is not to say that they always get it right (or have done so from the very beginning). It is only to say that a CFO who has thought about it will be duly worried about whether the company can handle the dilution that goes with equity compensation.

⁹² See Richard A. Booth, *Why Stock Options are the Best Form of Executive Compensation (And How to Make Them Even Better)*, 6 NYU J. L. & Bus. 281 (2010). The idea of corporate decision-maker (CDM) is borrowed from language used in the Principles of Corporate Governance (PCG).

Thus, a grant of equity compensation conveys significant information to investors about what insiders truly believe about company prospects. It signals to the market the fact that management believes it can meet or exceed expectations.⁹³ This is all the more so where companies distribute almost all of their spare cash one way or the other.⁹⁴ But the execution of repurchases differs significantly depending on whether equity compensation takes the form of options as opposed to restricted stock. Thus, a grant of options sends a different signal from that sent by a grant of restricted stock. The idea behind options as compensation is that they motivate CDMs to seek gains. But they do not penalize CDMs for losses. In contrast, the idea behind restricted stock is that it motivates CDMs to think both about seeking gain and about avoiding loss.

A grant of stock requires buyback no matter what. Outside stockholders suffer dilution immediately when stock is granted (although accounting rules may permit the effects to be spread over time). But a grant of options permits companies to buy back shares as necessary, depending on real-time assessment of whether optionees are likely to exercise – depending on whether and how much stock price has increased since the grant date. For example, a company that does not expect to make its numbers may choose not to use as much spare cash to buy back its own stock. But if the same company has issued restricted stock as compensation, it must deal with dilution irrespective of progress toward meeting analyst expectations or face the consequences of not doing so.

Relatedly, the choice to use options rather than stock as compensation (or vice versa) will send slightly different signals to the market as to what insiders truly think about company prospects. A grant of restricted stock says (in effect) that the company thinks it will generate enough return to repurchase an equal number of shares (in much the same way that a dividend or stock dividend sends a message that the company will be able to continue to pay the cash dividend or that the company will be able to pay an established dividend on an even larger number of shares). Thus, one might argue that a

⁹³ See Richard A. Booth, *Why Stock Options are the Best Form of Executive Compensation (And How to Make Them Even Better)*, 6 NYU J. L. & Bus. 281 (2010). Scholars seem generally to agree that stock dividends – which should have no economic effect but nevertheless tend to cause market price rise a bit – are seen as a signal that the company is doing well: If the corporation issues more stock it must think it can still pay any established dividend or maintain EPS. On the other hand, the signal conveyed by stock dividends might be falsified (so to speak) by repurchasing an equal number of shares. Indeed, a buyback might be seen as signaling the opposite at least to the extent that the number of shares bought back exceeds the number of shares issued upon exercise or in the money – and to the extent the market knows how many shares have been bought back.

⁹⁴ Moreover, such a signal need not reveal the details of any competitive advantage, and one that is even more trustworthy than many others because of its money-where-your-mouth-is character. See *Virginia Bankshares, Inc. v. Sandberg*, 501 U.S. 1083 (1991). (discussing presumable content of summary information).

grant of restricted stock conveys more confidence on the part of insiders than does a grant of options.⁹⁵

On the other hand, it might be that a CEO who is worried about the future would prefer restricted stock because it will always be worth *something* even if stock price declines. So the fact that the CEO has agreed (in effect) to work for options may send the message that she is that much more confident about company prospects.

Moreover, it takes multiple options to match the incentive effects of one share of stock (all else equal). With an option, the recipient gets only the growth in share price, whereas with a share of stock the recipient gets both the grant date value of shares and the growth therein (as well as dividends (if any)).⁹⁶ Recall the example of ABC Corporation whose stock trades at \$10 per share and is expected to grow by one dollar (10%) per year. A grant of one share would thus be expected to be worth \$11 at the end of the year. It follows that the CEO would want options on eleven shares in order to be indifferent between the two (ignoring the value of the downside protection that goes with stock). On the other hand, if the CEO thinks the company can generate (say) a 20% return in the next year, the CEO might settle for fewer options.⁹⁷

Perhaps more important, it is unclear how much *incentive* inheres in a grant of stock. In the ABC example, 10/11 of the ultimate value comes from the existing value of the business. Only 1/11 comes from the prospect of growth. So recipients will be ten times more focused on avoiding losses than they are on generating gains.⁹⁸

Thus, the question becomes: What do the stockholders really want? The answer to this question depends on the characteristics of a model stockholder.

One model is a stockholder who is totally undiversified and has invested all of their money in the subject company. Another model is a stockholder who is totally diversified and has invested in (say) an index fund that itself invests in all of the companies in the S&P500 (SPX) in proportion to the market capitalization of each portfolio company.

