Changes in Controlling Shareholders' Holdings: Do They Entail Financial Tunneling?

by

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We examine changes in controlling shareholder holdings, looking for evidence of financial tunneling (unfair wealth transfers from public investors to controlling shareholders). Our sample comprises yearly data during 2000-2011 on 75 large Israeli companies. We find that controlling shareholders are successful in timing the stock market – there exists a significant negative correlation between changes in the mean controlling shareholders' equity holdings and market return. There is also some evidence that controlling shareholders increase (decrease) their holdings before years of positive (negative) excess returns in their shares. However, statistically significant mean excess returns are documented only after decreases in controlling shareholders holdings. Thus, we offer only limited support for the financial tunneling hypothesis.

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Keywords: Controlling shareholders; Financial tunneling.

1. Introduction

Most public companies outside the U.S. and U.K. (and some of the U.S. and U.K. firms – see Holderness, 2009) have a control group (an individual, family or coalition of a few dominant partners) that owns a large portion of the company's shares and controls the company's votes and decisions. The financial literature has identified a serious agency problem with this type of holding structure: the control group has the ability to extract from the company benefits for itself only ("private benefits"), at the expense of the rest of the shareholders (minority shareholders).

This study focuses on a particular form of private benefits extraction - financial tunneling. Our specific hypothesis is that controlling shareholders have superior "inside" information regarding the firm, and change their holdings and stake in the firm in accordance with this private information. When they know that the firm's share is underpriced, controlling shareholders increase their proportion in the firm, and vice versa when it is overpriced. By doing so, controlling shareholders profit at the expense of the "simple" public investors. On reflection, financial tunneling is essentially a generalization of the well known insider-trading phenomenon.

While insider trading has been extensively studies, evidence on other financial tunneling instruments and on the overall phenomenon of financial tunneling has been scarce. Previous studies document specific mechanisms of financial tunneling such as insider trading (Hirschey and Zaima, 1989 and Piotroski and Roulstone, 2005) or sales of equity stakes by the listed company to its controlling shareholders at below market prices (Cheung et al., 2006 and Peng et al., 2011). We contribute to existing literature by

focusing on a variable that aggregates almost all financial tunneling processes – the total change in controlling shareholders' proportion in the firm. Given that the various alternative financial tunneling mechanisms are substitutes, financial tunneling might be most evident when studying the total change in controlling shareholders proportion in firm's equity.[1] We do not contend that it is not important to inquire how exactly, i.e., by which "micro" mechanism, controlling shareholders financially tunnel. Rather, we argue that it is also interesting to examine the "macro" variable that aggregates most of these activities - the total change in controlling shareholders' proportion in firm's equity.

We offer three tests of the financial tunneling hypothesis. The first focuses on the general stock market trend: Do controlling owners exploit periods of decline in the stock market in order to increase their stake in the company, and later on sell these surplus holdings to the public when the stock market rises? This first test is somewhat indirect because it can be argued that it just examines the general stock market timing abilities of controlling shareholders. The second and more direct test isolates large changes in controlling shareholders holdings and inquires whether large increases (decreases) in these holdings precede years of positive (negative) excess returns in the firms' shares. The third test is related to the second one. If controlling shareholders exploit private information, the timing of large changes in controlling shareholders holdings would be "correct", that is in the year after an increase (decrease) in controlling shareholders holdings, the shares' excess return would be positive (negative, respectively).

[1] Changes in controlling shareholder holdings are particularly interesting in closely held firms. This is because in these firms there are several other mechanisms besides direct insider trading that may be exploited in financial tunneling attempts. For example, some financial transactions of the firms such as seasoned equity offers, private placements, rights offering, transactions in Treasury shares and others, may also serve financial tunneling. Thus, it appears that the financial tunneling problem in closely-held firms is more challenging than in disperse ownership firms.

