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The Social Functions of the Stock Market

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A stock market is a key feature found in any economy with a substantial private sector. For example, in the United States, we see the New York Stock Exchange and Nasdaq, in the U.K, the London Stock Exchange, and in Brazil, B3. While some commentators suggest that a stock market is primarily simply a place for useless speculation, a well-functioning stock market does in fact serve a number of important social purposes. It facilitates firms selling shares to raise funds for new investment by assuring potential purchasers that they can easily resell their shares when they wish to. The shares sold this way provide individuals a way to save for the future that, although involving risk, has historically yielded higher returns on average than bank deposits. The prices determined by trading in the stock market serve as signals that help allocate society's scarce savings to the most promising new investment projects and help discipline managers to make the best use of the productive capacity already under their control. Finally, the stock market helps a saver who chooses to invest in stock a way, through diversification, to moderate the risk involved without sacrificing expected return.[i]

This posting provides a primer concerning how a stock market performs these useful social functions.

What is a Share of Stock?

The starting point for this inquiry requires a clear understanding what a share of common stock is. A share is a tradable financial instrument that provides its holder with some kind of claim on a business firm's future positive net cash flows. A firm's operations will generate a positive net cash flow if the revenues that it receives from selling what it produces exceed what it must disperse for its labor and other inputs and payments on any outstanding debt. A firm has a board of directors elected by the holders of the shares that it has issued, with the most typical arrangement giving the holder one vote for each share that she owns. The directors supervise the management of the firm. They also can, from time to time, declare a dividend, i.e., a cash payment to the shareholders of equal amount for each share outstanding. If a firm reaches the end of its life, each share also gives its holder a pro rata right to the amount, if any, by which the sale of the firm's assets exceeds what is needed to repay its outstanding debts.

Selling Shares to Raise Funds for Purchasing Firm Assets

The fact that each share has a vote and the right to receive dividends and liquidating payments gives the share value. Because shares have value, a firm can issue and sell them to raise funds to acquire long-lived productive assets such as plant and equipment. The initial purchasers are often individuals seeking a return on their savings. This process of the firm issuing and selling its shares is referred to as the "primary market" for the shares. All else equal, the greater that a firm's future net positive cash flows are expected to be, the more valuable the share and the higher the price at which it can be sold.

Liquidity and the Stock Market

A second factor affecting the price that a firm receives when it issues and sells its shares is their liquidity. An initial purchaser will typically not expect to hold her shares for the full life of the firm and thus at some point will wish to sell.

The same is likely true of each subsequent purchaser. The easier and less expensive it is for the initial and subsequent purchasers to sell a share, the more "liquid" it is considered to be. This advantage of easy resale makes a more liquid share more desirable to hold. Thus, all else equal, a firm issuing and offering more liquid shares can sell them for a higher price.

Every sale of a share after the sale by the issuing firm to its initial purchaser is referred to as occurring in the "secondary market." A stock market is a kind of secondary market. It provides a central, rules-based place where potential sellers and buyers of a firm's shares can indicate to each other their respective interests in transacting and the prices at which they are willing to do so. Traditionally, this central place was a trading floor, where the buyers and sellers (or, more typically, their respective agents) could physically meet. Today, the central place is usually a computer into which potential buyers and sellers electronically feed their interests in trading. The computer uses publicly announced rules to determine which of these potential buyers are matched with which of these potential sellers and at what price. By making it easy for potential sellers to find the most interested sellers and vice versa, a stock market can make an firm's shares very liquid.

In a well-developed stock market, some people make a business out of supplying liquidity. A liquidity supplier stands generally ready to both buy and sell the shares of a given firm at prices they post. This allows traders to sell shares to the liquidity supplier at the supplier's "bid" and to buy from the supplier at its "offer." A supplier's offer is always higher than his bid, creating the possibility of a profit. For the typical individual saver (commonly referred to as a "small retail investor"), the best measure of a stock's liquidity is just this "bid-ask spread." i.e. the difference between the best bid and best offer available in the market. Liquidity suppliers are constantly changing their bids and offers in response to whether they are receiving more purchase orders or more sell orders.