⁹⁵ See Semler Brossy, *supra* note xxx at xxx, noting that companies increased their grants of options relative to stock during the COVID19 pandemic. The same report also notes (somewhat cryptically) that proxy advisory services (such as ISS) do not regard options as incentive compensation.

⁹⁶ Thus, options create incentives that are quite similar to the typical venture capital deal in which VC investors take back preferred stock that zeroes out the value of the company, leaving management with an investment that pays off only if and to the extent that the company increases in value – sometimes by a multiple of its initial value. See Ronald Gilson.

⁹⁷ The assumption is that the CEO is able to influence her compensation.

⁹⁸ Some also question the incentive inherent in an option. Jensen. If a share of ABC (for example) is expected to increase in value by one dollar to \$11, then perhaps the exercise price should be \$11 so as to reward the grantee only for doing better than expected.

Needless to say, there are many possibilities in between – many possible levels of diversification.

For an undiversified stock-picking investor with all of their eggs in one basket, it seems quite clear that the investor would want the CEO to worry about both gains and losses. Thus, such an investor would likely want the CEO to be compensated with stock (rather than options) because stock can both rise and fall in value. In contrast, a fully-diversified index investor would want all portfolio companies to seek to maximize risk-adjusted value. Such an investor is protected by the law of large numbers and is unconcerned that a few portfolio companies might suffer losses because they will be offset by gains from other portfolio companies. Thus, they would want the CEO to be compensated with options rather than stock.⁹⁹

In addition to the above musings about what form of compensation works best for incentive purposes, the discussion would be incomplete without some consideration of what the recipient CEO or HLO might prefer. It should go without saying that the corporation should seek the most bang for the buck from what it pays its officers and indeed employees. All else equal, we should consider whether the recipient prefers

⁹⁹ It is curious that corporate governance activists have been so adamantly in favor of using restricted stock rather than options for purposes of executive compensation. The standard argument is that restricted stock induces management to maximize stock price while also worrying about the possible downside of the business decisions they make. But management tends to worry plenty about the downside – because they want to keep their jobs – and (if anything) to focus too little on the upside – which stockholders would prefer because they can diversify away the risk of good faith losses. See Richard A. Booth, *Why Stock Options are the Best Form of Executive Compensation (And How to Make Them Even Better)*, 6 NYU J. L. & Bus. 281 (2010). The resulting system in which about executive compensation is divided about one-third each into cash, stock, and options creates a strange system of mixed messages. On the other hand, there are very good arguments for compensating directors (as opposed to officers) with restricted stock. See *id.*

Although options are the best form of compensation for CEOs and HLOs, it does not follow that directors should also be compensated with options. As is implicit in the foregoing discussion, options entail at least some subtle forms of dilution for outside stockholders. At the very least, the growth in price they enjoy when things work out is somewhat reduced in comparison to what it would be in the absence of options. In other words, outside stockholders must share the wealth with officers (inside stockholders). But it will always be possible (in hindsight) to argue that outsiders would have been better off if they were not forced to share with insiders even though one could always argue that insiders would not have done so good a job at generating gains if they had not known they would get a share thereof. Thus, it falls to the directors (with help from the CFO) to assure that the number of options granted is consistent with prospects for growth and does not dilute outsider interests to excess. It follows that directors themselves should not be paid with options if they are to be compensated at all with equity. Rather, the BOD should be compensated with stock (if they are paid at all with equity) because the BOD serves as an arbiter of sorts – almost as a court of equity – to assure that the prospects of growth are fairly divvied up between insiders and outsiders. Moreover, restricted stock is a much better fit in that it reflects the duty of directors to be mindful of both the upside and the downside. See *id.*

options or stock. Intuitively, it seems likely that CEOs would prefer the less risky alternative – restricted stock – since they are quintessentially undiversified: Not only is their incentive compensation tied up in the stock of one company, but their human capital is invested therein as well. If things do not work out, they are likely to get sacked. Indeed, the risk of getting fired as measured by average tenure has increased in direct proportion to the use of equity compensation.¹⁰⁰

Yet another factor to be considered is the tax treatment of equity compensation. Although tax does not matter much (if at all) with regard to whether distributions take the form of dividends or repurchases, tax treatment might matter when it comes to how equity compensation is paid. As it turns out tax law is admirably neutral in this regard.

At the outset, it is important to note that equity compensation is taxed at the same rate as ordinary income – up to a 35% maximum.