Our sample comprises yearly data during 2000-2011 on 75 large closely-held (yet publically-traded) Israeli firms. Testing the financial tunneling hypothesis calls for data from a concentrated-ownership economy, where financial tunneling might be most visible, and Israel may suit our purposes well as it appears a "typical" closely held firms' economy – it ranks slightly above the median in Dyck and Zingales (2004) private benefits scale, and at the median in Laporta, Lopez-De-Silanes, Shleifer and Vishny (2002) investor protection scale. Another advantage is that Israeli data on controlling shareholders holdings is relatively accurate and detailed.

The empirical results partially support the financial tunneling hypothesis. We document a significant negative correlation between the stock market annual return and the (across-firms) average change in controlling shareholders' holdings. Evidently, controlling shareholders increase their proportion in the firm when the stock market declines and decrease their proportion in the firm when the stock market rises. This "contrarian" strategy enriches controlling shareholders on average. The second test weakly supports the tunneling hypothesis, as we find (with marginal statistical significance) that the tendency of controlling shareholders to increase or decrease holdings depends on their firm share's excess return in the year after the holding change. Increases in controlling shareholders holdings are more likely before a year of positive excess returns. Our third test also partially supports the financial tunneling hypothesis. The signs of the mean excess returns after large changes in controlling shareholders' holdings are consistent with the financial tunneling hypothesis; however statistically significant excess returns are documented only for the case of a decrease in controlling shareholder holdings. Overall, given that our evidence is consistent with the financial

tunneling hypothesis, we cautiously suggest that in some firms and on some occasions, controlling shareholders have engaged in financial tunneling.

The paper is organized as follows. Section 2 offers some background on financial tunneling, and presents our tests. Section 3 describes the sample and data. Section 4 reports and discusses the empirical results, and Section 5 concludes.

2. Background and Testable Propositions

Jensen and Meckling (1976) were the first to formally define the agency problem of closely held firms: firm's controlling shareholders who dominate firm's vote (and decision making) have both an interest and the ability to exploit their power and extract private benefits from the company. The term “private benefits" was defined by Bebchuk and Kahan (1990) as any value, received or perceived by the controlling shareholders, that is not shared with the rest of the shareholders. Obviously, private benefits consumption by the controlling shareholders is generally at the expense of public shareholders who receive lower proceeds from the firm.

One of the mechanisms for extracting private benefits has been offered the name “tunneling” by Johnson, Laporta, Lopez-de-Silanes and Shleifer (2000). According to Johnson et al. (2000) tunneling comprises two main activities: (1) “self-dealing” transactions, whereby controlling shareholders receive exaggerated compensation from the firm, and/or execute "related party" transactions with the firm at unfair prices that are favorable to them, and/or "front-run" on the company’s most prospective investment opportunities; (2) Financial transactions such as some sorts of private placements that eventually tend to exploit and discriminate the minority. Atanasov, Black and Ciccotello

(2011) refine a bit the tunneling definition by differentiating between cash flow tunneling, asset tunneling and equity tunneling, where equity tunneling closely resembles financial tunneling (i.e., tunneling via financial transaction).

Atanasov et al. (2011) define equity tunneling as a change in the controlling shareholders' share in the firm at the expense of the minority shareholders, without directly influencing the company's operational activities. According to Atanasov et al. (2011) equity tunneling can take a variety of forms, including: dilutive equity offerings (issuance of shares or securities convertible into shares, to insiders for below fair value); freezeouts (transactions in which insiders take the firm private) for less than fair market value; loans from the firm to insiders (which will not be repaid in a bad economy, and hence act partly as put options); sale of a controlling stake (without an offer to buy minority shares); repurchase of shares from insiders for more than fair value (diluting the value of the minority shares); and equity-based executive compensation that exceeds a market rate for services.