Why do People Want to Buy and Sell Shares?

Individuals have many reasons for buying in the primary market and buying and selling in the secondary market. They may purchase securities as a place to put savings with the hope that they will generate a positive return. Later, they may sell these securities, which yields cash that they can then use to engage in consumption.[1] They may also buy or sell in order to diversify their investment portfolio across many securities so that it reduces risk. Or they

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[1] When an individual saves, she is deferring consumption. She might wish to do so in order have the funds needed for consumption during retirement or for significant future purchases such as the purchase of a car or a home.

may execute strategies designed to obtain trading profits based on analyses of public or private information suggesting that the current price in the market reflects either too pessimistic or too optimistic view of the firm's future cash flows.

How Stock Markets Generate Social Value

A stock market's capacity to generate social value depends on two key characteristics. One is the liquidity of the shares trading on it. The other is the accuracy of the prices at which these shares trade, i.e., the accuracy with which the market price of a firm's shares at any given time predicts its future cash flows. Liquidity is at the core, however, because greater liquidity encourages greater price accuracy as well. This is because share prices are made more accurate from speculative trading based on acquiring a variety of bits of publicly available information and analyzing them to make more accurate predictions of a firm's future cash flows than those reflected in current prices. Such trading will move these prices in a direction suggested by the more accurate predictions. Such "fundamental information" speculative trading is a potentially profitable activity, but it involves both the cost of collecting and analyzing the information and the cost of trading. Greater liquidity lowers the cost of trading and hence improves the prospects that the gains from the trades will exceed the costs of engaging in the activity. This improved prospect of profitability stimulates more of this activity and in doing so makes prices more accurate.[2]

As discussed, a well-functioning stock market makes the shares trading in it liquid. This liquidity, directly and through the greater price accuracy that the liquidity induces, creates social value through four channels:

1. Efficient use of existing productive capacity. Society's existing productive assets in corporate hands are divided among the respective firms that own them, with the managers of each firm deciding how the assets owned by that firm are used. A well-functioning stock market prompts each firm's managers to make the decisions -- what products to produce, how, and how much -- that will result in the overall corporate economy's existing productive capacity being used in the way that tends to maximize the social value of its output. The story as to why depends on the assumptions that every industry has a reasonable level of competition and that regulation prevents any potential adverse impacts on society such as pollution for which the firm does not pay. Under these circumstances, at the margin, what the firm pays for each of its inputs equals the value of what it takes from society. This is

[2] To some extent, institutional arrangements that promote price accuracy can also be ones that diminish liquidity. However, while understanding these phenomena is helpful is designing an optimal regulatory regime for an economy's stock markets, it is not important for what is trying to be accomplished here.

because these inputs are priced to reflect the loss to society that they are not available to produce something else. And the price at which the firm sells its output equals the value to society of what it gives back. Thus, if a firm's managers, when deciding how to use their firm's existing productive capacity, make the decisions that maximize the difference between the total cost of its inputs and the total revenues from selling its outputs – the decisions that maximize the value of the firm's shares – they will also be maximizing a corporation's contribution to society. The assumptions made here concerning competition and regulation are not fully correct anywhere, but they can come close enough to give the story real relevance.

Relatively accurate share prices incentivize firm managers to make share-value-maximizing decisions in three ways. First, accurate prices help alert investors when managers deviate from making share-value-maximizing decisions so that the investors can take action to redirect or replace these managers. Second, a firm's share price provides useful guidance to managers themselves as to what would be share-value-maximizing decisions. This is because accurate share prices usefully incorporate publicly available public information concerning relevant features of the business environment in which a firm operates. Third, a firm can use share-price-based compensation to help align the incentives of managers with those of shareholders. If share prices are relatively accurate, such compensation schemes reward good performance and punish bad performance with greater precision.