With options, there is no tax at the time the option is granted unless the exercise price (strike price) is less than the market price on the date of grant – in which case the difference is treated as ordinary income. Thus, options are almost always granted at-the-market (ATM) – with an exercise price equal to market price on the date of grant.¹⁰¹ When the option is exercised, the recipient must pay tax at the ordinary income rate on the difference between the market price and the exercise price on the date of exercise.¹⁰² And the company gets a matching deduction for this compensation expense (at the 21% flat rate for corporate income).

With a grant of restricted stock, the recipient owes tax on the full value of the grant as of the grant date. But the stock typically cannot be sold for several years until it is fully vested. (And sometimes it cannot be sold at all while the holder remains employed.) Mercifully, IRC 83 provides that tax may be deferred until the restriction expires. But when it does expire tax is due on the full value thereof as of that date. Thus, many recipients choose to pay the tax up-front (as permitted under IRC 83) to avoid paying

¹⁰⁰ See Richard A. Booth, *Why Stock Options are the Best Form of Executive Compensation (And How to Make Them Even Better)*, 6 NYU J. L. & Bus. 281 (2010).

¹⁰¹ The assumption implicit in tax law is that an ATM option has no readily ascertainable value (in the language of IRC 83). Although this was once true, it is today belied by option pricing theory. Moreover, GAAP requires that the grant-date value of options be recognized as an expense for purposes of calculating earnings. See FAS 123R.

¹⁰² See IRC 83. So called qualified stock options – sometimes called incentive stock options (ISOs) granted under IRC 421ff are subject to a different rule. The recipient pays tax not when the option is exercised but rather when the stock is sold but then to the extent of the total gain at the capital gains rate. ISOs are relatively unimportant in the grand scheme of things since one can hold no more than \$100,000 worth of such options at any given time. Thus, ISOs are not of much use for compensating CEOs and other high-level officers (HLOs). Moreover, in order to qualify as ISOs, such options must be awarded as part of a broad-based plan covering a large proportion of employees.

tax on possibly significant appreciation. In other words, one can pay tax early on an amount that does not include future growth. But one cannot recoup any excess tax that might be paid if stock price declines other than by selling the stock and recognizing a capital loss. So restricted stock can be tricky as a matter of tax planning.¹⁰³

Note also that those who hold restricted stock are typically paid any dividends that may be declared on their shares even though the shares cannot yet be sold. But note also such dividends are not qualified dividends under IRC 11 and thus are taxed at OI rates up to 35% rather than at the 20% rate paid by investors. So there is no compelling reason for someone who receives or holds restricted stock to care much one way or the other if the corporation pays dividends (although they might have a mild preference for spreading this income over time).¹⁰⁴

Incidentally, the foregoing tax considerations suggest that the government enjoys a gain from equity compensation in that it collects taxes at the higher OI rate on both gains and dividends that would otherwise be taxed at the lower 20% rate. Thus, while there is little reason to think that the fisc loses because repurchases have replaced dividends, there is good reason to think that it gains to the extent equity compensation causes shares to flow from outsiders to insiders. And the effect is likely even more pronounced than might at first appear because equity compensation is not held in tax deferred vehicles.¹⁰⁵

In the real world, companies tend to use a combination of both stock and options in addition to cash. Indeed, CEO average compensation comprises about one-third of each – which suggests that most companies have punted on the question of what their stockholders want.¹⁰⁶ They try to please both diversified and undiversified investors.

¹⁰³ On the other hand, many companies provide so-called tax protection to compensate for the tax payable by recipients of restricted stock. Needless to say, a recipient who is tax protected will presumably choose to have the grantor corporation pay the tax up front. The net effect is to increase the cost of this form of equity compensation by 35% (or more if one includes the echo effect on the recipient who must pay tax on the tax protection). In contrast, there is no need for tax protection with options.

While tax protection may thus eliminate some of the worry for recipients of restricted stock, the fact remains that restricted stock cannot be sold for some specified period of time. Hence the name. So a recipient thereof is effectively forced to invest in the grantor company – and to remain so invested for some specified time during which they must bear the risk of loss both from any firm-specific reversal of fortune and from adverse market conditions. Thus, it is not entirely correct to think of a holder of restricted stock as having received their reward at the time of grant since some clawback is always possible.

¹⁰⁴ Note now repealed option of income averaging.

¹⁰⁵ Note budget surplus from dotcom boom.

¹⁰⁶ See *supra* note xxx.

Last but not least, options permit a company both to distribute returns and to reinvest them as well – to have its cake and eat it too. Thus, the fact that companies distribute amounts equal to almost all of the returns they generate does not necessarily imply that they plow back almost nothing. To be sure, officer compensation equals only about 6% of earnings, and equity compensation only about two-thirds of that. So repurchases attributable thereto cannot account for much of the aggregate amount of buybacks. But many companies in the technology and financial sectors use equity compensation for large numbers of employees. And these sectors together account for about 40% of the total value of the S&P500. So the total amount of buybacks necessitated by equity compensation could be of that order of magnitude – approaching 50% of aggregate operating earnings.