Existing literature on the phenomenon of tunneling is diverse.[2] However, only a handful of articles up until now have focused on non-insider-trading "financial tunneling". For example, Baek, Kang and Lee (2006) find that in Korea the price discounts on private issues to controlling shareholders are higher than on other private issues. Atanasov, Black, Ciccotello and Gyoshev (2010) document ruthless expropriation of minority shareholders by controlling shareholders in Bulgaria via dilutions and freeze

[2] Examples of studies include Atanasov, Black and Ciccotello (2011), Bates, Lemmon, and Linck (2006), Atanasov, Black, Ciccotello, and Gyoshev (2010) (Bulgaria), Baek, Kang, and Lee (2006) (Korea), Bertrand, Mehta, and Mullainathan (2002) (India), Cheung, Rao, and Stouraitis (2006) (Hong Kong), Berkman, Cole, and Fu (2010) (China), and Djankov, La Porta, Lopez-de-Silanes and Shleifer (2008) (multi-country).

outs at unfair prices. Atanasov et al. (2010) also present evidence consistent with the hypothesis that following a corporate law reform in Bulgaria that curbed financial tunneling, cash-flow tunneling has increased. This suggests that tunneling, including financial tunneling, has many venues that are substitutes and difficult to block. [3]

In this study we depart from the "micro" analysis (i.e., from studies of individual financial tunneling mechanisms), and examine the "macro" picture, i.e., the time series of total changes in controlling shareholders proportion in their firms. While we recognize the great and perhaps superior scientific value of "micro" studies, there are also advantages to a "macro" analysis. For if, different tunneling mechanisms are substitutes, the bottom-line aggregate numbers are most descriptive. Admittedly, some or even most of the changes in controlling shareholders holdings may not emanate from financial tunneling motives. However, the same criticism applies to the "micro" studies, where the specific mechanism may also serve legitimate business purposes ("propping") and not only financial tunneling. Anyway, it appears useful to examine also what the total and average changes in controlling shareholders holdings can tell us.

Specifically, we propose three empirical tests of financial tunneling. The first follows the mean changes in controlling shareholders holdings during years of stock markets rise (boom periods) and decline (bear periods). Periods of continued advance or continued retreat in stock markets may generate (at least on occasions) a temporary

[3] Financial tunneling has been previously researched in Israel too. Zlicha and Sherbi (2009) address rights issuance on the Tel Aviv Stock Exchange and find that consistent with Wu and Wang (2007)'s model, rights offering leads to a dilution in the minority shareholders' holdings. Interestingly, during periods of declining equity markets, the dilution of the public's holdings is especially large and significant. Hence, consistent with financial tunneling, controlling shareholders tend to increase their share in the firms via rights issuance especially when their firms trade at cheap prices.

wedge between market prices and the shares' economic value. Consequently, controlling shareholders, who possess more accurate information about the company value, may exploit their superior private information to increase their proportion in the firm when shares are underpriced (typically in bear markets) and decrease their proportion in the firm when shares are overpriced (typically at bull markets). If this contrarian activity of controlling shareholders is prevalent in reality, we expect to find a negative correlation between the market index yearly return and the mean yearly change in controlling shareholders proportion in publically traded companies.

The second test is more direct. We focus on large changes in controlling shareholders holdings. If financial tunneling plays a role in these significant holding changes then we expect a higher likelihood of holding increases before a year of positive excess return in the firm's share. We will employ a difference in proportion z-test to compare the proportion of holding increases in year t before a "good" (= positive excess return) year t+1 with the counterpart proportion before a "bad" (= negative excess return) year t+1.

The third and perhaps most direct test proposes that if changes in controlling shareholders holdings is driven by inside information, then following an increase (decrease) in controlling shareholder proportion in firm Y its share would record significantly positive (negative) excess returns on average.

3. Sample and Data

Our initial sample comprises all closely-held companies included in the Tel Aviv-100 index at the beginning of year 2000. Tel Aviv-100 is a share price index of the 100

highest free-float stocks traded on the Tel Aviv Stock Exchange, and it is basically an index of the largest companies' shares traded on the Tel Aviv Stock Exchange. Also noteworthy, a closely held firm is defined by us as a firm in which controlling shareholders control over 40% of the vote.

