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*Valuation Discounts and Premiums Insights*

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**WILLAMETTE MANAGEMENT ASSOCIATES  
DISCOUNT FOR LACK OF VOTING RIGHTS/  
PREMIUM FOR VOTING RIGHTS STUDY**

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**INTRODUCTION**

Empirical evidence indicates that the stock market price for voting common shares is generally greater than the stock market price for comparable nonvoting common shares. Empirical evidence also indicates that the stock market price for super voting common stock is generally greater than the stock market price for comparable normal voting common stock.

Accordingly, these empirical data indicate that shareholders pay a price premium for voting privileges related to the common shares of a public corporation. And, these empirical data also indicate that shareholders will extract a price discount for the lack of voting privileges related to the common shares of a public corporation.

While there are not sufficient empirical transaction pricing data to support this hypothesis, valuation analysts generally agree that this relationship also holds for shares of private corporations, LLC units, LLP units, and other equity ownership interests.

**VOTING RIGHTS**

For purposes of this analysis, we define voting common stock as having (1) one vote per share or (2) a fraction of a vote per share while another class of stock has one vote per share. We define super voting common stock as having either (1) a greater number of votes per share than the voting common stock or (2) the ability to elect a disproportionately high number of board of directors members. Therefore, this class of stock has greater than normal voting rights in a corporation that has at least two classes of common stock outstanding.

For purposes of this analysis, we define nonvoting common stock as having no voting rights per share. Therefore, this class of stock has less than normal voting rights in a corporation that has at least two classes of common stock outstanding.

For purposes of this analysis, our categories of "voting" stock and "nonvoting" stock are not absolute. That is, we have not strictly limited our analysis to a comparison of (1) stock with one vote per share and (2) stock with no vote per share. Rather, our analysis considers the general pricing differences between three voting rights-related conditions: (1) stock with normal voting rights, (2) stock with greater than normal voting rights, and (3) stock with less than normal voting rights.

Voting shares enable the shareholders to vote on certain corporate matters. These corporate matters include electing the corporation board of directors (who oversee the management of the corporation). Nonvoting shares do not allow the shareholders to vote on certain corporate matters. In some cases, the voting power of nonvoting shares may be limited to corporate matters that are minimally required by state corporation law. Other than voting rights, the voting shares and nonvoting shares of the corporations considered in our analysis are typically comparable with regard to the shareholder investment risks and expected returns.

Super voting shares (1) have more than one vote per share and (2) typically elect the majority of the corporation board of directors. Other than voting rights, the voting and super voting shares of the corporations considered in our analysis are typically comparable with regard to the shareholder investment risks and expected returns.

**OBJECTIVES OF THE LACK OF VOTING RIGHTS/VOTING RIGHTS STUDY**

This discussion presents the results of recent empirical research regarding (1) the market-derived price discount regarding the lack of voting rights (or of inferior voting rights) and (2) the market-derived price premium for voting rights (or of superior voting rights).

First, we will summarize the recent professional literature with regard to discount for lack of voting rights/premium for voting rights (DLVR/PVR) studies. Second, we will report the results of a DLVR/PVR study recently performed by Willamette Management Associates (WMA).

In this WMA DLVR/PVR study, we considered both (1) price discounts/price premiums related to voting rights on a per share basis and (2) the allocation of a corporation's total equity value between (a) shareholder voting rights only and (b) all other shareholder ownership rights.

The principal research objectives of the WMA DLVR/PVR study were as follows:

1. to quantify the market-derived price discount associated with the lack of voting rights (or inferior voting rights) of common stock and

2. to quantify the market-derived price premium associated with the voting rights (or superior voting rights) of common stock.

The second research objective of the WMA DLVR/PVR study was to identify any corporate attributes/factors that affect the magnitude of the DLVR/PVR. The corporate attributes/factors considered in the WMA study include: (1) company size, (2) stock exchange listing, (3) subject industry, (4) stock classes (voting/nonvoting versus supervoting/voting), and (5) concentration of stock owned by founders/insiders.

The third research objective of the WMA study was to quantify the value of voting rights only as a percent of the total bundle of legal rights associated with common stock ownership.

The WMA DLVR/PVR study analyzed these three research objectives using empirical stock market data as of two time periods: (1) as of December 30, 1994 and (2) as of December 31, 1999.

We selected December 31, 1999, as the most recent analysis date for two related reasons. First, that date includes most of the stock price “irrational exuberance” of the late 1990s and early 2000. It is the last calendar year end before the dot-com and general stock market price increase “bubble” burst. Second, after the stock market “bubble” burst in 2000, the market experienced a severe price correction period through most of 2002.

After the correction period, the market has experienced a period of price increases in 2003 and early 2004. However, the market has not yet returned to the “irrational exuberance” prices of 2000. This recent period of price correction/price increase may have caused a short-term aberration in the relationship of voting/nonvoting stock prices. Accordingly, we selected an analysis date prior to this potentially aberrational period.

