Stock Market Prices and the Market for Corporate Control

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Abstract

The manner in which hostile takeovers have been executed historically has just begun to receive serious academic attention. In this paper we consider an important facet of this history, this being the relationship between the pricing of shares and the way in which hostile change of control transactions were planned and executed. We identify potential linkages between control transactions and stock market efficiency and review historical and empirical literature on the evolution of market efficiency over time to make predictions concerning the development of the market for corporate control. We test our conjectures using a hand-collected dataset of open market bids, contested tender offers (both for cash and exchange offers) and proxy contests occurring between 1900 and 1965.

Keywords: tender offer; market for corporate control; proxy contest

(November 2014 draft)

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We are grateful to the Millstein Center for Global Markets and Corporate Ownership and to the IRRC Institute for financial support for this project. We thank Martin Bengzten, Michelle Leese and Paolo Ronchi for excellent research assistance.
I. INTRODUCTION

Stock market prices should be of fundamental importance to the operation of the modern market for corporate control. In deciding whether to make an approach, a potential acquiror will compare the stock price – the market’s assessment of the targeted firm’s value under its current management -- with the acquiror’s assessment of what could be achieved under new owners. Moreover, once the market becomes aware of a bid for control, the target’s stock price will from that point onward reflect the market’s assessment of the likelihood of the bid succeeding and the acquiror’s stock price will adjust in accordance with investor perceptions of the likely impact of the transaction upon it. Finally, for shareholders of a prospective target, their views concerning the suitability of a bid will be shaped to a considerable degree by the extent to which the price offered exceeds the current stock price.

The foregoing characterization of share prices and the operation of the modern market for corporate control presumes that the stock market is, to a substantial degree, informationally efficient, in the sense that share prices impound promptly all publicly available information and also that stock prices are “fundamentally” efficient, in the sense that share prices reflect with substantial accuracy the intrinsic value of companies. Potential acquirors, it seems, begin with the market price of potential targets as the best available estimate of firm value under the incumbent team. The market pricing of targets will be particularly important for “hostile” acquirors, who will typically not be given access to private information available to the target. Acquirors also anticipate that the target’s share price (and their own) will change in a reasonably predictable way once news of the bid becomes public, with the size of the movement being dictated by the market’s assessment of the bid.

According to received wisdom the market for corporate control only began to operate in its modern form in the 1950s and 1960s in the sense that it was during this era that
potential acquirors began using the cash tender offer to secure control of otherwise potentially uncooperative targets. It also seems likely that stock market pricing evolved over time, given regulatory changes and technological advances occurring during the 20th century. Might these trends be related? We explore that possibility in this paper. Our intention is to consider how the pricing of shares changed and assess whether changes occurring affected the way in which hostile change of control transactions were planned and executed going back through time. We focus specifically on hostile transactions because, as we have explained, market pricing is particularly important for such deals.

The manner in which hostile takeovers have been executed historically has just begun to receive serious academic attention, with a recent paper of ours constituting the first concerted attempt to analyze the functioning of the market for corporate control during the opening half of the 20th century.1 In this paper, we continue our work in this regard. We expand hand-collected datasets we compiled in earlier work to encompass the 1960s, the era when it is generally acknowledged the market for corporate control began to function in its modern form in the United States. We do this in order to chart how developments in the market for corporate control may have been linked to, or facilitated by, developments in stock market efficiency.

Our enquiry provides insights into both control contests and the pricing of shares. We show that while during the opening decades of the 20th century share prices did react quickly to market news in a way that would be familiar to modern observers, the scale and depth of information impounded into share prices was much less substantial than it would be subsequently. Moreover, the scope for market manipulation apparently was greater, which may well have influenced the choice of takeover technique adopted for hostile bids that

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occurred during the opening half of the 20th century. During this era, when contests for corporate control occurred, the preferred technique was what we term the “open market bid” (OMB), through which the acquirer sought to gain control simply by purchasing shares in the stock market, often with contemporaneous private off-market purchases from significant shareholders. Moreover, OMBs were carried out for the most part by acquirors who operated by competitors within the same industry or by parties otherwise closely linked to the target. Such acquirors would have known more about circumstances relevant to the target’s business—and hence been less affected by the paucity of publicly-available information—than would otherwise unaffiliated putative acquirors.

Our data confirm that the cash tender offer went unused as a hostile takeover technique in the opening decades of the 20th century. When, however, merger activity revived in the 1950s and 1960s after a lull in the 1930s and 1940s, the cash tender offer came to eclipse other techniques for acquiring control in hostile deals. Moreover, while bids by acquirors who were in the same industry as the target remained more common than bids launched by an unaffiliated party, bids by parties lacking a pre-existing connection with targets—for whom publicly available information was crucial—became more prevalent. These developments may well have been connected to trends affecting securities markets. For instance, cash tender offers may plausibly have become popular partly because acquirors lacked scope they had previously to forestall share price increases an open market bid would normally prompt. Likewise, unrelated parties may have become increasingly inclined to launch bids because enhanced disclosure by public companies meant that share prices had become a more reliable firm value benchmark and consequently the assessment of potential targets had become easier to conduct.

The rest of this paper is structured as follows. In Section II, we identify potential linkages between control transactions and stock market efficiency. In so doing we first
describe the range of different techniques a would-be insurgent might deploy in order to gain control of a target company against the wishes of its management, and theorize the conditions under which each would be most attractive to an insurgent. We then conjecture as to the extent to which a putative acquiror’s willingness to deploy these various techniques might be affected by the informativeness of stock prices at the time. Section III reviews historical and empirical literature on the evolution of market efficiency over time and articulates the implications for contested control transactions, based on the conjectures articulated in Section II. In Section IV, we present new findings from our hand-collected dataset of open market bids, contested tender offers (both for cash and exchange offers) and proxy contests which are largely consistent with the theoretical analysis in sections II and III. Section V concludes.

II. TAKEOVER TECHNIQUES AND SHARE PRICES

A. Transfer by Sale versus Transfer by Vote

We begin our discussion with a thumbnail sketch of the various techniques open to would-be acquirors. The most forthright means by which an insurgent can obtain control of a publicly traded corporation is by acquiring a majority of shares, described by Ronald Gilson and Alan Schwartz as a “transfer by sale”. Alternatively, resort might be had to what Gilson and Schwartz call a “transfer by vote”, which involves achieving boardroom dominance by securing in a proxy contest the backing of unaffiliated shareholders. We will consider these in turn.

B. Types of Transfer by Sale

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2 As Henry Manne noted in his famous 1965 article identifying the “market for corporate control”: “There are several mechanisms for taking control of corporations.” Henry G. Manne, Mergers and the Market for Corporate Control, 73 J. POL. ECON. 110, 114 (1965).

3 Ronald Gilson and Alan Schwartz, Sales and Elections as a Method of Transferring Corporate Control, 2 THEO. INQUIRIES L. 783, 790 (2001).

4 Ibid.
To a modern audience, a transfer by sale would most likely connote a tender offer. This involves the acquiror inviting target shareholders to offer (“tender”) their shares to the acquiror in return for a specified consideration. The consideration could take the form of cash or of shares in the acquiror itself, or some combination of the two.

Despite its modern popularity, the tender offer is not the only technique available to orchestrate a transfer control by sale. For example, Henry Manne, in his famous 1965 article on the “market for corporate control”, observed that of the techniques for buying control, “The most obvious is outright purchase on the open market of the requisite percentage of shares,” which is what we characterize as an open market bid. Unlike a tender offer, an OMB must necessarily be made for cash.

Where a corporation has a small number of shareholders who own collectively a dominant stake, control might alternatively be bought through off-market purchases negotiated with them. Because the purchases are individually negotiated, such deals are not usually concluded at market prices. The purchase price(s) instead will be tailored to reflect the value of the vendors’ private benefits of control.

If a corporation lacks a tight coalition of shareholders with a dominant collective stake seeking to obtain voting control through individually negotiated off-market purchases is unlikely to be feasible. A general tender offer can make sense in such circumstances. Tender offers are, of course, also off-market purchases. A key distinction is that there is no

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5 Manne, Mergers, supra note xx, 116.


7 Manne, Mergers, supra note xx, 116 (noting that an acquiror can “try to buy the shares from large individual owners, thus preserving secrecy and allowing negotiation on price”).
negotiation over price. Instead, the same offer is typically made to all target shareholders on a “take-it-or-leave-it” basis.

Where an acquiror can obtain voting control by purchasing shares off-market from a tight coalition of investors, this can be thought of as a “friendly” acquisitions because that coalition would in all likelihood be able to dictate to the board of directors how matters should proceed.\(^8\) We correspondingly exclude from our hostile acquisition dataset instances where a bidder seeks to obtain control by way of off-market purchases from a coalition of shareholders with a controlling stake. As mentioned, off- and on-market purchases can be combined in the acquisition of a controlling stake. This can make it difficult to categorize an acquisition transaction for the purposes of our dataset but we seek to include only instances where a bidder sought to obtain less than a majority stake by way of private negotiation.

C. Pros and Cons of Control Contest Tactics – A Brief Synopsis

For a putative acquiror who does not have the backing of the target’s incumbent board or a coalition of shareholders with voting control, the initial choice is whether to proceed by buying a majority stake or seeking to obtain board control through a proxy contest.\(^9\) An important consideration will be that the financial outlay will be greater with a transfer by sale. This is because a controlling stake will have to be bought whereas theoretically it will be possible to prevail in a proxy contest while purchasing only a small number of shares.

On the other hand, a successfully executed transfer by sale gives an acquiror a more reliable handle on control than a transfer by vote. As owner of a controlling stake, the acquiror should be able to control the company until they decide to sell out. The winner of a

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\(^8\) Stern, *Acquisition*, supra note xx, 1196 (making the point in a situation where there is a single majority shareholder but the same logic should apply if voting control is held collectively by a coalition of investors with whom the acquiror can negotiate).

\(^9\) For a more detailed analysis of the points raised here, see Armour and Cheffins, Origins (2013), *supra* note xx, 267-69.
proxy contest, in contrast, will only retain control for so long as the shareholders continue to provide their backing. This leaves the acquiror exposed to the risk of repeated proxy fights, and to potential loss of the benefits of control either to a new insurgent or to a comeback by the ousted former management.\(^\text{10}\)

An additional benefit of a transfer by sale, as opposed to transfer by vote, is that it is often easier to convince target shareholders to go along. For target company shareholders a transfer by vote involves comparing the managerial capabilities of the incumbent board and the putative bidder. Matters will be simpler with a transfer by sale involving a cash tender offer. Given that the target shareholders will be cashed out they will not have to worry about what the bidder does after obtaining control.\(^\text{11}\)

This distinction is less clear-cut in the case of an exchange tender offer, where the consideration comprises shares in the acquiror. Target company shareholders must assess not only the price but also the bidder’s prospects when deciding whether to accept. Consequently the simplicity of cash can provide a compelling reason for a corporation attempting a hostile takeover to eschew an exchange offer.\(^\text{12}\)

Cash tender offers were also traditionally more straightforward to execute than exchange offers because of corporate and securities law. Shareholder approval might be needed, under state corporate law, for the issuance of shares needed to execute an exchange

\(^\text{10}\) In our dataset of proxy fights, we uncovered several instances of firms that experienced multiple proxy fights in short succession—annual or less.

\(^\text{11}\) EDWARD R. ARANOW AND HERBERT A. EINHORN, TENDER OFFERS FOR CORPORATE CONTROL 65 (1973).

\(^\text{12}\) Edward Aranow and Herbert Einhorn noted in the 1971 edition of their book on tender offers that an acquiror making a cash tender offer has “a distinct psychological advantage” because target shareholders “need not evaluate the relative efficiency of the incumbent management and the insurgent offeror. In contrast, the interests of prudent investment judgment would necessarily require the tendering shareholder to make such an evaluation in an exchange offer because he will, in effect, be exchanging an interest in the target for one in the offeror.” Ibid., 30.
tender offer. \(^\text{13}\) Moreover, between the mid-1930s and the enactment of the Williams Act in 1968, \(^\text{14}\) the distribution of shares associated with a share-for-share exchange obliged the acquiring corporation to prepare a prospectus divulging business and financial data concerning both the acquiror and the target whereas a cash tender could be carried out without triggering any additional disclosure obligations under federal securities law. \(^\text{15}\)

The advantages of a cash tender offer over an exchange offer were contingent, however, upon finance being available to provide the cash. Financial constraints indeed may well have played a role in postponing the dominance of the cash tender offer. Immediately following World War II, the premier investment banks were modestly sized partnerships that specialized in underwriting for larger public companies and initially disdained hostile takeovers upon which their corporate clientele may have looked askance. \(^\text{16}\) Conservative big-city banks were also reluctant to lend cash to acquisitive companies likely to be deployed for a hostile cash tender offer. \(^\text{17}\) Under such circumstances, an acquisitive company inclined to make a hostile tender offer may well have no choice other than to offer shares to the stockholders of the putative target.