From the initial sample we exclude all dually-listed companies, namely all companies whose shares were also traded on a foreign exchange (U.S. and U.K exchanges in our case). This is because controlling shareholders in dually-listed firms, bounded by stricter U.S. or U.K. corporate governance rules, probably do not or cannot behave like the typical local control group. Dually-listed firms also have different reporting standards, making their data not fully-comparable to that of the local firms. We further omit three companies where the State of Israel was the controlling shareholder. Last, three more companies were excluded due to insufficient data.[4] The final sample comprises 75 closely-held companies at the beginning of the sample period, and 73 closely-held companies at the end.[5]

Our data is yearly, and the sample period ranges from December 31, 1999 to December 31, 2011. The principal variable of this study, the holdings of controlling shareholders, is hand-collected from the companies' annual reports. Scanned annual reports are available to us (via Ifat, a data-base vendor). Article 24 of the annual report of Israeli firms details the holdings of large shareholders and reveals all relations between them. For example, if a family controls the firm via four different local or foreign private companies, Article 24 discloses the names of the individuals who are the ultimate owners,

[4] These companies traded during the sample period for less than a year.
[5] Agis and Lippman became dually-listed companies during the sample period.

and any relations between them. Article 24 also provides information about voting agreements between large shareholders, hence partnerships in control (=voting coalitions) are relatively easy to detect. The explicit and detailed nature of Article 24 makes control group identification and measurement of controlling shareholders holdings in Israel fairly accurate and trustworthy, which is a major advantage of our data. Notably, we compile yearly data on controlling shareholders' vote percentage, and when calculating the vote percentage, we neutralize the treasury shares, so that the vote percentage would take into account only active shares.[6]

Monthly stock return data are collected from The Tel Aviv Stock Exchange internet site (www.tase.co.il). For companies that do not trade anymore on the Tel Aviv Stock Exchange we resorted to stock return data from Predicta (a local data base vendor).

Two sample or methodological comments are in order. First, in our second and third tests, looking at excess returns after changes in controlling shareholders' holdings, we narrow the sample to large holding changes only. We suspect that most small changes in controlling shareholders holdings are innocuous, that is may arise from personal liquidity or other non-tunneling related motives. Thus, in order to achieve some inference power, we filter out yearly changes of less than 1% in controlling shareholders holdings. Unfortunately, 58 of the 276 large holding changes in our sample are further excluded because in cases such as freezeouts (buying all company shares from the public) or initial public offers, stock price data in the year after and/or before the large change do not exist.

[6] There are six companies that, at least at the beginning of the sample, were dual-class (with controlling shareholders percentage in equity differing from their percentage in vote). In these companies we add up the voting power achieved by each share class. We also examined the change in the controlling shareholders' equity percentage. The equity percentage results are almost identical to the vote-based results reported hereafter.

The second methodological issue concerns excess return estimation. For each large change "event", we fit the market model in the 36 months period including the change calendar year (year t) and the two calendar years surrounding it (year t-1 and year t+1). The 36 month period is methodologically sufficient for excess return estimation and it minimizes possible overlap between adjacent large changes in the same firm. The excess return in a particular month is estimated by the market model residual in that month, and the excess return in a particular calendar year is approximated by the sum of firm's excess return in that year 12 months. One of the problems of the study is that we lack a clear event month. This is because most of our large changes consist of several changes in controlling shareholders holdings within a particular calendar year. Thus, our time measurement units are calendar years, which may be too gross for precise response estimation.

4. Empirical results

Table 1 presents the average vote percentage of controlling shareholders in our sample firms during the sample period (end of 1999 through end of 2011). Mean controlling shareholders vote exceeds 70% in each of the sample years, and is generally on the rise during the sample period. Evidently, our sample comprises closely held firms with dominant controlling shareholders who can potentially engineer financial tunneling maneuvers.

[Insert Table 1 here]

4.1. The correlation between changes in controlling shareholders' holdings and stock market return

Our first empirical test examines the correlation between the annual change in controlling shareholders mean vote and the Tel Aviv-100 (market index) annual return. The financial tunneling hypothesis predicts a negative correlation between these two variables, i.e., that the control group typically increases its holdings during declining markets and decreases its holdings during rising markets.