We selected December 31, 1994, as the first analysis date simply because it represents the middle of the decade of the 1990s. The decade of the 1990s experienced a fairly consistent trend of stock market price increases. We selected December 30, 1994, to represent (1) a period of normalcy within a longer-term market cycle and (2) a period before the influence of the rapid dot-com and general stock market.

Numerous analysts have studied and quantified the DLVR/PVR over different time periods. As part of our analysis, we reviewed recent published DLVR/PVR studies. We reviewed these published studies looking for both (1) trends in the empirical DLVR/PVR conclusions and (2) consistencies/inconsistencies with the WMA DLVR/PVR study conclusions.

Based on our analysis of the selected stock price data, the WMA study attempts to identify the factors or attributes that affect the size of the DLVR/PVR. The objective of this procedure

is to allow analysts to consider any identified factors or attributes in their selection of the appropriate DLVR/PVR for their subject companies/securities.

The WMA study also attempts to quantify the value of voting rights alone (i.e., as a unique legal right) as a percent of the total bundle of legal rights associated with common stock ownership. In other words, for a subject company, the WMA study attempts to identify the percent of the total equity value that relates to voting rights only—as compared to all other legal rights of common stock ownership. This is an additional perspective on the value of voting rights that other published empirical studies have not addressed.

### VALUATION IMPLICATIONS OF THE DLVR/PVR

There are several reasons why a corporation may have multiple classes of common stock with different voting rights. This is true for both publicly traded corporations and privately held corporations. The DLVR/PVR

issues related to the various classes of common stock have valuation implications related to:

1. transactions,
2. taxation,
3. corporate planning,
4. financing,
5. litigation, and
6. bankruptcy.

### MERGER/ACQUISITION TRANSACTIONS

It is not uncommon for corporations to have multiple classes of common stock outstanding—differing only in voting rights—in a multi-investor ownership environment. Common stock shares with different voting rights typically have different values, particularly after a merger and acquisition (M&A) transaction.

Valuation analysts are often asked to quantify the DLVR/PVR so that an appropriate value can be assigned to each stock class. In a privately owned corporation, there may be two or more distinct categories of equity owners. Again, this is often the case after an M&A transaction. The different categories of owners may include:

1. seller (previously controlling) stockholders,
2. founder/founding family stockholders
3. management stockholders,

*“. . . the WMA study attempts to identify the factors or attributes that affect the size of the DLVR/PVR.”*

4. employee stockholders (with or without an ESOP structure),
5. financing source private equity investors, and
6. passive outside investors.

Accordingly, different categories of investors may want to own classes of stock with differing voting rights.

A mutual insurance company demutualization is another example of an M&A transaction where two (or more) classes of stock are typically created. Prior to the demutualization, the mutual insurance company is owned by its policyholders/owners. Typically, there are two types of mutual insurance company policyholders: (1) participating and (2) nonparticipating. The participating policyholders have similar ownership rights to voting shareholders, while the nonparticipating policyholders have similar ownership rights to nonvoting shareholders.

Upon the demutualization (typically followed by the IPO of the subject company or by the corporate acquisition by another entity), the insurance company will typically allocate the total equity value between these two classes of policyholders. The value of voting rights is an issue in the total equity allocation process.

#### **CORPORATE/SHAREHOLDER TAXATION**

Controlling shareholders often organize their closely held corporations so as to minimize federal gift and estate taxes. Nonvoting common stock is typically valued at a price discount as compared to comparable voting common stock. Therefore, nonvoting shares will have a lower taxable value than comparable voting shares.

In some instances, the owner of the closely held corporation may prefer to gift nonvoting stock (instead of voting stock) to children/grandchildren. This is because the gifted shares will be appropriately valued at a price discount for federal gift tax purposes.

In other instances, the close corporation owner may prefer to retain the nonvoting shares in his or her estate (and to transfer voting stock before the date of death). In that case, the nonvoting shares retained in the estate will be appropriately valued at a price discount for federal estate tax purposes.

#### **CORPORATE PLANNING**

In family-owned (and many other closely held) corporations, the owners typically fall into two categories: (1) stockholders who actively participate in managing/operating the company and (2) shareholders who do not actually participate in managing/operating the company.

In order to keep the corporation under the control of the family members who actively participate in the business (while still allocating equity ownership among all family members),

the corporation may have two classes of common stock. The family members who actively participate in management may receive/earn/buy the voting shares. The family members who do not actively participate in management may receive/earn/buy the nonvoting shares.

In some cases, the family corporation founder may retain super voting shares while other family members may receive/earn/buy regular voting shares. This ownership of super voting shares ensures that the founding shareholder retains final control of corporate direction during the founder's lifetime.

#### **FINANCING**

Owners of closely held corporations may sometimes pledge their stock as collateral for a secured personal loan. In that case, the bank would want to know (1) whether the pledged stock is voting stock or nonvoting stock and (2) the value of the voting stock versus the nonvoting stock. This information will allow the financial institution to determine the value of the stock collateral. That determination may affect both (1) the principal amount of the loan for which the shareholder would qualify (i.e., based on a loan to value ratio) and (2) the interest rate on the stockholder loan (i.e., also based on a loan to value ratio).