Note further that this use and reuse of earnings in the context of options – double dipping as it were – works only with options. It does not work with restricted stock because the company receives no payment for such stock as it does when options are exercised. Yet the company must nevertheless address the dilution caused by stock grants – and must do so whether or not stock price has risen. With options in contrast, the company can tailor its repurchase of stock as circumstances dictate. If it appears unlikely that options will be exercised or in the money the company may forgo using available cash to buy back shares – which is pretty handy since a languishing stock price suggests the company may be suffering through tough times.

Note also that ABC retains almost as much cash as it had in the first place. Although it has distributed cash equal to all of its earnings – if not a bit more – it has also received a similar amount of cash as a result of the exercise of options. Thus, the idea that big companies distribute almost all of the returns they generate is largely illusory to the extent that the distributions are necessitated by the (prospective) exercise of options.¹⁰⁷ Moreover and perhaps more important, the company ends up with almost as much cash that it can use for reinvestment as it would have had if it had made no distributions at all – which should reassure Senators Shumer and Sanders. Is this a great country or what?

On the other hand, it is possible that all cash inflow from exercise might be consumed by the spread between exercise price and repurchase price if the company grants a large number of options. Again, in the ABC example, it would take eleven options to equal the (prospective) value of one share of stock. But it would take all of the exercise price from one share to offset the spread for ten shares if repurchased at year end. The upshot is that ABC would be short by the cash required to repurchase the eleventh share. And indeed, if even ABC grants fewer options – generating less inflow from exercise – it will always be short by one share's worth of cash if the hope is to finance the offset solely from that source. It cannot be done. ABC will always need to use some

¹⁰⁷ Not so in the case of restricted stock. Possibility that expensing grants of options reduces pressure to make numbers.

amount of other cash if it pays retail (as it were) – if it waits until year-end to address dilution and must pay FMV as of exercise.

The foregoing thought experiment illustrates quite graphically the plight of the CFO in dealing with option hangover (as it might be called). What the CFO wants most of all is to buy back shares at grant date value but to do so as late as possible so as to conserve as much cash as possible – to minimize forgone return and opportunity costs and not to buy back shares if it turns out that options will be out of the money.¹⁰⁸ In other words, a CFO is like any other investor who wants to buy shares at the lowest possible price. The last thing they want is to drive up share price before they can address dilution.¹⁰⁹

Needless to say, a CFO is in a uniquely good position to buy low. If they have reason to think that stock price may suffer a dip in the near future, there is no legal rule that precludes them from waiting to buy.¹¹⁰ To be sure, it would be illegal insider trading to *sell* shares while in possession of such material non-public information absent a previously established trading plan.¹¹¹ But to refrain from trading does not constitute a violation.¹¹² Nevertheless, knowing when *not* to buy or sell is half the battle. A trader with such an edge is certain to do better over the long run than a trader without such an advantage.¹¹³

More broadly, the ultimate goal for the CFO is to maximize EPS without reducing market capitalization. As discussed above, it is not clear that the market will care too much about the use of current cash flow to repurchase shares. But it might care about the use of significant amounts of cash reserves (or borrowing capacity) to further boost EPS beyond what would have been reported hypothetically by the same company in the absence of any equity compensation. In other words, the market might view the repurchase of more shares than necessary to address dilution as equivalent to the payment of a dividend with the attendant ex dividend effect.

If the foregoing is at all an accurate portrayal of how CFOs see their jobs – and there is every reason to think it is – it is also easy to imagine that a CFO might have strong

¹⁰⁸ It is largely irrelevant whether optionees actually choose to exercise. Accounting rules generally require in-the-money options to be treated as exercised such as for purposes of calculating EPS.

¹⁰⁹ The structure of Rule 10b-18 reflects this reality.

¹¹⁰ *But see* Jander.

¹¹¹ See Rule 10b5-2.

¹¹² See *Blue Chip Stamps v. Manor Drug Stores*, 421 U.S. 723 (1975).

¹¹³ Thus, it is no surprise – and no worry – that companies do somewhat better (in terms of return) than the market average for outside investors in the company's stock.

opinions about executive compensation – and not just their own compensation. Since the CFO must worry every day about how to address dilution, it follows that the CFO will also have something to say about how many options (or shares) the company can afford to grant.