Figure 1 plots the average vote percentage of controlling shareholders in the sample companies and the level of the Tel Aviv-100 market index during 2000-2011. A strikingly clear negative correlation between the two variables can be observed - during periods of market decline (rise) the mean controlling shareholders vote increases (decreases).

[Insert Figure 1 here]

Table 2 documents the Pearson and Spearman correlations between the annual returns on the Tel Aviv-100 Index and the annual changes in the mean vote percentage of the controlling shareholders. We present correlations in three overlapping cross-sections: the overall sample, subsample 1 (that omits two companies that became dually listed during the sample period), and subsample 2 (that further excludes a company that underwent a major debt settlement in 2010).[7]

[Insert Table 2 about here]

[7] This debt settlement caused a significant involuntary decrease in the control group's holdings percentage. Therefore, we decided to examine the correlation excluding this company as well.

Table 2 results demonstrate a statistically significant negative correlation between the Tel Aviv-100 returns and the mean annual percentage change in the controlling group's holdings, for all the samples we examined. Both the parametric Pearson correlation coefficient (between -0.59 and -0.61) and the non-parametric Spearman correlation coefficient (between -0.71 and -0.76) highlight a relatively strong negative correlation.

Table 2 findings show that the control groups in Israel exploit equity market fluctuations: increase their percentage in equity when the market is down, and decrease their holding percentage when the market is up. In doing so controlling groups extract profits at the expense of the minority shareholders.

At this point, it is important to note that we cannot prove that the phenomenon of "increasing holdings when stock market prices are relatively cheap and decreasing holdings when stock market prices are relatively high" is planned ahead of time by controlling shareholders. It is possible that this negative correlation is forced upon controlling shareholders - during periods of decline they are often required to assist their firms, i.e., to increase their holdings. And, during periods of growth, they (controlling owners) need external equity to expand the firm, thereby diluting their own holdings.

Moreover, all that Table 2 documents is successful "market timing" by the controlling shareholders on average.[8] How can we know, and why should one deduce that this nice market timing ability emanates from inside information about controlling

[8] Note, however, that controlling shareholders trade in their own firm shares and not in the market index.

shareholders own firms? It is equally conceivable that controlling shareholders are more rational, more experienced and less myopic than the general public. Hence, in "poor" periods, when the public flees the market, controlling shareholders who have a longer-term perspective and view, accumulate shares, and in "good" periods, when the crowd is buying shares enthusiastically and uninhibitedly controlling shareholders decrease holdings. This second contention in defense of controlling shareholders casts the blame on the general public. The public has mental weaknesses and behavioral biases that are exploited by smart traders such as the controlling shareholders. There is nothing unfair about it. It is fair game.

However, it is likely that the inside information about their own firm value helps controlling shareholders in their "contrarian" decisions. They often know when their shares are worth more (less) than market price and are less afraid to buy (sell) their shares during market shortfalls (boom periods). One can ask: If controlling shareholders were just smart traders, why do they invest in their own firm shares and not in the market portfolio? Perhaps they feel more comfortable in investing in their own firms because of the inside information they possess.

In sum, the findings of the correlation tests are consistent with the financial tunneling hypothesis. However, we remain unconvinced, as several other plausible interpretations exist. In the next section we attempt more direct tests of financial tunneling.

4.2. The relation of changes in controlling shareholders holdings to firm's excess return

Financial tunneling is attractive for controlling shareholders when they have inside information about their firm that is not yet incorporated in market prices. If controlling shareholders foresee, based on inside information, a "better than expected" next year (hence, positive excess returns in next year), they might increase their holdings this year waiting for the abnormal appreciation next year. This is a financial tunneling act because controlling shareholders increased their holdings at below fair prices (or below full-information prices). A similar argument holds for decreases in controlling shareholders holdings ahead of disappointing or negative excess return years.