A putative acquiror who has decided to try to acquire control by paying cash must still choose between an OMB and a cash tender offer. A potentially significant disadvantage with an OMB is that if the campaign does not succeed, the acquiror could end up with a substantial minority stake which will likely be difficult to unwind without putting downward pressure on the share price. In contrast, a tender offer can be made conditional on a specified percentage

of shares being tendered, meaning that bidder can walk away completely if the tender offer does not generate the hoped for response.\textsuperscript{18}

On the other hand, financial constraints would likely be more strongly binding as respects cash tender offers than OMBs. A bidder seeking control by a cash tender offer needs to have access to a substantial amount of cash at one time so as to pay all stockholders who tender their shares. An acquiror pursuing an OMB could avoid having to secure access to the cash required all at once by patiently buying up shares on the stock market over a considerable period of time.\textsuperscript{19}

Transaction costs are another relevant consideration for a bidder deciding between an OMB and a cash tender offer. For an OMB, these would comprise the brokerage sales commissions associated with the purchases, which will increase depending on the number of shares outstanding. For a cash tender offer, in contrast, the acquiror will have to pay investment banker fees, depositary services charges, legal bills, shareholder mailing costs and newspaper advertising fees.\textsuperscript{20} Collectively these transactions costs will likely exceed the brokerage fees associated with an OMB. The cost advantages of an OMB are likely to be particularly substantial where the target corporation has relatively few shareholders because this will reduce the number of transactions needed to secure control.

The manner in which shares are priced on the stock market also likely will do much to determine whether an acquiror proceeds by way of a tender offer or an OMB. It is axiomatic

\textsuperscript{18} Daniel R. Fischel, \textit{Efficient Capital Market Theory the Market for Corporate Control, and the Regulation of Cash Tender Offers}, 57 TEX. L. REV. 1, 6 (1978). See, however, Lloyd R. Cohen, \textit{Why Tender Offers? The Efficient Market Hypothesis, the Supply of Stock, and Signalling}, 19 J. LEGAL STUD. 113, 118-19 (1990) (arguing that if this was a major fear of acquirors they would launch “naked” tender offers without first acquiring a sizeable stake in the target when in fact raiders typically bought up on average more than 20\% of a target’s shares before launching a bid).

\textsuperscript{19} Liquidity pressure would arise where an OMB is made suddenly. For instance, in the 1900s, when OMBs involving railways were prevalent, railway companies would go heavily into debt to raise money to buy stock in other railways: see ALEXANDER D. NOYES, \textit{THE MARKET PLACE: REMINISCENCES OF A FINANCIAL EDITOR} 218 (1938).

\textsuperscript{20} Cohen, “Why”, \textit{supra} note xx, 113-14.
that for a tender offer to succeed, target shareholders must be offered a premium over the prior market price. Estimates of the average bid premium for tender offers occurring between the 1960s and 1980s ranged between around 15% and 50%.

On the other hand, the cost to the acquirer of carrying out an OMB will depend on the way in which the market price responds to the associated increase in demand. In theory, if the market price does not increase significantly over the acquisition period, then an OMB could work out cheaper than a tender offer which necessitates a premium. There is a big “if” involved, namely that the bidder’s activities will not drive the share price up. The risk of this occurring is substantial. Samuel Hayes and Russell Taussig argued in a 1967 Harvard Business Review article that the cash tender offer was “the only quick, reasonably priced approach when resistance is expected”, and said of what we refer to as OMBs, “this may take years if a prohibitive run-up in the market price is to be avoided.”

The likelihood of an OMB prompting a substantial increase in the target company’s shares is not the same under all circumstances. Instead much will depend on the functioning of the stock market. It is therefore appropriate to consider in theoretical terms the impact the pricing of shares can have on takeover bid techniques before we investigate empirically the market for corporate control. We do this next.

D. Share Prices and Takeover Strategy

21 As Myles Mace and George Montgomery observed in 1962 in a book on corporate acquisitions: “When the stock of a company to be valued for an acquisition is listed, widely held and traded actively on an exchange or over-the-counter, the minimum total price for such an enterprise is generally greater than the total value determined in the market place….To stockholders the quoted price on the market constitutes value and any offer less than was is believed to be value will be rejected.” MYLES L. MACE AND GEORGE G. MONTGOMERY, MANAGEMENT PROBLEMS OF CORPORATE ACQUISITIONS 204 (1962).


While in principle the functioning of the stock market can have a significant impact on the functioning of the market for corporate control, the interrelationship between market pricing and takeover bid strategy has received little attention in the academic literature. The sole exception of which we are aware is a 1990 article by Lloyd Cohen, in which he theorizes why a bidder would use a tender offer rather than an OMB.\textsuperscript{24} Cohen, having drawn attention to the theoretical possibility that an acquirer could gain control of a corporation more cheaply using an OMB due to the premium and transaction costs associated with tender offers, sought to demonstrate why the tender offer would be the logical takeover technique to deploy. He argued that with an OMB, the market purchases made by the bidder would cause the share price of the target to spiral upwards in a way that could make acquiring control unrealistically expensive.\textsuperscript{25} A tender offer could break this cycle because it would signal to current shareholders that while they could sell their shares at a premium to the current market price, the premium was only on offer due to the bid and would only become available to target company shareholders if the bid actually succeeded.

Why with open market purchases would the price of a target company’s shares rise in the manner Cohen hypothesized? A crucial element of his explanation relates to the manner in which shares are priced. He says that “most shareholders believe that their shares are worth whatever they are selling for.”\textsuperscript{26} Cohen’s logic is that only rarely will investors be convinced that their own assessment of the true value of shares is superior to that of the market, and quite reasonably so. According to Cohen, “the typical investor should and does behave as though he was aware of, and believed in, the semi-strong form of the efficient

\textsuperscript{24} Cohen, “Why”, supra note xx. Cohen drew attention specifically to the fact that there was “virtually no discussion in the literature of why raiders employ tender offers rather than open market purchases (at 116-17). His article has only been cited on a small number of occasions and none of the papers in questioned focused on his analysis of tender offer/open market purchase choice.

\textsuperscript{25} Cohen, “Why”, supra note xx, 128-29.

\textsuperscript{26} \textit{Ibid.}, 129.
capital market hypothesis”, meaning investors operate under the assumption that share prices reflect all publicly available information.

To complete the picture of why cash tender offers make sense, Cohen assumes that the supply curve for shares in target companies is inelastic, in the sense that the number of shares cannot be increased. This means that at some point the acquisition of shares associated with an open market bid will depend on persuading investors to sell who are not inclined to exit at the current market price. In other words, the supply of shareholders valuing their shares at the current market price will dry up and will do so before the bidder obtains control. The bidder will therefore be forced to pay more than the initial market price to continue to find shareholders who will agree to sell.

Under such circumstances, as a bidder seeks to buy additional shares in the market, the share price will be bid upwards. Investors, as implicit believers in the semi-strong form of the efficient capital market hypothesis (ECMH), will assume that their shares are worth the new higher price. The process will continue so long as the bidder continues to make open market purchases. According to Cohen, due to costs spiralling upwards the bidder will be unable to climb the almost vertical supply curve: “a raider simply cannot acquire a controlling interest in the corporation if most shareholders believe that their shares are worth whatever they are selling for.”

Cohen argues that a cash tender offer changes matters in a way that makes it feasible for a cash-oriented takeover bid to succeed. What the tender offer does is send a clear

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30 See Stout, Unimportance, supra note xx, 688-89; Stout, Are Takeover, supra note xx, 1264.
32 Ibid., 129-30.
signal to the market that investors should disregard what would otherwise be the most trustworthy signal on intrinsic value, namely the share price. The point that the bidder is seeking to drive home is that the price the bidder is offering does not reflect the underlying value of the corporation in current hands – the pre-tender offer share price would be the appropriate metric if this state of affairs continued – but rather the value of the company if and when control changed hands. The message is credible because the bidder will likely incur costs publicizing its efforts, because of the takeover premium which is built in and because of the high transaction cost associated with the bid. Assuming shareholders in fact trust the information the cash tender offer conveys shareholders can choose to tender their shares or stand pat. Since shareholders are aware that a forced sale could follow under disadvantageous terms by way of a “squeeze out” merger if the takeover bid succeeds, they will be inclined to sell. The result, according to Cohen, is that “the supply curve will become sufficiently elastic for the raider to succeed in acquiring majority control at a tolerable cost.”

Cohen’s reasoning implies that a bidder would use a tender offer in each and every circumstance where the intention was to use cash to acquire control despite objections from the current management team. He was aware, however, that the cash tender offer was a relatively recent phenomenon, saying that this type of transaction was “virtually non-existent prior to 1960.” He attributed the growth in the popularity of the cash tender bid from that point onwards to investors having become progressively more reliant on share price as an accurate measure of the intrinsic worth of their investment. Cohen’s analysis correspondingly hinges on the assumption that the efficiency of share prices was greater from

34 Ibid., 140.
35 Ibid., 140.
the 1960s onwards than it was beforehand, or at least that investors became increasingly wedded to the idea that price was a reliable signal of fundamental value.

With respect to the relationship between share prices and takeover techniques Cohen’s analysis provides a helpful departure point and the analysis in Part III.B indicates it is plausible that share prices and investors’ perceptions of them match Cohen’s assumptions. Cohen’s approach should not, however, be taken at face value. The discussion in Part III.C suggests that with share prices it is unclear whether there was a sufficiently substantial break from the past to account for the timing of the dominance of cash tender offers. Chronology poses an additional challenge to Cohen’s analysis. While tender offers were pretty much exclusively a post-World War II phenomenon, OMBs occurred with some frequency in the opening decades of the 20th century, particularly in the opening years of the century and the in 1920s. Given Cohen’s assertion concerning the need to climb an almost vertical supply curve, why did these OMBs occur?

Cohen in fact acknowledges the possibility that an acquiror might prefer to make an OMB, namely where shareholders do not have ECMH-style faith in the veracity of share prices:

“…if the shares are held by only a few hundred people, the signalling role of a tender offer is diminished. In such a thin market, the rationally ignorant investor will not treat market price as a highly reliable signal of fundamental value.”

Cohen did not draw upon this logic to explain why open market bids occurred during the first half of the 20th century when the cash tender offer was unknown, but this can be done readily. If investors generally lacked faith that shares prices benchmarked reliably the intrinsic worth of public companies, then due to the lower costs associated with OMBs as compared to

tender offers, an acquiror seeking to use cash to gain control of a target company by way of a transfer by sale would rationally prefer to make an OMB.

Another aspect of Cohen’s analysis that is open to question is that OMBs will drive up the share prices of targets substantially due to the inelastic supply curve. A key point in this context is that investors may well not buy a stock for its unique qualities. Instead, they may buy shares and own them because the equity offers at the market price a fair return, adjusting for risk.  With a stock market as well developed as that in the United States there should be numerous close substitutes for a particular stock. A corporate finance maxim which follows from this is, “Seen One Stock, Seen Them All.” Under such circumstances, an investor seeking to buy a sizeable number of shares in a company should be able to convince incumbent shareholders to sell readily at the current market price as those investors have a wide assortment of suitable investment alternatives. The supply curve, in other words, will be highly elastic.

Let us assume for the sake of argument that Cohen is in fact correct and the supply curve for shares of a potential target is inelastic. If a bidder could nevertheless rely on trading strategies to short-circuit the increase in price open market purchases would normally generate, then OMBs would be a more attractive takeover technique than Cohen implies. In this regard, it is worth noting that the New York Stock Exchange only began to regulate

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39 Brealey, Myers and Allen, supra note xx, 360. On the fact that this maxim substantiates the idea that the supply curve for shares for an acquiror will be highly elastic see Stout, Are Takeover, supra note xx, 1242.
40 Daniel R. Fischel and David J. Ross, Should the Law Prohibit “Manipulation” in Financial Markets?, 105 Harv. L. Rev. 503, 513-15 (1991). On other observers who reputedly take the point for granted in their analysis, see Stout, Are Takeover, supra note xx, 1242, n. 40. Highly elastic supply does not mean stock prices will never change if a large purchase occurs; investors may instead assume the buyer has private information and revise their assessment of the stock’s value upward: Brealey, Myers and Allen, supra note xx, 361.
41 On the distinction between “trade-based manipulation” and “action-based manipulation” where the manipulator affects stock prices through observable actions other than trading see Mark Bagnoli and Barton L. Lipman, Stock Price Manipulation Through Takeover Bids, 27 Rand J. Econ. 124, 127 (1996).
market manipulation in earnest in 1913 and federal securities law prohibiting such behavior was not introduced until the mid-1930s.\textsuperscript{42} This suggests that such strategies would have been far more likely to be feasible in the 1900s than by the 1950s and 60s, which in turn gives rise to the possibility that a bidder would have been much better situated to execute an OMB without driving the share price precipitously upwards.