Finally, lest we lose track of what prompted this article – namely the agitation over repurchases and equity compensation and the idea that it is all part of a scheme to avoid taxes and divert funds from investment – the factors to be considered by a corporation (and its CFO) in designing a compensation system and minimizing the potential for dilution of outside stockholder returns render it quite unbelievable that something nefarious is afoot. In short, the last thing a CFO might worry about is how much tax stockholders might pay. They have much bigger things to worry about.

Incidentally and as noted earlier, the traditional view was that it is no business of a corporation what happens to its shares once they are issued.¹¹⁴ Thus, the courts have held that insider trading (for example) does not constitute a breach of fiduciary duty per se, although it might amount to the use of a corporate asset (information) for personal gain and thus might give rise to an action for recoupment or disgorgement of ill-gotten gains.¹¹⁵ One interesting implication of the analysis here is that the interest of a corporation in its own outstanding shares is quite significant at least in the sense that there are compelling business reasons for a corporation to manage the number of shares outstanding. In short, the old view may have evolved away because of the use of stock as currency for both compensation and acquisitions – which may require some rethinking of corporate law doctrine. Similarly, corporate tax law generally views both

¹¹⁴ See *supra* note 1.

¹¹⁵ See, e.g., *Brophy v. Cities Service Co.*, 70 A.2d 5 (Del.Ch.1949). See also *Diamond v. Oreamuno*, 248 N.E.2d 910 (N.Y. 1969) (corporation could recover losses avoided by insiders who sold their shares before negative information was disclosed); *But see Schien v. Chasen*, 313 So.2d 739 (Fla. 1975); *Freeman v. Decio*, 584 F.2d 186 (7th Cir. 1978) (Indiana law) (both denying corporate recovery). Relatedly – and ironically – tax law strongly discourages retention of earnings and profits without a business purpose for doing so. See IRC 543 ff. But tax law also frowns a bit on repurchases which it tends to see as serving no business purpose. See, e.g., *Mountain State Steel Foundries, Inc. v. C.I.R.*, 284 F.2d 737 (4th Cir. 1960). Thus on balance, tax law seems to mandate dividends. See also *Dodge v. Ford Motor Co.*, 170 N.W. 668 (Mich. 1919) (ordering corporation to pay dividend of funds for which it admittedly had no plans or need).

dividends and repurchases as personal matters rather than business matters.¹¹⁶ But this view is honored as much in the breach as it is followed by the courts.¹¹⁷

Some Additional Factors to Consider

While the foregoing discussion has stopped to smell the tax consequences (so to speak) of repurchases in general and equity compensation in particular, the important point is that the motivation for both derives from sources other than tax avoidance or tax evasion or even tax planning. Indeed, tax law is remarkably neutral in this area – as it should be. Moreover and more important, the foregoing discussion demonstrates that not everything is about tax. Indeed, the emergence of equity compensation as well as repurchases as the dominant form of distribution are best explained by other forces. Tax explains almost nothing.

Still, although the foregoing discussion should suffice to explain why repurchases have become the dominant form of distribution – and to dispel the suspicion that corporations are up to something nefarious – it may not be a complete explanation. It is possible that corporate decision-makers (CDMs) have seized on the legitimate role for repurchases described here as an excuse to accelerate the evolution away from the traditional reliance on dividends as the primary vehicle for making distributions. So it is important to be candid about other reasons why CDMs might have chosen to distribute so much more by repurchase than they did even as recently as twenty years ago. There are several such reasons.

First, CDMs might prefer repurchases to dividends because dividends make stock price a bit more volatile than they would otherwise be and thus worth a bit less. Again, per-share price can be expected to decline by the per-share amount of a dividend when a stock goes ex-dividend. To be sure, the market understands the ex-dividend effect. But the market does not always get things exactly correct. Indeed, some trading is motivated by dividend-capture strategies that would not exist but for presumable discrepancies in pricing around dividend record dates.¹¹⁸ In short, dividends cause unnecessary volatility.¹¹⁹

¹¹⁶ See, e.g., IRC 162(k).

¹¹⁷ See *Mountain State Steel Foundries, Inc. v. C.I.R.*, 284 F.2d 737 (4th Cir. 1960).

¹¹⁸ See items on dividend capture strategies. Note that it is quite complicated to adjust market prices to eliminate the ex dividend effect – although many online sources of data (such as Yahoo Finance) do the calculation for you.

¹¹⁹ In addition, dividends may encourage short sellers by causing stock price to decline. On the other hand, since one who has gone short must fund the payment of dividends to those from whom one has borrowed the stock, this factor may be a wash.