Empirically, we restrict our attention to the subsample of 218 large changes (changes of over 1%) in controlling shareholders holdings. This is because as explained in section 3, we expect less noise and more powerful inference in this subsample. In total, there are 112 large holding increases and 106 large holding decreases in our subsample.[9] For each of the changes we estimate the excess return in the year before, year of, and year after the change.

When the large holding change precedes a year with a positive excess return the proportion of holding increases is 0.567, and when it precedes a year with a negative excess return the proportion of holding increases is 0.471. Holding increases appear 0.096 (about 10%) more frequent before a "good" year of the company shares. The difference in proportions z-statistic is 1.4, implying that the null hypothesis of no relation between current holding changes and future excess returns can be rejected at the 10% significance

[9] During the sample period controlling shareholders' average holdings increased, hence the fact that we find slightly more increases than decreases is not surprising.

level against the one-sided alternative that holding increases are more likely before a positive excess return year.

The finding that holding increases are more likely ahead of a positive excess return year is consistent with the financial tunneling hypothesis. However, it is also important to note the raw numbers. In the "ideal" conditions, i.e., before a positive excess returns year, the frequency of holding increases (0.567) is close to 0.5 (the expected frequency under the no-relation null hypothesis). Hence, not only is the test z-statistic marginal, the effect itself also appears minute.

On reflection, it is possible that the problems of our sample, mainly the absence of a clear event date, generate our weak results. However, alternatively, it is also possible that controlling shareholders are reluctant to exploit their private information for the purpose of financial tunneling. The reluctance to financially tunnel may be a rational valuation-based controlling shareholder decision. For if financial tunneling is disclosed, controlling shareholder reputation is stained and firm share price declines. Perhaps controlling shareholders in our sample weighed the benefits of financial tunneling against its costs (i.e., against their own wealth loss given the decline in market price upon recognition of financial tunneling), and rationally decided to financially tunnel only rarely.

Our third test of the financial tunneling hypothesis is a variation of the second test. If some changes in controlling shareholders' proportion in firm's equity are motivated by inside information, we should observe positive excess returns on average in the period after controlling shareholders increased their holdings and negative excess returns on average after they decreased it.

Table 3 presents the mean excess returns in the year before, year of, and year after large changes in controlling shareholders holdings. Examining the decreases in controlling shareholders holdings (Panel A), a statistically significant negative mean excess return of -4.75% can be observed in the year after large holding decreases. This supports the financial tunneling hypothesis.

However, when we examine the increases in controlling shareholders holdings (Panel B), we find a statistically insignificant mean excess return of 1.36% in the year after the large increases. The sign of this mean excess return is consistent with the financial tunneling hypothesis, yet the lack of statistical significance shows that the subsample of large increases in controlling shareholders holdings only weakly supports the financial tunneling hypothesis. It is possible that the small positive response is due to some contamination in the increased holdings sample. During the sample period the average holdings of controlling shareholders increased. Thus, some of the "increase holdings" transactions may be benign and did not emanate from inside information.[10,11]

[Insert Table 3 about here]

Before concluding, it is also interesting to examine the pre-change stock performance. Financial tunneling appears even more enticing for controlling shareholders when past excess returns on the firm's share are opposite in sign to the future expected excess returns. If next-year expected excess returns are positive (negative) and previous-

[10] Similar results are obtained when we use only changes of at least 2% in controlling shareholders' vote.

[11] Other possible reasons for the rather limited success in the third test may be identical to the reasons for the weak support of the financial tunneling hypothesis in our second test – see the above discussion. It is either that our tests are powerless or that controlling shareholders are reluctant to financially tunnel.

year excess returns are negative (positive), the psychological or behavioral stimulus for financial tunneling appears relatively strong.[12]

In Table 3 we observe that in the year before holding increases the mean excess return is negative (-3.03%) and in the year before holding decreases the mean excess return is positive (1.80%). Consistently with the above behavioral bias conjecture, controlling shareholders decrease their holdings after abnormal advances in their firm's share price and increase their holdings after their share price lags behind. However, both pre-change years' excess returns are statistically insignificant, preventing us from any meaningful inference on the behavioral bias conjecture.