While based on Cohen’s analysis the functioning of securities markets seems most likely to impact on an acquiror’s choice between a cash tender offer and an open market bid, other stock market-oriented predictions can be made in relation to the market for corporate control. For instance, if share prices were not a reliable barometer of the intrinsic worth of a company as the 20\textsuperscript{th} century got under way, would-be acquirors would have had little faith in a potential target’s share price as a benchmark for making a bid. Takeovers—especially hostile ones—are always a risky proposition but under such conditions they would have been very much leaps in the dark. Correspondingly, if share prices were a less reliable barometer of intrinsic worth—that is, less “fundamentally efficient”—in the early decades of the 20\textsuperscript{th} century than was the case later this should have discouraged hostile bids.\textsuperscript{43}

Assuming that a bidder was prepared to go ahead with a hostile bid regardless of potential apprehension concerning the reliability of share prices, the manner in which shares were priced could affect the method adopted. For instance, growing faith in the veracity of share prices should encourage the use of exchange tender offers, all else being equal. With an exchange tender offer, a stockholder in the target company evaluating the offer has to take into account not only how any premium on offer relates to the pricing of the target company’s shares but also the reliability of bidder’s share price as a measure of intrinsic value. All else

\textsuperscript{42} Armour and Cheffins, \textit{Origins} (2013), \textit{supra} note xx, 41-42.

being equal, stockholders in a target company should be more willing to tender their shares as their confidence increases in the reliability of the bidder’s share price as a metric.

Another prediction which follows if during the early 20th century share prices were a less informative and reliable barometer of firm value as compared with later decades is that a bias in favor of acquiring control by a transfer by vote would have been present that may well have diminished over time. In an environment where a putative bidder surmised that a public company was a promising takeover target but lacked faith in the share price as a measure of intrinsic worth the bidder might well prefer to proceed if possible without making the substantial financial outlay associated with an open market bid or a tender offer. Their fall-back position likely would have been to seek to gain control of the corporation by securing dominance of the board, likely by way of a proxy contest. It follows that until potential bidders could treat share prices of the target as providing at least a rough approximation of firm value transfers by vote would have dominated transfers by sale.

III. SHARE PRICE EFFICIENCY – HISTORICAL TRENDS

A. Share Prices and Efficiency – a Précis

The analysis in Part II.D offered a series of conjectures with the underlying premise being that the efficiency of share prices can impact upon takeover strategies putative acquirors adopt. In order to consider the conjectures we have offered more carefully, we now need to articulate more precisely the concept of stock market “efficiency”. We will then consider the historical evidence concerning share prices, beginning with the era when the tender offer moved to the forefront and then moving backwards through time to the opening of the 20th century. .

When considering the relationship between share prices, and more precisely the efficiency of share prices, and takeover bids, it is crucial to bear in mind that the “efficiency”
of share prices can be understood in various different senses. To set the scene for our empirical investigation of hostile takeovers in the U.S. we correspondingly define now the types of stock market efficiency that matter for choices between takeover tactics. Discussions concerning share prices and efficiency typically relate to the ECMH.\textsuperscript{44} The ECMH focuses on the extent to which share prices adjust to reflect the information which is “in the market”. There are three basic versions of the hypothesis: the weak form, the semi-strong form and the strong form.\textsuperscript{45} As mentioned, a stock market is efficient in the semi-strong sense if share prices reflect all publicly available information.\textsuperscript{46} A market is efficient in the weak sense if prices fully reflect all information contained in past share prices. If a market meets this standard, the study of prior price fluctuations will not help in predicting future price movements. Finally, the strong form of the ECMH claims that share prices fully reflect all knowable information, including that which is not publicly available. Setting aside for the moment the extent to which stock markets might meet one or more of these versions of the ECMH, even if a stock market is informationally efficient in at least one of the senses just outlined, caution is required to avoid reading too much into the idea that share prices are “efficient”. The inference one might draw is that “efficient” prices will be “correct” in the sense that they are highly reliable indicators of future net cash flows and hence the underlying value of the securities. For instance, Jonathan Barron Baskin and Paul Miranti said of EMCH in their 1997 book \textit{A History of Corporate Finance} “In this view, capital markets are perfect and frictionless and price securities at the best estimate of their


\textsuperscript{45} LORIE & HAMILTON, \textit{supra} note xx, 71.

\textsuperscript{46} \textit{Supra} note xx and related discussion.
Intrinsic value.”\textsuperscript{47} In fact, stock prices that are “informationally” efficient are not necessarily “fundamentally” efficient, in the sense that a company’s share price reflects with substantial accuracy the actual value of that company.\textsuperscript{48}

To illustrate, assume that a stock market is informationally efficient in the semi-strong sense. This does not mean that a company’s stock price is necessarily a reliable barometer of fundamental value. For instance, there may be important facts concerning a company of which only corporate insiders are aware that are not reflected in the share price. Also, even if all key information is “in the market”, future events which are unknowable can still affect a company. Correspondingly, even the best informed investor can only make an estimate of the actual value of a company’s shares.\textsuperscript{49} Moreover, given that what can only be investors’ best estimates of underlying value dictate stock market fluctuations, the possibly exists that the market consensus concerning a company or an industrial sector’s future prospects (e.g. internet companies in the late 1990s) can be seriously off-base.\textsuperscript{50}

While informational efficiency cannot necessarily be equated with fundamental efficiency, if the stock market does reflect all publicly available information a corporation’s share price will plausibly be the best available estimate of the value of the business as it is being run, at least based on that information. This is because the actions of numerous unbiased individuals who have strong financial incentives to evaluate anticipated corporate performance correctly will be doing much to dictate the price at shares trade. Still, the extent to which informational efficiency and price accuracy will be equated will depend on two

\textsuperscript{47} JONATHAN BARRON BASKIN AND PAUL MIRANTI, A HISTORY OF CORPORATE FINANCE 13 (1997).


\textsuperscript{49} Fox, Morck, Yeung and Durnev, supra note xx, 345.

factors. These are the nature and extent of the information available and the means by which this information becomes available to investors.

The significance of the nature and the extent of the information available can be illustrated by considering the semi-strong form of the ECMH. Assume only scant information is publicly available concerning a particular company’s shares. Under such circumstances, it is entirely possible that its share price will be informationally efficient in the semi-strong sense, which relates only to the extent to which the price reflects that information which is public.\(^{51}\) Semi-strong form informational efficiency is concerned only with the speed at which fresh publicly available information is impounded into share prices, which is conceptually distinct from the amount of information that is made public.

While the nature and extent of information available concerning shares need not affect the informational efficiency of share prices in the semi-strong form, the situation likely is different with price accuracy. A corporation’s share price will be relatively “accurate” if the price is relatively close to the share’s intrinsic worth.\(^{52}\) If the information “in the market” is scant then even if this information is impounded rapidly in share prices those prices may well not reflect accurately a company’s true value. Widespread availability of financially salient information should on the other hand increase the accuracy of share prices in this sense because the investors whose trading sets share prices should have a more accurate sense of the future the companies involved.\(^{53}\)

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51 And a fortiori that it should be informationally efficiency in the weak sense: when the future movement of share prices is a “random walk”, meaning studying past share price patterns will not help investors to beat the market. This test appears to be satisfied in that share prices are “unbiased” – on average they do not diverge from the actual value of shares either upwards or downwards – regardless of the amount of information available concerning companies. Fox, Morck, Yeung and Durnev, supra note xx, 335; Merritt B. Fox, Required Disclosure and Corporate Governance, 62 LAW & CONTEMP. PROBLEMS 113, 115-16 (1999).

52 Fox, Morck, Yeung and Durnev, supra note xx, 345.

While the extent to which share prices meet the standard of semi-strong form of the ECMH should not be dependent on the amount of information available, the manner in which information is conveyed to the market and thereby impounded in share prices should matter. This likely will be the case with the fundamental efficiency -- accuracy -- of share prices as well. On each count, “mechanisms of market efficiency” Ronald Gilson and Reinier Kraakman identified are instructive.\(^\text{54}\)

Gilson and Kraakman, in order to explain why share prices might be efficient in the manner the ECMH implied, identified four mechanisms of market efficiency. These were 1) “universally informed” trading, where prices behaved as if price-relevant information was uniformly disseminated 2) “professionally informed” trading, where information was less well-known but was publicly available and was incorporated rapidly into share prices due to the trading of savvy professionals 3) “derivatively informed” trading, where uninformed traders engage in “price decoding” by observing and interpreting data on price and trading volume and shifts in the activities of presumptively informed traders 4) “uninformed trading”, where traders gauge the likelihood of future events by reference to their own facts and forecasts.\(^\text{55}\) According to Gilson and Kraakman, these four market mechanisms operate with decreasing relative efficiency.\(^\text{56}\) Tautologically, share prices should behave consistently with the semi-strong variant of the ECMH if there is universally informed trading in relation...
to price-sensitive information. This outcome would conversely be least likely if trading was entirely uninformed.\textsuperscript{57}

Having elaborated upon the meaning of efficiency with respect to share prices we are now in a position to formulate a more precise analysis of the interrelationship between stock prices and takeover tactics. Whilst discussion of share prices and efficiency generally revolve primarily around the ECMH—that is, informational efficiency—it is the fundamental efficiency of prices, or more precisely investor perception of fundamental efficiency, that is of central importance for takeover strategy. With respect to the choice between cash tender offers and open market bids, what drives Cohen’s signalling story is how investors perceive share prices. In circumstances where investors are not strongly wedded to the idea that share prices represent the best estimate of a company’s true value, this should improve the prospects for open market bids.\textsuperscript{58} In contrast, where investors have faith that share prices are the most reliable estimate of a company’s intrinsic worth, cash tender offers will be well-situated to perform the signalling function that would seem to be crucial for success.\textsuperscript{59}

Similarly, potential acquirors should be more likely to launch takeover bids, propose exchange tender offers and forsake transfers by vote in favor of transfers by sale if they have faith that share prices of putative targets represent reliable estimates of value under current management.

It is important to note in these related contexts that it is not crucial that share price actually be a reliable barometer of intrinsic value. What matters rather is investors’ belief in their accuracy. If faith in share prices increases, takeover tactics may be expected to change

\textsuperscript{57} The logic would seem to be the same with fundamental efficiency, with share prices becoming increasingly reliable estimates of intrinsic value as trading moved from uninformed to universally informed.

\textsuperscript{58} \textit{Supra} note xx and related discussion.

\textsuperscript{59} \textit{Supra} note xx and accompanying text.
even if, in retrospect, share prices turned out to be a less reliable metric than was generally assumed.

While it is the extent of fundamental value efficiency – or at least faith in share prices as a barometer of intrinsic value – that will influence takeover tactics, Cohen explicitly invoked the semi-strong form of ECMH in his analysis. 60 In so doing, he was following in the footsteps of numerous legal commentators in failing to distinguish explicitly between informational and fundamental efficiency, 61 and correspondingly conflated the semi-strong form of ECMH with the reliability of share prices as an estimate of firm value. From a historical perspective, it is important to bear in mind that in circumstances where publicly available information concerning corporations traded on the stock market is rudimentary, the information which is available may be incorporated rapidly in share prices in the manner contemplated by the semi-strong form of the ECMH without share prices constituting a reliable measure of the intrinsic worth of companies upon which investors rely reflexively. Correspondingly, even if perceptions of share prices as a measure of the value of public companies can influence takeover tactics stock markets can at least in theory be informationally efficient without encouraging putative acquirors to launch takeover bids or fostering the use cash or exchange tender offers with bids that are launched.