Second and closely related, any CDM who receives or holds options as part of their compensation package presumably will prefer distributions by repurchase – not because they cause any increase in stock price but simply because they do not cause stock price to fall. Needless to say, options have value only to the extent that stock price increases above exercise price – which is typically market price on the date of grant.¹²⁰ So any decision that actually causes share price to decline – such as the decision to pay dividends rather than repurchase shares – undermines the value of options as compensation.¹²¹ To be sure, it is hardly an argument for buybacks that corporate insiders prefer them – although their preferences are just as valid as those of any other constituency. But it is not entirely fair to dismiss this factor as mere venality. It is a quite legitimate for a corporation to want to maximize the value of the compensation they pay. Of course the CFO (for example) will want his own pay to be as high as possible. But where others – and possibly many others – will also benefit from optimizing the compensation scheme, the seeming conflict of interest inherent in the process is more structural than real.¹²²

Third, buybacks cater to the presumable preferences of investors as a matter of transaction costs and (admittedly) tax treatment. In other words, buybacks increase investor choice and ultimately make shares worth that much more. If a company pays dividends, then investors who prefer reinvestment must pay tax on the (unwanted) dividend and brokerage commissions to reinvest the proceeds. If instead the company distributes the same funds through buyback, investors who prefer reinvestment (and who thus retain their shares) pay no tax and no commissions. And investors who prefer dividends may sell a few shares (or borrow against their shares) to roll their own

¹²⁰ See *supra* note xxx.

¹²¹ This problem is easy enough to fix by indexing exercise price to adjust for dividend payments, but it may entail adverse tax consequences to do so. Note effects on reported earnings. Jensen.

¹²² Cf. *Zapata Corp. v. Maldonado*, 430 A.2d 779 (Del.1981) (treating alteration of terms of options motivated by tax considerations as duty of loyalty issue).

dividend (so to speak). To be sure, the transaction cost then falls on such investors. But under the dividend alternative, *everyone* pays the tax.¹²³

Moreover, distribution by repurchase permits investors to choose *when* they pay the tax. In other words, repurchases permit investors to plan their affairs so as to recognize gain on one stock when offsetting losses can be recognized on another stock.¹²⁴ (Timing is everything.) One might argue that by inducing companies to pay dividends, we might maximize taxes collected. But it seems only fair in taxing gain from investments that investors should be permitted to net out losses. If not, then stocks (and other investments) will be worth that much less and generate that much less in taxes. There is no free lunch even for the government. In short, distribution by repurchases maximizes investor choice. And all else equal, investors prefer more choice to less. So stockholders should prefer buybacks to dividends even if the tax burden is ultimately the same.¹²⁵

Fourth, CDMs undoubtedly prefer the stealth of the buyback process to the open-kimono of dividends. While disclosure is good and should enhance stock price all else equal, no one wants one's every move scrutinized and second-guessed. Thus, companies presumably like the fact that buybacks can be conducted largely in secret

¹²³ One might think that companies would address this issue by permitting shareholders to choose between receiving either a cash dividend or a stock dividend (which ordinarily triggers no tax). But tax law provides in such cases that the stock dividend be taxed as if it were cash (on the theory that recipients have increased their ownership interest in the corporation). See IRC 305(b). Note that old IRC 305(e) once permitted such plans for utilities, but that provision was repealed in 1990. In effect, tax law effectively prohibits dividend reinvestment plans, or more precisely, taxes any such such reinvestment as if it is a dividend thus eliminating any advantage.

Note that before 2003 when the tax rate on dividends (but not capital gains) was the higher OI rate, even investors who might otherwise have preferred dividends would likely have preferred repurchases assuming that brokerage commissions on the sale of a few shares were not so high as to eat up the difference. But following the May Day 1975 market reforms, commission rates became negotiable and have fallen almost to irrelevance. Indeed, it is quite possible today to trade commission-free. So it is almost costless today for investors to roll their own dividends, which further encourages repurchases as compared to dividends even with an equalized tax rate.

Thanks to Marvin Chirelstein for the roll-your-own metaphor.

¹²⁴ See *Gregory v. Helvering*, 69 F.2d 809, 810 (2d Cir. 1934) (opinion by Learned Hand): "Any one may so arrange his affairs that his taxes shall be as low as possible; he is not bound to choose that pattern which will best pay the Treasury; there is not even a patriotic duty to increase one's taxes."

¹²⁵ As noted elsewhere herein, the IRC is replete with provisions that permit investors to defer paying tax on gain when the proceeds of sale or exchange are reinvested. Note budget surplus from dotcom boom.

and can be fine-tuned to the vicissitudes of market conditions.¹²⁶ In contrast, dividends can never be cut as a practical matter. To do so signals that the business is in trouble. To reduce or omit a dividend is never seen as a mere choice to adopt an alternative distribution policy. It is always seen as bad news.¹²⁷ In contrast, a corporation is almost totally free to repurchase shares or not and to do so at the time of its choosing.¹²⁸ To be sure, investors must trust CDMs to do the right thing. But as shown here, there are powerful forces at work that assure they do so.