***2. Efficient capital allocation**.* Relatively accurate shares price assist in the efficient allocation of society's scarce capital, helping to steer its savings to funding the most promising new investment projects in an economy. To see why, note that it is again a firm's managers who decide the deployment of whatever funds are in the firm's coffers. These could be funds that the firm has generated internally when the revenues from the goods or services it sells exceed the costs of the inputs needed to produce them, or they could be funds raised through some kind of external financing. One use of these funds is to finance new investment projects of the managers' choosing. Alternatively, they can pay out some or all of the available funds to their shareholders, who can then reinvest them elsewhere.

Efficient capital allocation requires that a firm's managers decide only to invest in the most promising projects of which they are aware and not to invest in any project with expected returns less than its shareholders could obtain if the funds were returned to them as dividends. These are the decisions that maximize the value of the firm's shares. Thus more accurate prices prompt a firm's managers to make the investment and dividend decisions that contribute to the efficient allocation of society's scarce capital in the same ways that they prompt these managers to use the firm's existing productive assets most efficiently.

More accurate share prices in the secondary market also affect firm investment decisions more directly through their effect on the terms on which firms can obtain external financing. This is particularly so in the case of financings through the issuance and sale of additional shares: no one will pay more for the new shares than the identical are selling for in the secondary market.

3. Allocation of resources over time. If goods and services are to be produced and consumed in future periods, some of society's scarce resources must be used in the current period for investment. Whatever resources are used now to build capacity to produce future goods and services are resources not available to support current consumption. Thus society faces a tradeoff between current consumption and future consumption. A well-functioning stock market, by making shares more liquid, helps society get closer to an efficient point in this tradeoff.

The primary market for shares simultaneously satisfies the needs of firms seeking funds now for real investments that will produce goods and services in the future and the needs of savers seeking to forgo current consumption in order to enjoy future consumption. However, the prospect of illiquidity in the secondary market impedes the primary market from facilitating these mutually advantageous primary market transactions. As we have already noted, if a firm's shares are expected to be less liquid in the secondary market, they will be less valuable. Savers and firms are likely to share the consequences of this illiquidity-driven lower value. The primary market price will be lower, though likely not lower enough to fully compensate savers for the lower value. At the same time, the lower price increases the firm's cost of capital because it will need to issue more new shares, diluting more the claims of existing shareholders, to raise the same amount of money. So individuals will save less and firms will invest less. This means that there are transactions that do not occur that would have occurred in a higher liquidity world. The fact these lost transactions would have been voluntarily entered into by both savers and firms means that both would have expected to have been made better off by entering into them. The liquidity created by a well-functioning stock market would allow these mutually favorable transactions to occur, a socially advantageous result.

4. Risk allocation. A well-functioning stock market aids in the allocation of the risks generated by the inevitably volatile cash flows of the firms that have issued stock so that risk-averse investors, who hold portfolios of these firms' shares, suffer as little pain from this volatility as possible. The returns from different stocks are not perfectly correlated and so holding a collection of different stocks – diversification – can reduce risk without reducing expected return. This is because, relative to the average of all stocks, some stocks will turn out to realize returns greater than what is expected and others will turn out to realize returns less than what is expected. This means that diversification will allow a certain amount of cancelling out, thereby the volatility of her returns.

For this to work, however, it must be easy and inexpensive to buy and sell shares in relatively small amounts. Without a well-functioning stock market, most savers would not be interested in purchasing shares in the primary market because of the difficulties of selling them later. Ownership of the shares of each issuer would only make sense if the size of the stake in the firm was large enough that finding a buyer in the future without the aid of a stock market would be worth the trouble. Without a well-functioning stock market, only persons with very substantial wealth could be investors and hold stakes in enough different firms to take full advantage of diversification.

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[i] The ideas discussed in this posting are explored in more detail in Merritt B. Fox & Kevin Haeberle, **Error! Main Document Only.***Evaluating Trading Practices and Their Regulation,* 42 J. CORP. L. 887 (2017) available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3101140. For background about the stock market more generally and the regulation of activities associated with it, please consult Merritt B. Fox, Lawrennce R. Glosten & Gabriel Rauterberg, THE NEW STOCK MARKET: LAW, ECONOMICS, AND POLICY (2019), published by the Columbia University Press. See https://cup.columbia.edu/book/the-new-stock-market/9780231181969