B. Share Prices in the Era of the Cash Tender Offer

To correspond with Cohen’s conjectures concerning the prominence of the cash tender offer, it should have been the case in the 1960s and thereafter that investors placed greater weight on share prices as a metric of fundamental value than had been the case beforehand. Similarly, if from the 1960s onwards bidders believed share prices provided them with a more reliable benchmark of corporate value than had been the case previously

60 Supra note xx and related discussion.
61 On this tendency, see Ayres, Back, supra note xx, 969.
then bidders should have been more inclined to make share exchange tender offers than they had been previously and should have been forsaking proxy contests in favour of attempts to secure control by transfers by sale. There indeed is some evidence that share prices did conform to these patterns. In particular, the chronology of the development of the efficient capital market hypothesis lends credence to the idea that investors and acquirors would have had greater faith in share prices during the 1960s than in earlier eras. This was because it was during this decade that foundational academic work underpinning the ECMH was carried out which could provide a robust theoretical underpinning for the veracity of share prices. A succinct overview of the chronology illustrates the point.

A 1959 article by University of Chicago academic Harry Roberts provided the major push for the random walk hypothesis that underpins the weak form of the ECMH. Roberts, who demonstrated that weekly changes in the Dow Jones Industrial Average for the year 1956 strongly resembled weekly levels of random numbers, knew he was challenging received wisdom. As he observed in his 1959 article, many financial analysts “believe that the history of the market itself contains ‘patterns’ that give clues to the future, if only these patterns could be properly understood.”

In 1964 Lawrence Fisher and James Lorie published empirical findings generated from a new historical database of share prices complied by the Center for Research in Security Prices that indicated not only that stocks outperformed bonds but that the same returns would have been generated by an investor who simply chose the shares at random. The article was “a bombshell”, drawing attention from academics, practitioners and the

press. Fisher and Lorie’s findings concerning stock selection strategy anticipated the semi-strong form of the ECMH, in that investors seemingly could skip on detailed analysis of fundamentals and rely on share prices reflecting all relevant available information. As Lorie said to the Wall Street Journal, their study “seem(ed) to suggest” that “the routine type of financial information isn’t likely to prove profitable.” Indeed, one critic said that Fisher and Lorie’s research and the resulting press coverage had spread a “cult of ignorance” oriented around the idea that “knowledge of securities, financial fundamentals, and investing techniques makes little if any difference to the results achieved.”

In 1965 Eugene Fama, also working under the auspices of the Center for Research in Security Prices, followed up on Fisher and Lorie’s work in two significant ways. First, he coined the term “efficient” to characterize a stock market where a series of stock price changes had no memory and where new information was reflected “instantaneously” in actual prices. In 1970, he developed the terms “weak”, “semi-strong” and “strong” efficiency to describe these properties of securities markets with greater precision. Second, he implicitly equated “informational” efficiency with “fundamental” efficiency. According to Fama, in an “efficient market…where there are large numbers of rational profit-maximizers actively competing, with each trying to predict market values of individual securities,

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66 Study Shows ’Random’, supra note xx.

67 Barnes, What, supra, note xx, 60.


69 Fama, Efficient, supra note xx, 383.
and where important current information is almost freely available to all participants...at any given time the actual price of a security will be a good estimate of its intrinsic value.”70 (emphasis added).

Fama’s 1965 article, like Fisher and Lorie’s research, attracted considerable attention. Fama was profiled in a series of business publications and appeared on television to discuss his work.71 He subsequently acknowledged that “Insofar as you can become famous for writing an article in academic journal, I became famous.”72

Due to the media coverage the foundational EMCH research generated the notion that share prices were “efficient” and represented a reliable signal of true value received widespread attention. The fact talented younger economists such as Michael Jensen and Richard Roll chose to devote their attention to the operation of securities markets reinforced the process.73 As Peter Bernstein said of the 1960s in a 2005 book on the impact financial economics had on the financial community, “Wall Street was still reluctant to listen, but by the end of the decade the sound of the distant drummers on the campuses had become so loud that investors could no longer ignore it.”74

The manner in which Fama introduced the notion of efficient markets implied that investors could quite safely equate share prices with intrinsic value. This was because he spoke of important current information being “almost freely available to all participants”; that

70 Fama, Random, supra note xx, 56; see also at 59 (with efficient markets “stock prices at any point in time will represent good estimates of intrinsic or fundamental values”). Peter Bernstein has primarily credited Paul Samuelson, the distinguished economist, with the idea that prices set in the marketplace were the best estimate of “shadow prices” i.e. intrinsic value. See BERNSTEIN, CAPITAL, supra note xx, 119. The paper, however, Bernstein credits for making this contribution was highly mathematical, lacking in rhetorical flourishes and published in a relatively obscure journal: Paul A. Samuelson, Proof That Properly Anticipated Prices Fluctuate Randomly, INDUST. MGMT. REV., Spring 1965, 41. Correspondingly, Fama’s research is much more likely to have had an impact on the investing public.


72 Ibid.

73 On Jensen and Roll’s 1960s securities market research see SMITH, supra note xx, 99-104.

74 BERNSTEIN, CAPITAL, supra note xx, 111.
is, that there was no price-relevant private information. As we have seen, semi-strong form informationally efficient share prices might in fact not be a reliable barometer of the intrinsic worth of companies. Still, the match between the two is likely to be stronger the more information that is available publicly and weaker if there are constraints on the set of information available to participants; that is, that there is substantial private information.\textsuperscript{75} If more information was being impounded in share prices during the 1960s than beforehand this would lend credence to Cohen’s theory that cash tender offers became prominent in the 1960s because investors of that era treated share price as a reliable measure of value in a way that their predecessors did not would be supported. Research by Jeffrey Gordon, who has argued that the informativeness of share prices increased substantially between 1950 and 2005, indicates that indeed a wider range of information was reflected in share prices in the 1960s than had been the case beforehand.\textsuperscript{76}

Gordon argues that during the second half of the twentieth century, managers increasingly turned to stock market signals for strategic guidance.\textsuperscript{77} As applied to the takeover context, this would imply that acquirors should have been more willing to rely on transfers by sale rather than transfers by vote to secure control of intended targets. Moreover, if investors’ attitudes mirrored those of managers, then Cohen’s explanation for the emergence of the cash tender offer in the 1960s potentially could be substantiated.

Gordon suggests various reasons why stock prices impounded increasingly more firm-specific information between 1950 and 2005. In some cases the relevant trends only began after the 1960s and thus would not have had an impact on investor perceptions at the time Cohen suggested was crucial. Examples include changes to Securities and Exchange

\textsuperscript{75} Supra notes xx to xx and related discussion.


\textsuperscript{77} Gordon, \textit{ibid.}, 1541.
Commission (SEC) disclosure rules, amendments to accounting standards that prompted more informative corporate disclosure and the rise of the personal computer that drastically reduced the cost of information processing.\footnote{Gordon, \textit{ibid.}, 1548-62.}

On the other hand, there were trends Gordon identified that implied that share prices would have impounded significantly larger amounts of relevant information by the 1960s than they would have during the first half of the 20\textsuperscript{th} century. For instance, a trend involving the disclosure of vastly greater amounts of data, as measured by pages of documentation filed with the SEC, commenced during the 1960s.\footnote{Gordon, \textit{ibid.}, 1545-47.} This was associated with a corresponding increase in the level of effort put into processing information by sophisticated market participants. The number of people devoting their careers to assessing firm valuation grew substantially, with the number of securities analysts more than quadrupling between 1950 and 1967.\footnote{Gordon, \textit{ibid.}, 1561.} Contemporaneously, the proportion of shares owned by institutional owners -- who unlike retail investors would invest on a sufficiently large scale to make effective use of securities research -- tripled from 11\% in 1955 to 33\% in 1970.\footnote{Gordon, \textit{ibid.}, 1562, 1568.} Gordon’s analysis correspondingly provides at least some support for the proposition that in the 1960s faith in share prices as a metric of intrinsic value should have been growing in a way that would have affected the use of takeover techniques.

C. Mechanisms of Market Efficiency During the First Half of the 20\textsuperscript{th} Century

Gordon’s conjectures concerning the substantially increased informativeness of share prices offer at least partial guidance for the second half of the 20\textsuperscript{th} century. But what about the first half of the 20\textsuperscript{th} century? When one considers the nature of information that was publicly available and the means by which the information was conveyed to the market, it
would seem that investors should have had little faith in share prices as a barometer of the true value of publicly traded companies. As sections D and E reveal, however, there is empirical and anecdotal evidence which tells a somewhat different story. We set the stage for that discussion here by identifying the nature and effectiveness of mechanisms of market efficiency at work during the opening half of the 20th century.

Due to a combination of federal and state laws at the beginning of the 20th century railroads were publicly divulging more extensive cost and non-financial data than many firms even disclose today. In contrast, publicly owned industrial companies of this era provided very limited financial information to investors. A balance sheet was almost always included in published financial reports but otherwise the quality and quantity of information supplied varied greatly. The discrepancy between railroads and other companies plausibly affected the manner in which shares were priced. According to a 1903 report in the New York Times there was a general sense that major industrial companies were undervalued as compared with railways. The failure of industrials “to stand up and be counted with the railroads” was said to have resulted partly from their not being “in the habit of making such reports as the railroads.”

Disclosure gradually became more robust during the opening decades of the 20th century. For instance, the New York Stock Exchange (NYSE) began in 1900 to require listed companies to provide an income statement and balance sheet annually and after 1910 expanded the requirements to include interim reports, audit requirements and obligations to

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86 Ibid.
disclose material information. Still, the change in pattern was not a radical one. The NYSE did not oblige listed companies to report their profits and during the 1920s a majority of companies listed on the “Big Board” failed to offer shareholders full financial statements with information on items such as sales, interest costs and dividends paid.

The NYSE’s influence was restricted, moreover, to companies that sought a full listing on the Exchange. Until 1910, companies could have their shares admitted to trading at the NYSE through its Unlisted Department without furnishing any financial information. Companies could also arrange to have their shares traded on “provincial” stock exchanges, such as those in Chicago, Boston and Pittsburgh, or by making provision for trading on the “over-the-counter” markets without facing disclosure requirements akin to those the NYSE imposed. William Ripley, a Harvard economist whose writings on the stock market in the 1920s attracted widespread attention, said of public companies not listed on the NYSE that their shares “remain(ed) more completely under control of its management as respects market price.” A 1934 study of securities markets by the Twentieth Century Fund said similarly of such companies “corporation reporting (was) essentially inadequate to the proper functioning of the market.”

By the 1920s there was growing awareness that the value of shares depended primarily on future earnings and that analysis and interpretation of corporate reports provided

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91 When Ripley Speaks Market Listens, NEW YORK TIMES, Sept. 26, 1926, SM7.
92 Ripley, Stop, supra note xx, 396.
a key means for determining earning power. Given, however, that during the opening decades of the 20th century many public companies were seemingly not providing investors with the financial data necessary to price shares optimally, what sources of information did investors rely upon? One rudimentary step that was taken was to use the par value of the shares as a benchmark, though the growing use of no-par stock after 1917 meant other techniques increasingly had to be used to deduce the intrinsic value of a corporation’s shares. Investors also focused closely on dividends to value stocks, assuming in so doing that dividend track records provided useful guidance on future pay-outs.

Investors seeking to go beyond par value and dividend policy to gauge whether a company’s shares were appropriately priced could seek to gain a sense of trends likely to affect the company’s industry and the stock market more generally. To this end, they could consult newspapers, financial magazines and market letters brokerage circulated. The business news media was sufficiently active by 1900 to communicate substantial information to investors on general economic trends and also engaged in independent ferreting and analysis of industry developments.

The telegraph technology of the time meant reports concerning specific industries and basic economic trends relevant to the stock market were rapidly impounded in share prices.

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94 CHARLES AMOS DICE, THE STOCK MARKET 610-11, 614 (1928); Jeffrey Fear and Christopher Korbak, Diverging Paths: Accounting for Corporate Governance in America and Germany, 80 BUS. HIST. REV. 1, 24 (2006).