5. Summary and Conclusions

We examine changes in controlling shareholders proportion in their firms, trying to unveil evidence of financial tunneling (unfair wealth transfer from public investors to controlling shareholders via financial transactions), Most of the financial tunneling mechanisms are substitutes; thus the aggregate change in controlling shareholders holdings may capture best financial tunneling maneuvers. We are the first to examine the total change in controlling shareholders holdings as a possible manifestation of financial tunneling.

Using a sample of yearly data during 2000-2011 on 75 large companies in Israel, an economy dominated by closely-held firms, we document evidence consistent with the existence of financial tunneling. Our evidence comprises three tests. In the first test we

[12] Note, however, that a rational agent would rely only on future expected excess returns.

find a significant negative correlation between the general stock market return and the mean change in controlling shareholders proportion in the firm. Controlling shareholders act as contrarians. When the stock market falls controlling shareholders increase their holdings and when market is on the rise they dilute their holdings.

In the second test we find that the tendency of controlling shareholders to increase or decrease holdings depends on their firm share's excess return in the year following the change in holdings. Increases in controlling shareholders' holdings are somewhat more likely before a year of positive excess returns.

Our third test also partially supports the financial tunneling hypothesis. The signs of the mean excess returns in the year after large changes in controlling shareholders' holdings are consistent with the financial tunneling hypothesis; however, statistical significance is achieved in only part of the cases.

The successful timing abilities of controlling shareholders unveiled in this study provide them profits at the expense of the public, which raises the suspicion that it is an unfair zero-sum game, namely financial tunneling. Controlling shareholders may have exploited their inside information to expropriate wealth from innocent public investors. However, given that our evidence is sometimes statistically insignificant and provides only limited support to the financial tunneling hypothesis, we do not argue that we have shown that financial tunneling is a well-established phenomenon and a major problem.

It is possible that our "weak support" results are due to our sample problems. On the other hand, it is also possible that some controlling shareholders shy away from financial tunneling opportunities because they fear its potential negative impact on firm's reputation, the company share prices and ultimately on their own (controlling

shareholders) wealth value. In such a case, our weak supportive results may be common and recurring in future financial tunneling research as well. Clearly, despite our novel tests and new evidence consistent with financial tunneling, we have not settled the issue. The quest for more extensive tests and more evidence on financial tunneling continues.

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Table 1: Mean controlling shareholders' vote in our sample companies: 2000-2011

The table documents end-of-calendar-year average vote of controlling shareholders in a sample of large closely held companies traded on the Tel Aviv-100 Index.

Year end	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Number of companies in the sample	75	75	75	75	75	74	73	73	73	73	73	73	73
The controlling shareholders average vote (in %)	72.07	72.68	73.91	74.49	74.33	74.65	74.95	74.17	75.81	77.95	77.75	77.09	77.55

Table 2: Correlation tests of the timing ability of controlling shareholders

The table reports correlations between the annual return on the Tel Aviv-100 Index and the annual change in controlling shareholders average vote. The correlations are calculated based on 12 yearly observations (2000-2011). Sample 1 comprises 73-75 publically-traded Israeli companies for the entire sample period. This is the study's main sample. Subsample 1 omits two companies that became dually-listed during the sample period. (As a result, there are 73 companies for the entire sample period). Subsample 2 further excludes a company that underwent a major debt-settlement in 2010.

	Pearson correlation			Spearman correlation			
	Correlation coefficient	t-stat	p-value	Correlation coefficient	t-stat	p-value	Number of companies
Overall sample	-0.59	-2.28	0.045	-0.76	-3.64	0.005	73-75
Subsample 1	-0.60	-2.34	0.041	-0.71	-3.21	0.009	73
Subsample 2	-0.61	-2.44	0.035	-0.71	-3.22	0.009	72

Table 3: Abnormal returns around changes in controlling shareholders holdings

The table reports the mean abnormal stock returns (AR in short) surrounding changes of more than 1% (in absolute value) in controlling shareholders vote. For each change event we run a monthly market model on the 36 months comprising calendar years t-1 trough t+1 (where year t is the calendar year of the holding change). Monthly AR is defined as the residual of the market model regression, and we compute and present in the table the sum of the monthly ARs in each year. Results are shown for holding decreases and increases separately.