To be clear, the foregoing factors generally have one thing in common: They amount to subtle ways in which a corporation can keep its stock price as high as possible at the margin. Presumably that is what stockholders want. The fact that it may also serve the interests of CDMs who receive equity compensation should not be troubling – since the avowed reason for equity compensation is so to align incentives. And it is good for the government tax-wise (and otherwise) as well.

The question remains: Why do corporations today choose to make any distributions by dividend? The gradual disappearance of dividends in favor of repurchases suggests that someday corporations may pay no dividends at all.¹²⁹ But why have dividends survived as long as they have? For now, the answer may be the flip side of the reason that a corporation dare not cut or omit its regular dividend. To declare a dividend for the first time is to declare in effect that one will be able to continue to pay such dividend indefinitely. It is for the corporation to put its money where its mouth is. Knowing the consequences of undoing the decision to pay a dividend, no corporation would ever go

¹²⁶ One implication is that the market can never know for sure how many shares are outstanding. But investors (the market) have come to expect corporations to manage the process in their interest. Note that most companies display the number of their shares outstanding prominently on the front page of their 10Ks and 10Qs – even though they are not required to do so – and that the as-of date for such disclosure is almost always a date more recent than the as-of date for the accompanying financial statements. Moreover, the number given is an exact number and not an average as required by GAAP in connection with other disclosures relating to EPS or dilution from equity compensation.

¹²⁷ See VICTOR BRUDNEY & MARVIN A. CHIRELSTEIN, *CORPORATE FINANCE* (1972), *Saga of GPU*, at 452-60.

¹²⁸ Even if a corporation announces a plan to buy back shares – as it may do under Rule 10b-18 but is not required to do – there is no implied promise to follow through. Indeed, if the announcement causes stock price to rise, it may be a good argument not to follow through.

¹²⁹ See Fama & French, *supra* note 3. On reflection, the handwringing over disappearing dividends is arguably more curious than the disappearance of dividends. In essence, Modigliani and Miller predicted it. The bigger mystery is why it took the markets so long to catch up. But nostalgia is a powerful thing. And transitions are difficult: Orangutans are skeptical of changes in their cages. Moreover, it is tempting to think that corporations are up to something that may disserve stockholder interests. Hence this article.

down that path unless it were quite confident of its future prospects. And the market is likely to react accordingly.¹³⁰

One final implication of the system described here – in which the biggest corporations distribute sums equal to almost all of the return they generate from operations – is that the amounts distributed are taxed – and taxed multiple times because of the multiplier effect described above. The alternative – reinvestment by the corporation – does not necessarily give rise to any tax at all. To be sure, it might do so if it takes the form of higher wages. But if so it also gives rise to a deduction by the corporation that likely offsets any additional tax that might be paid by the recipients. In contrast, the tax that is triggered by distributions is all gravy for the government. The corporation gets no deduction for dividends or repurchases, although it is possible that stockholders who sell into a repurchase may time their sale in such a way as to recognize offsetting losses on other stocks. Moreover, as recounted at length above, almost all of the amounts distributed are reinvested – which is exactly what the critics want. To be sure, funds reinvested in the stock market do not actually go to the companies in which they are invested. The funds go to selling stockholders. But by providing an exit for shares issued in connection with M&A and as compensation as well as funding new issues of stock by IPO or SEO, the circulatory system described here facilitates economic growth far better than any reinvestment mandate might do. Indeed, even if distributions are absorbed by mere price increases in some stocks – as undoubtedly happens with some portion thereof – the companies who benefit thereby are better able to raise capital from other sources.¹³¹

There is no doubt that equity compensation has been an important factor in driving distribution policy towards repurchases and away from dividends.¹³² It may be that learning from options spread to other areas such as dealing with dilution from

¹³⁰ The question of why corporations pay dividends at all has troubled legal scholars for some time. See Frank H. Easterbrook, *Two Agency-Cost Explanations of Dividends*, 74 Am. Econ. Rev. 650 (1984); Richard A. Booth, *Junk Bonds, the Relevance of Dividends and the Limits of Managerial Discretion*, 1987 Colum. Bus. L. Rev. 553. Robert Clark has also suggested that investors favor dividends over reinvestment because they force companies back to the well (so to speak) if they want to undertake new strategies. Thus, dividends may be seen as establishing a base-level preferred return perhaps as a quid pro quo for equity compensation.

¹³¹ For example, the attendant increase in market capitalization of such companies effectively reduces LTV for existing debt and creates debt capacity pro tanto. Cf. Klang.