97 SMITH, supra note xx, 71.


As the *New York Times* indicated in 1909, “The race for news in Wall Street today is still more keen because the great increase in the general command of information makes it more difficult for the man in Wall Street to outstrip his fellows.”\(^{100}\) News tickers likely played a crucial role in this context. These were machines that relied on telegraph technology to provide to subscribers with distilled real-time access to company- and industry-specific information and general news that could influence a particular company, industry or the market as a whole.\(^ {101}\)

The news ticker was a cousin of the stock ticker. Stock tickers, which again were rented to subscribers, printed information concerning stock exchange dealings on a tape, with transactions occurring on the New York Stock Exchange generating information on the number of shares sold and the price per share.\(^ {102}\) Stock tickers facilitated what Gilson and Kraakman refer to as “derivatively informed trading”, a form of which is “price decoding”.\(^ {103}\) Price decoding involves otherwise uninformed traders interpreting data on price and trading volume concerning shares of a particular corporation to deduce new, as yet undisclosed, information relating to that corporation.\(^ {104}\) A 1928 guide to the stock market described in a chapter on tape reading how “tape readers” relied on stock tickers in this manner:

“(T)he ticker records immediately the transactions of those who know the facts, and the tape reader sees the effects on stock prices and acts according to the clues there

\(^{100}\) Frank Fayant, “*Inside News*” – *And What it Means to Wall Street*, N.Y. TIMES, Sept. 19, 1909, SM5. See also THOMAS CONWAY, *INVESTMENT AND SPECULATION: A DESCRIPTION OF THE MODERN MONEY MARKET AND ANALYSIS OF THE FACTORS DETERMINING THE VALUE OF SECURITIES* 92 (1911) (“One of the most important influences affecting prices of speculative securities is the current news contained in the telegraph, the telephone, the news bureau slips and the financial dailies….Wall Street is quick to discount any unfavorable condition.”)


\(^{102}\) DICE (1928), *supra* note xx, 52; HUEBNER, *STOCK MARKET*, *supra* note xx, 218.

\(^{103}\) Gilson and Kraakman, *Mechanisms*, *supra* note xx, 574.

\(^{104}\) *Ibid.*, 575.
given. The tape tells the news accurately and in plenty of time for the tape reader to
get into the market before the news comes out.”

While it would appear that price decoding operated as a mechanism of market
efficiency during the opening decades of the 20th century, professionally informed investing,
which Gilson and Kraakman say is more likely to result in efficient prices, seemingly was
primitive. A 1934 text on the stock market indicated that market advisory services had been
inaugurated to provide subscribers with recommendations on the timing of buying and selling
of particular shares. Rigorous security analysis nevertheless apparently remained very
much a minority pursuit. With brokerage houses that supplied information to traders and the
general public on individual companies as late as the mid-1930s those generating the reports
the brokerage houses disseminated were often mere information clerks rather than a
statistician or economist of significant standing within the firm. The New York Society of
Securities Analysts, which by 1963 had nearly 3,000 members was only founded in 1937 by
approximately 20 analysts and had only 82 members as of 1939. Indeed, it is arguable that
the job title “securities analyst” would not have been understood prior to the mid-1930s.

As of 1950, the sources of information investors could rely upon were much the same
as they were in the late 1920s and early 1930s, including corporate financial reports, the stock
ticker, newspapers, financial publications and brokerage letters. However, the enactment
of federal securities legislation in the mid-1930s made disclosures by companies potentially

105 DICE (1928), supra note xx, 281-82.
106 Supra note xx and related discussion.
107 HUEBNER, STOCK MARKET, supra note xx, 235.
York Society of Securities Analysts, History, Mission and Governance
110 John C. Coffee, Market Failure and the Economic Case for a Mandatory Disclosure System, 70 VA. L.
more informative. The Securities Act of 1933\textsuperscript{112} required public disclosure of material financial information about public offerings companies made and the Securities Exchange Act of 1934\textsuperscript{113} imposed substantial disclosure requirements on companies with shares already listed on stock exchanges. The author of a guide to the stock market who emphasized that investors could not work intelligently without full information and said in the 1928 edition of reports issued by public companies “the information is still very incomplete”\textsuperscript{114} indicated in the 1952 edition that the requirements of the 1934 Act had reinforced New York Stock Exchange rules governing disclosure and “greatly improved the situation.”\textsuperscript{115} Moreover, according to a 1963 article on the development of financial reporting in U.S. manufacturing companies “businessmen…rapidly improved their financial reporting practices in response to the direct pressure of the Securities and Exchange Commission.”\textsuperscript{116}

Various caveats need to be borne in mind, however, with the impact federal securities legislation had on corporate disclosure up to 1950. First, rules in the 1934 Act mandating the disclosure of financial data on a quarterly and annual basis only applied to issuers with shares traded over-the-counter when the total market capitalization of securities issued exceeded specified levels.\textsuperscript{117} Second, with those public companies subject to requirements to disclose financial information on a periodic basis, it was unrealistic to expect ordinary investors to access the data because it was only available for inspection in Washington and the offices of national stock exchanges.\textsuperscript{118} Correspondingly, the mechanism of market efficiency would

\begin{itemize}
\item \textsuperscript{112} 48 Stat. 74.
\item \textsuperscript{113} 48 Stat. 881.
\item \textsuperscript{114} DICE (1928), supra note xx, 611.
\item \textsuperscript{115} CHARLES AMOS DICE, THE STOCK MARKET 424 (1952).
\item \textsuperscript{116} Hawkins, supra note xx, 163.
\item \textsuperscript{117} Brian R. Cheffins, Steven A. Bank, and Harwell Wells, Questioning “Law and Finance”: US Stock Market Development, 1930-70, 55 BUS. HIST. 598, 611 (2013).
\item \textsuperscript{118} Maurice C. Kaplan and Daniel M. Reaugh, Accounting, Reports to Stockholders, and the SEC, 48 YALE L.J. 935, 937 (1939).
\end{itemize}
have had to have been primarily professionally informed trading, which perhaps indeed was in operation to a substantial extent. Two S.E.C. attorneys said of filings by public corporations in a 1939 law review article that, “brokers, large scale and institutional investors do obtain the information filed, and their judgment on the value of the security, presumably reflected in its market price, affords the ordinary investor some protection.”

Third, the full impact of federal securities law reform on disclosure likely was delayed. SEC staff responsible for the disclosure regime would have needed to gain expertise and experience and private parties would have needed to become familiar with the new legal regime. Securities regulators also initially afforded considerable latitude to those preparing the accounts, resulting, according to a 1998 history of accounting in the U.S., “in very little change in pre/post-SEC reporting relationships.” Indeed, a study by two S.E.C. attorneys of balance sheets and income statements filed by nationally prominent corporations in 1937 found “(r)eports to stockholders, whether judged by the standards set by the SEC or by one’s own lights, seem very inadequate.”

D. Empirical Evidence

Based on the foregoing, there is anecdotal evidence that suggests share prices should have been a more reliable barometer of intrinsic value in the 1950s and 1960s than was the case in earlier decades, which in turn implies that acquirors engaging in hostile takeovers should have become increasingly willing during this era to execute transfers by sale and should have opted to use cash tender offers to secure control more frequently than would

119 Kaplan and Reaugh, supra note xx, 938.
120 Cheffins, Bank, and Wells, supra note xx, 611.
121 Cross and Prentice, supra note xx, 369.
123 Kaplan and Reaugh, supra note xx, 978; on their methodology see at 938, n. 16.
have been the case previously. The available empirical evidence, while scant,\textsuperscript{124} casts doubt, however, on this chronology. While the mechanisms of market efficiency seemingly operated with greater effect during the second half of the 20\textsuperscript{th} century than the first, empirical studies suggest that share prices may not have been markedly less efficient prior to 1950, at least in the informational sense.

With respect to informational efficiency, event studies of market reactions to news announcements by early 20\textsuperscript{th} century US public companies suggest that in this era share prices in fact impounded available relevant news very rapidly. For instance, with friendly takeovers carried out during a merger wave occurring between 1897 and 1903, share prices of companies being acquired increased promptly and substantially in the modern fashion when a prospective merger was announced.\textsuperscript{125} In addition, for industrial companies traded on the NYSE between 1905 and 1910, dividend increases, dividend decreases/omissions and announced earnings decreases were associated with rapid and significant price revisions.\textsuperscript{126} Announced earnings increases only prompted significant positive returns for companies that were paying dividends, perhaps reflecting the fact that for investors positive earnings reports lacked credibility unless backed by dividend payments.\textsuperscript{127}

Support for the proposition that early 20\textsuperscript{th} century US stock markets were informationally efficient – or at least as informationally efficient as modern stock markets -- also comes from a very different direction. A large body of finance literature challenges the extent to which stock markets behave consistently with the ECMH. What is interesting for

\begin{footnotesize}
\begin{enumerate}
\item Banerjee and Eckard, \textit{Why}, supra note xx. Similarly, prices declined rapidly in circumstances the merger was a “fait accompli” in the first news report, seemingly reflecting disappointment on the part of investors that insiders had successfully captured all prospective gains before the public announcement (\textit{ibid}).
\item \textit{Ibid}.
\end{enumerate}
\end{footnotesize}
present purposes is that for the most part the literature reports no change in the relative (in)efficiency of stock markets across the 20th century. For instance, studies challenging the idea that US stock markets are weak-form informationally efficient report that the extent to which prices departed from a “random walk” was no greater during the opening half of the 20th century than it was subsequently. The studies in question were seeking to identify autocorrelation, which exists when past performance or past patterns predict future movements. If share prices are engaged in a random walk they should be serially uncorrelated.128 This was not the case during the opening half of the 20th century, but crucially for our purposes this was not a departure from the historical norm.

Andrew Lo, who examined monthly returns of the Standard & Poor’s composite index from 1871 to 2003, hypothesized that his measure of autocorrelation “might be expected to take on larger values during the early part of the sample and become progressively smaller during recent years as the U.S. equity market becomes more efficient.”129 What he instead found was that the degree of (in)efficiency varied through time in a cyclical fashion, with scores between 1900 and 1950 not being markedly different than in subsequent decades.130 This suggests that share prices during this era departed from the weak form of the ECMH to the same extent during this period as they did in subsequent decades, and that there was no secular trend towards improvement over time.

A study by Anthony Gu and Joseph Finnerty offers similar findings concerning the weak form of the ECMH prior to 1950. They analyzed the daily index of the Dow Jones Industrial Average from 1896 to 1998, hypothesizing in so doing that advances in

129 Lo, Adaptive, supra note xx, 25.
130 Lo, ibid. (Exhibit); Lo, Reconciling, supra note xx, 35 (Fig. 2). The market was at its most “efficient” in the 1950s (i.e. the autocorrelation co-efficient was very close to zero) but the autocorrelation co-efficient was similarly low as the 20th century got underway.
information technology would help to increase market (i.e. informational) efficiency over time.\textsuperscript{131} Their hypothesis was contradicted, in that while there was autocorrelation present during numerous years between 1896 and 1998, this trend was considerably more pronounced between the early 1940s and mid-1970s than it was either before or after.\textsuperscript{132} This implies that the stock market was \textit{less} efficient after the introduction of federal securities regulation and during the period when the ECMH was developed than it was during the opening decades of the 20\textsuperscript{th} century.\textsuperscript{133}

Turning to fundamental efficiency, Randall Morck, Bernard Yeung and Wayne Yu investigated the extent to which in a given month between 1926 and 1995, stock prices and shareholder returns (including dividends) of a randomly selected sample of 400 U.S. stocks moved together with stock prices and shareholder returns of the market generally.\textsuperscript{134} Morck \textit{et al.} found the general pattern was for the fraction of stocks moving up and down together to decline over time.\textsuperscript{135} A plausible inference is that stock prices became less “synchronous” over time because more firm-specific information was being impounded into them.\textsuperscript{136} This in turn would imply an increase in stock price accuracy over time, plausibly due to increased disclosure requirements increasing the set of publicly-available information.

\begin{thebibliography}{99}
\bibitem{morck2000-2} Morck, Yeung and Yu, supra note xx, 220-22.
\bibitem{durnev2003} Artyom Durnev, Randall Morck, Bernard Yeung and Paul Zarowin, \textit{Does Greater Firm-Specific Return Variation Mean More or Less Informed Stock Pricing}, 41 J. ACCTING. RES. 797, 834-35 (2003) (saying of the implications of their analysis for U.S. historical data reported by Morck, Yeung and Yu, supra note xx, “Our findings suggest that higher firm-specific returns may also reflect more informationally efficient stock prices in the United States.”)
\end{thebibliography}
Arguably the most significant change in disclosure requirements was the enactment of the Securities Act of 1933 and the Securities Exchange Act of 1934. The time trend revealed in Morck et al.’s data only became pronounced, however, after 1950.\textsuperscript{137} Moreover, a study by Paul Mahoney and Jianping Mei, which compared the impact of earnings reports on a variety of metrics (share turnover, bid-ask spreads, “no trade” days and share price volatility) for companies with shares listed on the NYSE in 1927 and 1935, reported that the size of the reactions were not significantly different.\textsuperscript{138} Both findings are consistent with the historical evidence discussed in Section III.C suggesting that even if New Deal securities legislation had an impact on stock market prices this effect was delayed.