	Number of observations	Abnormal return	t-stat
Panel A: Abnormal returns around decreasing transactions			
Preceding year (year t-1)	106	1.80%	0.78
Concurrent year (year t)	106	2.95%	1.14
Following year (year t+1)	106	-4.75%	-2.10
Panel B: Abnormal returns around increasing transactions			
Preceding year (year t-1)	112	-3.03%	-1.33
Concurrent year (year t)	112	1.66%	0.67
Following year (year t+1)	112	1.36%	0.56

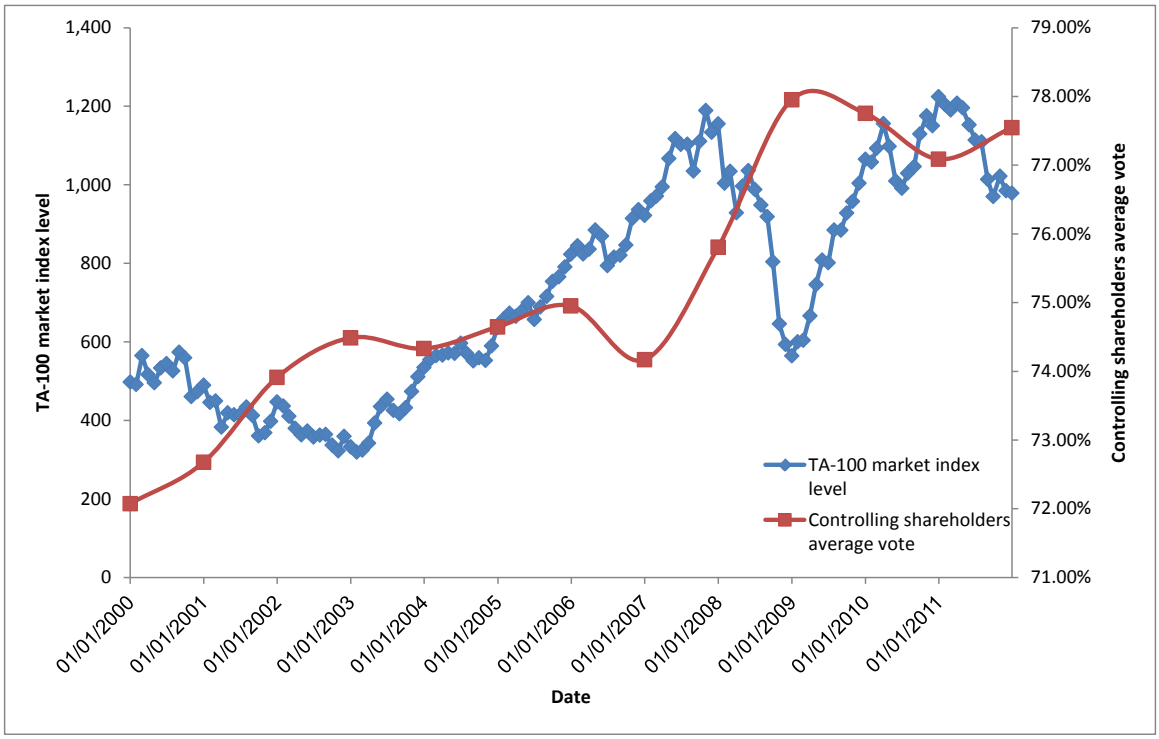


Figure 1: A time series plot of the controlling shareholders' average vote (in our 75 sample firms) and of the Tel Aviv-100 market index level.

The average vote is measured at the end of every calendar year, while the Tel Aviv-100 Index values are at the end of every calendar month. The sample period is December 31, 1999 through December 31, 2011.