¹³² Again, although it is relatively easy to estimate the aggregate amount of officer compensation, it is unclear how much equity in the aggregate is issued by companies that use that use equity compensation more broadly for lower-level employees. See *supra* note xxx.

acquisitions financed by stock. In other words, CFOs may have discovered the advantages of repurchases because of the need to deal with dilution from equity compensation.¹³³ After all, necessity in the mother of invention. Or it may be that the growth in equity compensation triggered this evolutionary change that was just waiting to happen.¹³⁴ But the fact that we discovered the advantages of repurchases in the context of compensation does not make it wrong just because compensation is tinged with self interest. Like necessity, self interest is a great motivator.¹³⁵

This is not to say that big corporations repurchase their own stock (even now) in order to facilitate the process by which capital is recirculated. They do so for their own reasons. But if suddenly they did not do so, the capital circulatory system (as it might be called) would be severely compromised. Start-ups and other small private businesses would be left with no other exit strategy than going public via IPO. And competition for a smaller pool of liquid funds would drive up the price of new equity. In short, the advantages of generous distributions in general and buybacks in particular are considerable. But no one actually designed this system. It just happened. Like evolution. And it would be a big mistake to try to turn back the clock.

Conclusion

Stock repurchases by issuing corporations have always been controversial and have become even more so recently because of the perception that the excess funds used to finance buybacks have come from tax cuts and other sources (such as government bailouts) that were intended to stimulate reinvestment or enhanced wages and benefits for workers. As a result, critics have proposed that tax law be amended to discourage buybacks (and possibly dividends as well) on the theory that the benefits of such distributions go mostly to executives (who are compensated in large part with equity) and to already wealthy stockholders. The controversy is fueled in part by the sheer size of distributions, which are equal in the aggregate among S&P 500 companies to almost all of their operating earnings and in part by the idea that the motivation must be tax-

¹³³ As with the first person to eat an oyster, it may not have been clear that repurchases were so good. Moreover, it may be that we did not understand dilution as well as we might have done before we started really thinking about it. Cf. TWX. One might liken the process to chemist's evolving understanding of oxidation. At first, it seemed like nothing more than rust. But over time it became apparent that any acquisition of an electron amounted to the same thing. Similarly, repurchase by a corporation of its own stock might seem at first to be nothing more than a subtle form of insider trading rather than a crucial cog in an elaborate financial machine.

¹³⁴ As I have suggested elsewhere, golden parachutes may have triggered the growth of equity compensation. See Richard A. Booth, *Why Stock Options are the Best Form of Executive Compensation (And How to Make Them Even Better)*, 6 NYU J. L. & Bus. 281 (2010).

¹³⁵ Indeed, creditors depend more on the self-interest of borrowers than any other force.

related because corporations do most of what they do because of the tax consequences.

The crucial fact missed by the critics is that almost all (96%) of the funds distributed by repurchase are reinvested by the recipient stockholders in the shares of other public companies. Indeed, stockholders are effectively required to reinvest such funds in order to generate the higher returns that one expects from equity. Those who fail to reinvest do no better than bondholders over the long haul.

For this process to work, there must be a supply of new shares in which the proceeds of buybacks can be invested. Thus, most of such funds go (1) to newly public companies or existing public companies that issue additional shares or (2) to buy stock issued by existing public companies to acquire private companies (whose sellers sell the shares with which they are paid). And some of the money goes (3) to control for dilution caused by shares issued in connection with equity compensation. The remainder is reinvested in other public companies in a continuous process that redistributes value (and thus ultimately capital) among public companies according to the prospects of each.

Moreover, this process results in a chain reaction of sales and purchases by other investors that has the effect of multiplying the taxes paid. So it is quite wrong to assert either that stock buybacks avoid taxes or that they result in more consumption by already wealthy stockholders. Rather, the process effectively delegates to investors collectively – the market – how and where to reinvest returns. In contrast, if companies are made to reinvest more of the returns they generate, they will almost certainly favor their own lines of business. To be sure, we want companies that have found new opportunities to exploit them all else equal. But we do not want to interfere with the process. Tax law is supposed to be as neutral as possible – for its own good and ours.

It borders on miraculous that the system has evolved to induce management to distribute almost all of the profits generated by the largest corporations rather than to retain them as was the practice as recently as the early 1980s. The idea that we should return to old business models because investors have done too well in the meantime is absurd. While efforts to address wealth and income inequality are laudable, the critics misunderstand how share repurchases work and what the data mean. Indeed, their proposal would probably make matters worse. The real worry is that we might cause companies to reinvest in underperforming acquisitions or simply to retain excess cash for no reason at all.

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