In contrast with Morck et al.’s findings, Robert Shiller’s identification of “overvolatility” in share price movements poses a challenge to the idea that there was any increase in share price efficiency as the twentieth century progressed. Based on a dataset he compiled of share price, earnings and dividend data for companies in the Standard & Poor’s composite index from the 1870s to the 1980s\textsuperscript{139} Shiller reported that throughout this period share prices fluctuated much more dramatically than would have been expected given the actual dividend payments the companies subsequently made,\textsuperscript{140} or even the expectations as to dividends at the time.\textsuperscript{141} This “overvolatility” could be interpreted as evidence that stock

\textsuperscript{137} Gordon, \textit{Rise}, supra note xx, 1543-44 (saying of the time trends the data revealed “particularly since 1950”).


\textsuperscript{139} The year-by-year data and the sources drawn upon are set out in chapter 26 of \textbf{ROBERT J. SHILLER, \textit{MARKET VOLATILITY}} (1989).


prices did not accurately reflect the fundamental value of the underlying investment, as measured by actual or expected cashflows to investors.\textsuperscript{142}

Taken together a key point with the various share price studies with a chronological dimension is that they did not reveal a strong time trend indicating that share prices became more efficient in either the informational or fundamental value sense as the 20\textsuperscript{th} century progressed.\textsuperscript{143} Indeed, there was some evidence that share prices were less efficient, by Shiller’s measure, during a “bull” market in the 1960s and early 1970s than was the case beforehand.\textsuperscript{144} The only partial exception is the Morck et al. research, which implies that from 1950 onwards that share prices were more accurate than they had been.

How do we reconcile Morck et al.’s findings with the other chronologically oriented empirical evidence concerning share prices? This is relatively straightforward with the studies measuring ECMH. As we have indicated, share prices can be informationally efficient even if publicly available information is scant. Correspondingly, it is possible that share prices were just as efficient informationally in 1910 as in 1960 even though the nature and quality of that information was inferior in 1910.

Reconciling Morck et al.’s findings with Shiller’s results in more challenging. A way forward is to remember that Shiller’s data is concerned with price movements relative to movements in actual, or expected, payouts to investors whereas Morck et al.’s measure is

\textsuperscript{142} See, for example, Stout, \textit{Unimportance}, supra note xx, 698.

\textsuperscript{143} The relevant studies typically do not provide a detailed time-trend analysis. Instead, the evidence on time trends typically consists of charts plotting fluctuations in actual share prices and prices that would have been anticipated based on the “fundamentals” input chosen. See, for example, Shiller, \textit{Do Stock}, supra note xx, 422; Campbell and Shiller, \textit{supra} note xx, 673-74; SHILLER, \textit{MARKET}, supra note xx, 168-69, 363; Barsky and De Long, \textit{Bull}, supra note xx, 270-71; Barsky and De Long, \textit{Why Does}, supra note xx, 292, 294. Shiller, however, did provide a statistical time trend analysis of the relationship between the dividend/price ratio and share prices in SHILLER, \textit{MARKET}, supra note xx, 35. He said “The efficient markets hypothesis thus appears to be dramatically wrong from this regression: stock prices move in a direction opposite to that indicated by the dividend-price ratio. This is true in every sub-period examined.”

\textsuperscript{144} N. Gregory Mankiw, David Romer and Matthew D. Shapiro, \textit{An Unbiased Reexamination of Stock Market Volatility}, 40 J. FIN. 677, 685 (1985).
concerned with price movements relative to movements in the market as a whole. A plausible conjecture is that they each capture different potential deviations from fundamental efficiency. Morck et al. focus on the position of companies in relation to each other, assuming in so doing that co-movement of prices is evidence of lack of idiosyncratic firms-specific information. Shiller, in contrast, focuses on excess volatility, which plausibly will result from trading strategies likely to affect the market at large. It may well be the case that investors were able to discriminate better between firms over time using more substantial information in the manner Morck et al. conjecture while still being afflicted with same biases that affect the volatility of prices market-wide. Hence, there may have been some improvement in the efficiency of share prices in relation to each other while due to general trading patterns stock prices were a far from ideal indicator of future economic performance.

E. Market Participants’ Perceptions of Share Prices

The purpose of the foregoing analysis of the efficiency of share prices has not been to offer any sort of definitive verdict on the extent to which share prices prior to the 1960s fluctuated in a manner akin to a random walk, reflected available information or constituted a reliable barometer of underlying fundamentals. Instead, we have been seeking to gain a sense of the extent to which investors and potential acquirors would have had faith in share prices as a benchmark of intrinsic value, which in turn should have affected strategies adopted in the market for corporate control. Correspondingly, we turn now to the—admittedly somewhat scanty—evidence about the extent to which contemporaries believed share prices were meaningful indicators of companies’ true values.

While the tenets of the EMCH were not formulated formally until the 1960s, it is possible to identify observers even prior to the beginning of the 20th century who subscribed to the view that share prices provided the best available estimate of the value of the companies in question. George Gibson wrote in 1889 in The Stock Markets of London, Paris
and New York that, “when shares become publicly known in an open market, the value which they acquire may be regarded as the judgment of the best intelligence concerning them.”

A quarter of a century later, W.C. Van Antwerp concurred in a guide on the stock market, saying of an investor and NYSE share prices:

“The (stock) ticker gives him instantaneous quotations…(T)hese quotations are not a one-man affair but the combined judgment of thousands of experts, bulls and bears, bankers and brokers, speculators and investors, all over the world…(T)he price thus established is not merely the opinion of the all these minds as to values to-day, but that it represents a critical look into the future.”

A claim by Samuel Untermeyer, counsel for a 1912-13 congressional investigation of a supposed Wall Street “money trust”, in a 1915 American Economic Review article that “the pretended market prices of securities of our greatest corporations have been ‘rigged’ and manipulated at the will of a handful of gamblers and operators…..”, elicited in response characterizations of the stock market similar to Gibson and Van Antwerp’s. Albert W. Atwood, who had collaborated on a 1911 book on investment and speculation, said “the great fundamental changes in prices on the Exchange… have been due to the changes in the value of the properties the stocks represented.”

Henry Emery, a Yale economist, said

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146 W.C. VAN ANTWERP, THE STOCK EXCHANGE FROM WITHIN 22-23 (1914).
147 Samuel Untermeyer, Speculation on the Stock Exchanges and Public Regulation of the Exchanges, 5 AMER. ECON. REV. (supplementary issue), 24, 41 (1915). Untermeyer was counsel for a congressional sub-committee chaired by Arséne Pujo.
148 CONWAY, INVESTMENT, supra note xx.
149 Speculation on the Stock Exchanges – Discussion, 5 AMER. ECON. REV. (supplementary issue), 86, 86 (1915) (emphasis in original).
similarly of stock exchange prices that they “whether proved right or wrong in the future, do represent with exactness what we all think now.”

Similar faith in share prices was expressed even in the midst of the post-1929 bear market. According to a 1930 survey of the functioning of the stock exchange, “The fundamental cause for changing prices is, of course, changing values….Speculation merely intervenes to adjust present prices to future but seemingly probable values.” A 1934 guide to the stock market indicated similarly

“Exchange markets…represent the collective mind of the investment world as to values, present and prospective. And in this connection it is all important to remember that the collective judgment is much more reliable than the judgment of an individual.”

This sort of faith in share prices as a barometer of the intrinsic value of companies was by no means universally held. For instance, during the 1930s Benjamin Graham maintained that a prudent investor should only purchase shares when a corporation had good prospects and a share price below liquidation value. Economist Wayne Leeman suggested in 1949 “there is a mass of evidence which indicates that there is more trading on price movements, or movement trading, than there is value trading.”

150 Henry C. Emery, Speculation on the Stock Exchanges and Public Regulation of the Exchanges 5 AMER. ECON. REV. (supplementary issue), 78 (1915).
152 HUEBNER, STOCK MARKET, supra note xx, 34.
153 Barsky and De Long, Bull, supra note xx, 275 (citing BENJAMIN GRAHAM AND DAVID DODD, SECURITY ANALYSIS (1934). For another example, see Lewis H. Haney, Corporation Accounting Data from the Standpoint of the Investor, 25 J. AMER. STAT. ASSOC., Supplement: Proceedings of the American Statistical Association 7, 10 (1930) (saying of “…the so-called good companies whose stock commands high prices. No one knows what they are worth and this makes it impossible to entertain exaggerated hopes.”)
Despite a certain degree of skepticism concerning share pricing, pre-1960s investors had a plausible intellectual foundation for assuming that fluctuations in share prices reflected changes to a company’s intrinsic value. The key was that the price was being set by way of arm’s-length transactions with no intrinsic bias concerning outcomes. Adolf Berle, the distinguished corporate law academic, acknowledged the point in a 1931 article on stock market manipulation. He said of a situation where an investor purchased shares on the stock market at the “ask” price of a prospective seller the price “becomes a material factor in all other appraisals of that security, of greater or less weight depending on the situation, but of very real importance in permitting the buyers and sellers to estimate the value of the stock in question.”\footnote{A.A. Berle, Liability for Stock Market Manipulation, 31 Colum. L. Rev. 264, 270 (1931).} It follows that even if the mechanisms of market efficiency worked somewhat less effectively prior to the mid-20th century than was the case thereafter, contrary to what would be expected given Cohen’s stock price-oriented explanation for the emergence of the cash tender offer in the 1960s, investors of this era may well have assumed that a share price increase prompted by an undisclosed campaign to secure voting control by open market purchases indicated positive news concerning the intrinsic value of the corporation. By analogy, share prices were arguably a sufficiently reliable barometer of what potential target companies would be worth not to act as a deterrent to hostile takeovers framed as a transfer by sale.

F. How Would Share Prices Respond if There Was an Open Market Bid?

Again, according to Cohen, the key strategic advantage a cash tender offer provides for bidders as compared to an OMB is that while with an OMB the bidder will have to pay ever-increasing prices as investors re-evaluate what the company is worth as the bidder’s buying pushes the share price up a cash tender offer is a reliable signal that the increase in
value implied by the bid premium is conditional upon the acquiror obtaining control.\textsuperscript{156} If investors during the first half of the 20\textsuperscript{th} century in fact assumed that a company’s share price provided the most reliable barometer of the intrinsic worth of that company, this logic seemingly should have been just as compelling during this era as it was thereafter. This reasoning presupposes, however, that open market purchases designed to secure control would have pushed share prices upwards inexorably in the manner Cohen hypothesizes.

There is reason to believe this may not have occurred.

In the opening decades of the 20\textsuperscript{th} century there certainly was a risk that the share purchases underpinning an OMB could drive the target company’s share price up. Various observers, for instance, suggested that, as Cohen hypothesized in explaining the popularity of the tender offer, many if not most owners of shares would only sell their shares at prices exceeding the market price. According to a 1930 guide to Wall Street, “the market price…represents…the price at which the last transaction occurred….\textsuperscript{157} A 1948 guide to the stock market indicated similarly “The market price of a stock is the price where the seller most eager to sell and the buyer most eager to buy meet….Most holders may be unwilling to buy or sell at that price.”\textsuperscript{158}

Contemporaries were also aware that attempts to use the stock market to acquire a large stake in a targeted company could drive the share price up. According to a 1928 guide to stock market speculation:

“Each important situation in a corporation’s finances has a direct reaction in the market for that corporation’s shares. If the situation is very drastic, where, for

\begin{footnotes}
\item[156] Supra note xx and related discussion.
\item[158] Mindell, Stock, supra note xx, 42-43.
\end{footnotes}
example, a contest for the acquisition of the shares is in progress, the stock price may
shoot wildly upwards...."159

Similarly, a 1934 analysis of the stock market indicated that for those seeking to accumulate a
large holding in a company, “bidding for the stock will tend to raise the price unduly”.160

Given that executing an OMB could drive share prices upward and given that
investors during the early 20th century might indeed have assumed that rising shares prices
reflected the intrinsic value of the companies affected, Cohen’s theory would predict the use
of cash tender offers at this time. The available evidence – explored in more detail in Part IV
– indicates that this did not occur. A possible share price related explanation is that using
OMBs to obtain outright voting control without driving the share prices upwards in the
manner Cohen hypothesized was more likely to be feasible as the 20th century opened than
would have been the case subsequently. This was because a party seeking to acquire voting
control of a target company potentially could rely on a single savvy Wall Street operator to
purchase the shares without the price increasingly markedly.

For instance, when in 1901 J.P. Morgan was in a contest for control of the Northern
Pacific railway with E.H. Harriman and the Union Pacific railroad in which both sides were
using open market purchases to gain the upper hand Morgan called upon James R. Keene,
Wall Street’s “master manipulator” of the time, to achieve the desired objective.161 Similarly,
in 1911 Thomas Ryan, a tobacco magnate, asked Bernard Baruch, a prominent stockbroker,
to buy up enough shares on the open market to give Ryan control of Wabash Railway, which

159 FREDERIC DREW BOND, STOCK MOVEMENTS AND SPECULATION 71 (1928).
160 HUEBNER, STOCK MARKET, supra note xx, 400.
161 KLEIN, LIFE, supra note xx, 233 (discussing Keene’s role in the Northern Pacific contest); James R.
Keene, N.Y. TIMES, January 30, 1910, SM2. See also BERNARD M. BARUCH, MY OWN STORY 143 (1957)
describing Keene as a “wizard”); Victor Smith, Meteoric Career of John W. Gates, Skilful Juggler of Millions,
ATLANTA CONSTITUTION, June 15, 1902, A4 (Keene “regarded as the ablest operator the street has known”).
Baruch proceeded to do. Ryan also asked Baruch to buy control of the Norfolk and Western railway by way of open market purchases and while Baruch’s efforts to obtain outright control did not succeed he purchased on Ryan’s behalf a large block of Norfolk and Western shares and did so without advancing the share price materially.

Baruch attributed his success with the Wabash Railway partly to his ability to persuade a broker specializing in Wabash stock to refrain from using Baruch’s sizeable buying orders as a signal to buy Wabash shares to sell to Baruch at a higher price, citing the broker’s awareness that Baruch would reciprocate at some point in the future. Additional techniques that could be used by parties seeking to use an OMB to acquire voting control without driving up the share price markedly would be to spread rumours that the company was going through difficult times and to sell shares periodically to counter upward price movement. As the 1928 edition of a guide to the stock market said of “getting control of the floating supply” of shares in a company “by buying on the market”:

“This requires plentiful credit and time, perhaps a few weeks, perhaps a few months. Stocks, of course, must be accumulated at a low price. To induce holders to sell at a bottom figure, reactions in the market are exaggerated by concerted selling, rumors of financial difficulty ahead, of small earnings, of new financing, and so forth. The price of the stock will be run a few points and then left to sink back below its former level. No permanent advance is permitted. The newspapers call attention to the false starts followed by reactions, and not progress made. This goes on week after week until holders get disgusted with their stock and sell out.”

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163 BARUCH, supra note xx, 112.
164 Ibid., 112-13.
165 DICE, STOCK (1928), supra note xx, 429-30.
A 1934 edition of different guide to the stock market offered a similar description of a party accumulating “large lines of stock” while using “the most skilful methods of accomplishing their purpose without attracting attention”:

“Our operator will purchase whenever weakness develops, but should the price manifest an undue tendency to rise prematurely he will sell in order to depress the price….Gradually the desired line of securities is accumulated, whereas the unknowing, influenced by the apparent weakness of the market and their impatience at not seeing the market improve, dispose of their holdings.”

Tolerance of subsequently prohibited methods of stock price manipulation may well have further facilitated the use of OMBs to obtain voting control. The “matched order” is an example of a type of stock price manipulation that could be used to temper the share price increase that would otherwise be associated with an attempt to obtain voting control by way of open market purchases. The most straightforward way for the bidder to proceed would have been to give a first broker orders to sell shares already owned at prices progressively lower than the then current market price and simultaneously give, unbeknownst to the first broker, a second broker orders to buy shares at the prevailing stock market price. So long as the purchases by the second broker were large enough to be recorded on the stock exchange ticker, the matching of the orders would cause the price indicated by the stock

166 HUEBNER, STOCK MARKET, supra note xx, 400-1.

167 On legislative prohibitions, see Securities and Exchange Act of 1934, §§ 9, 10; 15 U.S.C. 78i, 78j. On tolerance of stock market manipulation, see e.g. Finance: Stock Exchange and ‘Manipulation’, THE NATION, Jan. 6, 1910, 22 (“Perhaps the most impressive fact about last week’s so-called ‘Rock Island corner’, in the course of which the stock went up 31 points in the first ten minutes of business on the Stock Exchange, and down 31 points in the next hour or so, was the fact that the public at large appeared to accept the occurrence as a natural incident of present-day Stock Exchange trading.”)


169 The Stock Exchange Begins Self Reform, N.Y. TIMES, Feb. 6, 1913, 1 (providing a detailed example of the pattern but focusing on a party that wanted to drive the share price up).
market ticker to fall.\textsuperscript{170} This might well prompt nervous investors to sell and drive the price down still further.\textsuperscript{171} The party seeking to acquire control could then snap up a sizeable number of shares cheaply.\textsuperscript{172}

The operation of mechanisms of market efficiency during the opening decades of the 20\textsuperscript{th} century likely facilitated the efforts of those seeking to acquire control of a company by way of an OMB without pushing the share price upwards inordinately. As we have seen, while professionally informed investing was primitive during this era, investors would frequently engage in “price decoding” when deciding whether to buy and sell shares.\textsuperscript{173} The logic involved was described by Richard Wyckoff, the editor of The Magazine of Wall Street, in a 1924 guide to buying and selling shares:

“It long ago occurred to me that success in the security market demanded an understanding of the operations of those who were most influential, because these interests had been studying the business and operating in the market for many years and therefore were experts. It was sound reasoning to suppose that knowledge of the principles which they used in their market operations would enable one to detect their thumbprints on the tape and to follow with pleasure and profit.”\textsuperscript{174}

Wyckoff conceded, however, that a tendency on the part of investors to engage in price decoding could generate pricing trends that might be beneficial to those wanting to discourage substantial upward price pressure as part of a takeover:

\textsuperscript{170} One hundred shares was the minimum because the New York Stock Exchange constitution specified that 100 shares constituted the unit of trading: Dice, Stock (1928), supra note xx, 53, 266.

\textsuperscript{171} Dana L. Thomas, The Plungers and the Peacocks: 150 Years of Wall Street 47 (1967).

\textsuperscript{172} Dice, Stock (1928) supra note xx, 423-24 (indicating that one purpose of matched orders was to accumulate “a lot” of stock “at a very low price.”)


\textsuperscript{174} Richard D. Wyckoff, How I Trade and Invest in Stocks & Bonds 99-100 (1924).
“But there is another kind of suggestion which is the most potent in its influence on
the public, and that is the action of the market itself. A rising price for a stock
suggests still higher prices and declining quotations bear the inference that prices are
going lower….(G)roups will often try to depress a stock, counting on the public’s
support when the issue begins to decline.”175

There is some uncertainty as to the actual frequency of market manipulation in early
20th century stocks.176 What is clearer, however, is that as time progressed it would have
become more difficult for even a highly skilled stock market operator to use this technique to
cap share price increases associated with an open market bid. This should, applying Cohen’s
insights, have helped to set the scene for the emergence of the cash tender offer.

According to a 1930 guide to Wall Street, “Manipulation depends on a public
following for its success.”177 Since it seems likely that over time the pricing of shares was
increasingly driven by professionally informed trading as opposed to price decoding,178 the
ability of a party to impose downward pressure on share prices through skillful buying and
selling of shares should have diminished. Also, relying on matched orders and related
techniques to manipulate the share price of a potential target became increasingly
problematic. In 1913 the New York Stock Exchange adopted a resolution to prevent
manipulation of share prices, especially in the form of matched orders.179 In practice stock

175  WYCKOFF, HOW I TRADE, supra note xx, 99.
176  The evidence on point is conflicting. See, for example, SELDEN, MACHINERY, supra note xx, 169
(“Manipulation, however, is always going on, within limits in any active market”); Harold J. Howland,
Gambling Joint or Market Place? An Inquiry Into the Workings of the New York Stock Exchange, OUT, June
28, 1913, 418, 422 (“Whether this manipulation still continues and to what extent is a debated question.”);
Guolin Jiang, Paul Mahoney and Jiaping Mei, Market Manipulation: A Comprehensive Study of Stock Pools,
77 J. FIN. ECON. 147, 169 (2005) (indicating based on empirical analysis of “pools”, the most likely candidates
to engage in market manipulation in the 1920s, “the size, liquidity, and information disclosure practices of
exchange-listed companies in the 1920s were sufficient to make manipulation difficult.”)
177  FOWLER, INTRODUCTION, supra note xx, 142.
178  Supra notes xx to xx and related discussion.
179  The Stock Exchange Begins, supra note xx.
Exchange officials apparently seldom detected or penalized such fictitious transactions.\(^{180}\) The Securities and Exchange Act of 1934, however, specifically banned matched orders entered into for the purpose of creating a false or misleading appearance with respect to the market for shares of public companies and the Securities and Exchange Commission enforced the law sufficiently robustly to generate a fair amount of case law.\(^{181}\)

Expansion of the share registers of potential target companies would have created additional obstacles for those minded to acquire control of companies by way of open market purchases. Whereas during the opening decade of the 20\(^{th}\) century only a small handful of companies had share registers with more than 5,000 stockholders by the 1930s it was commonplace for large public companies to have over 100,000 shareholders.\(^{182}\) The transaction costs associated with buying a sufficiently large number of shares to acquire voting control would have escalated accordingly. Moreover, a prospective acquiror would have struggled to find a single stock market operator who could deliver control by using open market purchases. As the number of shareholders grew and share turnover multiplied it became increasingly difficult for even those as skilled as Keene and Baruch to achieve desired objectives single-handedly.\(^{183}\) Indeed, according to Van Antwerp’s 1914 guide on the stock exchange “The Keene type of manipulator has gone, never to return.”\(^{184}\) This and related trends should have made it more difficult for bidders to use OMBs and therefore, all else being equal, should have helped to foster the use of tender offers.


\(^{182}\) Armour and Cheffins, Origins (2013), supra note xx, 39-40, 42.

\(^{183}\) On significance of share turnover in this context, see WYCKOFF, WALL, supra note xx, 149.

\(^{184}\) VAN ANTWERP, STOCK EXCHANGE, supra note xx, 30. See also Exit the Swashbuckling Trader of Wall Street, N.Y. Times, May 13, 1917, SM8 (calling Keene “the last of the class of great operators”).
IV. EMPIRICAL ANALYSIS OF HOSTILE TAKEOVER TECHNIQUES

A. Methodology

Having surveyed historically the development of share price efficiency on U.S. stock markets between 1900 and the mid-1960s we now turn to the evidence from our dataset on the evolution of different modes of control contest over the period 1900-1965 to test our conjectures concerning the relationship between share prices and the market for corporate control. We compiled our time series using searches of the ProQuest Historical Newspapers database, which permits full-text searches of major US newspapers. We focused on those papers most salient for announcements about corporate control contests, namely the Wall Street Journal, the New York Times and (to a lesser extent) the Washington Post.

In earlier work, we used the ProQuest Historical Newspapers database to compile time series of OMBs, proxy contests, and tender offers for the period 1900-1949. For this study, being aware the late 1950s and early 1960s were the period during which the tender offer rose to prominence, we extended these datasets to 1965.

We compiled four different time series: OMBs, proxy fights, cash tender offers, and exchange tender offers. In each case, we entered relevant search criteria and then manually read the articles which were identified. The articles were then assessed individually to determine relevance to our enquiries. We discounted reports that were described as “rumours” unless confirmed by a subsequent story. We excluded transactions where the bidder sought or obtained voting control by negotiating off-market private purchases of shares with a dominant shareholder coalition; as we discussed in Part II.B this is an example of a friendly takeover. We also excluded transactions in which the acquiror was seeking to

186 Setting the end-point of the data collection to 1965 was based on pragmatic considerations, namely a substantial increase in the number of “hits” using our search strategies in the years immediately following.
acquire less than control.\textsuperscript{187} In relation to each transaction, we sought information to confirm whether the deal was hostile,\textsuperscript{188} we identified the insurgent and the insurgent’s relationship with the target and ascertained whether the takeover was successful.

Whilst due to the paucity of prior empirical work on hostile takeovers occurring prior to the 1960s our datasets provide a fruitful departure point for our analysis, there are clear limitations on the inferences that can be drawn from such data. First, we could only uncover details of control transactions which received newspaper coverage. This likely biases the results towards larger companies, the activities of which would be more newsworthy. We have no way of knowing the extent of this bias, or how it evolved over time.

Second, with takeovers that received newspaper coverage we could only identify those stories that contained the search terms we relied upon. Designing search criteria in this context is challenging given the evolution in takeover tactics and language used to describe them over two-thirds of a century. Consequently, for each time series we used search criteria comprising a range of different ways of referring to the same underlying transaction.\textsuperscript{189}

B. Overall Frequency of Control Contests

For 1900-65, we identified a total of 92 OMBs, 154 cash tender offers and 106 exchange tender offers in which the acquiror was seeking to obtain a controlling stake by transfer by sale. Our research on proxy contests only covered up to 1955 at the time of

\textsuperscript{187} In the case of an OMB or a tender offer, we took “control” to mean either $>50\%$ of the voting rights, or a lesser proportion of the voting rights if the newspaper report described this as “working” or “effective” control. In the case of a proxy fight, we took “control” to mean a majority of the board of directors.

\textsuperscript{188} We took as the hallmark of “hostility” whether the transaction was initially opposed by the target’s management.

\textsuperscript{189} The search criteria were as follows. For OMBs, we searched for ‘aquire* w/20 control OR secure* w/20 control OR gain* w/20 control OR obtain* w/20 control OR attempt* w/20 control AND “open market” AND stock OR shares’. For proxy contests, we searched for ‘“proxy fight” OR “proxy battle” OR “proxy contest” OR “proxy solicitation” OR “consent solicitation” OR “solicit proxies” OR “soliciting proxies” OR “solicitation of proxies”’. For cash tender offers, we searched for ‘tender AND offer AND (control OR merger) AND (share OR stock)’. For exchange tender offers, we searched for ‘tender AND offer AND (control OR merger) AND (share OR stock) AND exchange’.
writing, but in combination with data available from the SEC, we anticipate that approximately 260 proxy contests occurred between 1900 and 1965 in which the insurgent was seeking to obtain board control.

Figure 1 charts the total number of control transactions across all four time series. There was general trend in favour of more hostile takeovers being launched over time. This is what would be expected if share prices were becoming increasingly efficient in the fundamental value sense over the time period. Given that executing a control contest is potentially an expensive shot in the dark, potential acquirors can be expected to rely heavily on publicly available information and the stock price as they proceed. Improvements in fundamental efficiency should bolster faith in share prices and therefore be associated with an increased willingness to engage in takeover activity.

**Figure 1**: All Control Contests, 1900-1965

Notes. “Control contests” includes sum of hostile tender offers (whether exchange or cash), open market bids for control, and proxy fights launched for board control of US publicly-traded companies identified through searches of ProQuest Historical Newspapers. Data for proxy fights for board control from 1956-65 are from SEC Annual Reports.

190 See supra, Section II.D.
While Figure 1 appears to support our conjecture concerning the relationship between share prices and takeover activity, a couple of caveats are in order. One is that the time trend we identify can be accounted for to at least to some extent by an increase in the total number of listed companies over time. After all, more companies mean more potential control contest targets. On the other hand, data compiled by the SEC indicates that the number of companies listed on national stock exchanges actually declined between the mid-1930s and 1950 before increasing in the 1950s and 1960s.191

Another caveat relates to ownership patterns. A hostile takeover is only possible in the absence of a dominant shareholder who can exercise a de facto veto over a takeover.192 There was a general trend in favour of ownership dispersion in U.S. public companies from 1900 through to the mid-1960s,193 which should have set the scene for additional control contests. Correspondingly the growth in the number of hostile control contests reflected in Fig. 1 could be as much a result of a growing separation of ownership and control as much as changing perceptions of share prices.

C. Data on Types of Takeover

Having considered aggregate hostile takeover trends, we consider now how matters evolved with each of the takeover techniques we focus on. Figure 2 plots the annual data on cash and exchange tender offers together. It also plots data on proxy contests for control. Given that, at the time of writing, we had not completed our proxy contest dataset we plot from 1952 onwards the number of proxy contests for corporate control from data reported in the SEC’s Annual Reports, which began that year.

Figure 2: Control contests, 1900-65 (raw numbers)

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191 Cheffins, Bank, and Wells, supra note xx, 602-3.
Notes. “Hostile offers” comprises the sum of hostile cash tender offers and hostile exchange tender offers. “Proxy contests” comprises proxy contests for board control. “Open market bids” comprise transactions in which acquiror seeks to obtain control of target company by purchasing controlling stake in the market. All identified through searches of ProQuest Historical Newspapers. Additional series of data on proxy fights for board control from 1952-65 are from SEC Annual Reports.

Given that the number of control contests grew over time, it is hard to draw conclusions from Figure 2 about the relative incidence of different types of control contest. To correct for this, Figure 3 presents the same data expressed as proportions of the total annual tally of control contests. The most striking point to emerge from this is the relative ubiquity of proxy fights for control; these constitute a sizeable proportion of all control contests in almost every year in the sample.

Figure 3: Control Contests, 1900-65 (proportions by type)
Notes. “Hostile offers” comprises the sum of hostile cash tender offers and hostile exchange tender offers. “Proxy contests” comprises proxy contests for board control. “Open market bids” comprise transactions in which acquiror seeks to obtain control of target company by purchasing controlling stake in the market. All identified through searches of ProQuest Historical Newspapers. Data on proxy fights for board control from 1956-65 are from SEC Annual Reports.

While proxy fights for board control occur with regularity between 1900 and the mid-1960s, the proportion of proxy fights is lowest in the 1900s, 1920s, 1950s and 1960s. This broadly corresponds with the periods in which there was substantial merger activity. Conversely, the periods in which proxy fights were the exclusive, or almost exclusive, form of control contests—the 1930s and 1940s—were decades in which mergers were much less frequent.194 The pattern is a logical one because hostile takeovers executed by a transfer by sale are a species of merger and it is hardly surprising that the relative importance of this method of acquiring companies fell into abeyance when merger activity was in the doldrums generally.

D. Transfers by Sale: OMBs versus Tender Offers

Having drawn attention to contrasting trends concerning transfers by sale and transfers by vote, we now consider transfers by sale in more detail. Figure 4 provides evidence on time trends concerning OMBs and tender offers.

**Figure 4**: Transfers by Sale: OMBs vs Hostile Tender Offers

![Graph showing time trends for OMBs and tender offers from 1900 to 1963.]

Notes. “Hostile offers” comprises the sum of hostile cash tender offers and hostile exchange tender offers. “Open market bids” comprise transactions in which acquiror seeks to obtain control of target company by purchasing controlling stake in the market. All identified through searches of ProQuest Historical Newspapers.

Figure 4 reveals a strong time trend. In the opening decades of the 20th century the OMB was the technique of choice of acquirors seeking to execute a transfer of control by sale. This was no longer the case, however, by the 1950s. By this point in time the tender offer had largely eclipsed the OMB.

The time trend conforms with the chronology presented in Part III.B, which again indicated that, as Cohen surmised, the emergence of theoretical analysis of the efficiency of stock market prices coincided with the popularity of the tender offer. His underlying logic again is that the tender offer came into its own when investors would have interpreted the
share price rise associated with an open market bid as a genuine increase in the value of the company, forcing a bidder to pay unrealistically high prices to secure control.

The fact that the time trend in Figure 4 is consistent with Cohen’s account does not prove conclusively that his version of events is correct. Part III.D indicated that it is far from clear that share prices became more efficient, at least in the informational sense, between 1900 and 1950 and Part III.E. showed that investors believed well before 1950 that share prices were a reasonably accurate indicator of intrinsic worth of companies. Correspondingly, it may well have been the case that, as Part III.F. discussed, the tender offer grew in prominence at the expense of the open market bid because a SEC crackdown on market manipulation precluded bidders from taking steps to forestall the share price increases that would normally be associated with heavy buying of shares of a particular company.

E. Hostile Tender Offers: Cash Bids vs Exchange Offers

Figure 5 illustrates the relative frequency of hostile cash versus exchange tender offers between 1900 and 1965. In our dataset, hostile tender offers do not become a meaningful part of control contests until the 1950s. We found only a tiny number of pre-1940 hostile tender offers, each of which was an exchange offers.195 We omit these from Figure 5 in order to focus on the 1950s.

Figure 5: Hostile Tender Offers: Cash vs. Exchange Offers, 1950-65

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195 The pre-1940 exchange tender offers we found by way of our searching had Nevada Consolidated Copper Co. (1910) and All America General Corporation (1930) as targets. There may also have been an exchange tender offer launched in 1901 to obtain control of American Bridge Co. See Armour and Cheffins, Origins (2013), supra note xx, 21-22.
Notes. “Cash offers” comprises hostile cash tender offers and “Exchange offers” comprises hostile exchange tender offers. All identified through searches of ProQuest Historical Newspapers.

Figure 5 indicates that exchange offers were used less frequently than cash offers between 1950 and 1965. This is consistent with expectations, given the pre-Williams Act legal obstacles that which were pertinent to exchange offers but not to cash bids.\textsuperscript{196} We conjectured additionally that improvement in stock price accuracy over time might be associated with an upward trend in exchange offers, given that such a trend would make it easier for target shareholders to judge what they were getting.\textsuperscript{197} Figure 5 provides no obvious support for this conjecture.

F. Relationship of the Acquiror to Target Company

We speculated in the introduction to the paper that where publicly available information about firm performance is scant— and consequently markets are likely to be less fundamentally efficient— then control contests are less likely to be launched by those outside the same industry as the acquiror. Firms in the same industry, we reasoned, would have

\textsuperscript{196} Supra, Section II.C.

\textsuperscript{197} Supra, Section II.D.
access to more target-specific information than would outsiders. Figure 6 tests this conjecture by plotting the evolution over time of the relationship between the industries of putative acquirors and target companies for transfers of control by sale. Figure 6 reveals a clear increase over time in both the absolute number, and the proportion, of hostile transactions launched by outsiders. Various factors could have contributed to the growth in the aggregate number of hostile takeovers, such as an increase in the number of publicly traded companies and a growing separation of ownership and control within firms (see section B above). Nevertheless, with respect to the growing proportion of hostile bids undertaken by bidders unrelated to their targets, the greater publicly-available information over time stands out as the most plausible explanation.

**Figure 6**: Relationship of Acquirer and Target Industry: Contested Transfers by Sale, 1900-65

Notes. “Contested transfers by sale” comprises sum of hostile OMBs, hostile cash tender offers and hostile exchange tender offers. All identified through searches of ProQuest Historical Newspapers.

V. CONCLUSION
Given the significance of the market for corporate control, it is striking how little is known about the history of corporate control transactions in the United States. In this paper, we address a significant facet of this history, namely linkages between stock market efficiency and the market for corporate control. In so doing, we make three contributions. First, we offer an account of how changes in the informativeness of stock prices might be expected to impact historically upon the market for corporate control. Second we present hand-collected time series data on the incidence between 1900 and 1965 of different types of hostile transaction. Third, we apply our predictions of the interrelationship between share prices and takeovers to our data.

The empirical evidence we have generated is generally consistent with what would be predicted given our theoretical analysis. Open market bids, the preferred type of hostile control transaction at the beginning of the twentieth century, were eclipsed by hostile tender offers after World War II. This is what would be expected, given an increasing level of stock price accuracy over this period, driven by increases in the scope and quality of information that public companies must disclose.

It is true that even prior to World War II, investors tended to assume that share prices provided a reasonably accurate estimate of firm value. However, as stock prices became more informative, investors in target companies likely would have relied to a greater degree on their accuracy and thus would have been more inclined to interpret a rise in price associated with an OMB as being due to good news about the company’s operations. In contrast, deploying tender offers permitted bidders to make clear to target shareholders that any increase in the price of the shares was due to value which would be added only if the deal went ahead.

The fact there was a rise over time in bids made by acquirors from a different industry to the target confirms further a link between information available, share prices and
takeovers. Such acquirors, lacking within-industry data, would have been highly reluctant to proceed when disclosure was rudimentary. They would have been more inclined to go ahead when they could rely on the more extensive disclosures targets had to make under federal securities law to generate informed assessments of targets.

The displacement of OMBs by tender offers is also consistent with the introduction of meaningful prohibitions on market manipulation. A putative acquiror can at least theoretically restrict the sharp increase in target company share prices an OMB would be expected to generate by using trading techniques designed to restrict upwards share price movements. While bidders would have had substantial scope to deploy this strategy as the 20th century opened, regulatory initiatives likely largely precluded the market manipulation that made OMBs viable as a takeover technique.

One additional feature of our paper is to highlight the ubiquity of the proxy contest across the entire period as a means of capturing control. In periods where merger activity was in the doldrums, proxy fights were the only form of control contest that occurred. Yet even in eras when mergers occurred, thereby making OMBs and tender offers feasible, proxy contest numbers held up reasonably well.

The account of takeover history offered here admittedly is partial. As we have seen, share prices are important to the operation of the market for corporate control. Other factors, however, also would have been influential. We will be investigating these in our future research.