In addition, the distinction between voting and nonvoting stock may also affect corporate financing. This may occur if the corporation issues debt instruments that may convert into either voting or nonvoting shares. The corporation may also obtain either mezzanine or private equity financing. These financing sources often have specific expectations with regard to obtaining conversion rights to either nonvoting, voting, or super voting shares as part of their total compensation for the debt/equity financing.

#### **LITIGATION**

The value of voting rights is an issue in shareholder disputes, especially with regard to minority shareholder rights. These minority shareholder rights are provided for by state statutes and include (1) dissenting shareholder appraisal rights and (2) shareholder oppression appraisal rights. In these statutory claims, shareholders may contend that they are not receiving the appropriate value for their nonvoting/voting shares.

In a family law/marital dissolution dispute, the family-owned stock is typically included in a valuation of the marital estate. Accordingly, they would affect the value of the nonvoting/voting stock included in the marital estate.

The value of nonvoting/voting/super voting shares may also affect the amount of gift/estate/income tax in federal tax litigation matters.

**BANKRUPTCY**

In either a debt restructuring or corporate reorganization pursuant to a bankruptcy, corporate debtors sometimes wind up as corporate shareholders. After the reorganization, the debtor may have multiple classes of equity securities outstanding. These classes may include both common stock and preferred stock. And, these classes may include both nonvoting and voting common stock.

When considering a proposed plan of reorganization, creditors often compare (1) the value of the debt securities cancelled and (2) the value of the equity securities received. In these considerations, the appropriate DLVR/PVR affects the value of the reorganized equity securities.

**RELATIONSHIP BETWEEN DLVR AND PVR**

Most empirical DLVR/PVR studies directly quantify the price premium for voting rights. This relationship is quantified as follows:

$$PVR = \frac{P_s - P_i}{P_i}$$

where:  $P_s$  equals the price of the stock with superior rights, and

$P_i$  equals the price of the stock with inferior voting rights.

For instance, if the Subject Company voting stock sells for \$22 per share and the otherwise comparable Subject Company nonvoting stock sells for \$20 per share, the PVR is calculated as follows:

$$\begin{aligned} PVR &= \frac{\$22 - \$20}{\$20} \\ &= \frac{\$2}{\$20} \\ &= 10\% \end{aligned}$$

Likewise, most empirical DLVR/PVR studies indirectly quantify the price discount for lack of voting rights. That is, the DLVR is calculated based on the previously determined PVR. This DLVR relationship is quantified as follows:

$$DLVR = 1 - \left( \frac{1}{1 + PVR} \right)$$

For instance, if the Subject Company PVR is determined (from the above example) to be 10 percent, the DLVR is calculated as follows:

$$DLVR = 1 - .9091$$

$$DLVR = 9.1\%$$

Therefore, a 10 percent PVR implies a 9.1 percent DLVR. And, a 9.1 percent DLVR implies a 10 percent PVR.

This relationship is the methodology the WMA study used to extract the DLVR from the calculated PVR. That is, first, we calculated the PVR from the empirical stock price data. Second, we quantified the DLVR (using the above-indicated formula) from the calculated PVR.

**REVIEW OF PUBLISHED DLVR/PVR STUDIES**

Previously published DLVR/PVR studies have covered the time period of 1940 through 1994. There is a diverse range of both nations and stock exchanges covered by these DLVR/PVR studies, including: the United States, Canada, Italy, Great Britain, Switzerland, Sweden, and Israel. The results of many of the recent published DLVR/PVR studies are presented in Exhibit 1.

Many of the DLVR/PVR studies listed in Exhibit 1 are not directly applicable to U.S. corporations listed on domestic stock exchanges. This is because there are significant differences between various countries with regard to (1) securities laws (particularly with regard to shareholder rights), (2) stock exchange listing and regulation requirements, (3) public reporting and shareholder disclosure requirements, and (4) the relative rights of nonvoting shareholders versus voting shareholders.

Even within the same country (e.g., within the United States), federal securities laws and stock exchange regulations have changed over time. For that reason, the market-derived DLVR/PVR may have changed since the above-listed studies were performed. Accordingly, the results of DLVR/PVR studies encompassing earlier time periods may no longer be applicable as of the current date.

The DLVR/PVR studies performed by (1) O'Shea and Siwicki and (2) Houlihan, Lokey, Howard, & Zukin, appear to be the most relevant to contemporary domestic corporations. This is because these two DLVR/PVR studies (1) are the most recent and (2) pertain to the U.S. securities markets. The results of both of these two studies conclude both a mean and a median price PVR of under 5 percent.

The following discussion summarizes the methodology, data sources, and conclusions of the WMA DLVR/PVR study. The WMA study (1) updates (and, presumably, confirms) the

**Exhibit 1**  
**Partial List of Published DLVR/PVR Studies**

DLVR/PVR Study Performed By	Years Covered in Study	Country/Exchange	Number of Companies Analyzed	Concluded Premium Voting Rights	Comments	
Lease, McConnell, and Mikkelson	1940-1978	U.S.	30	5.44%	Mean, 30 companies	
O'Shea and Siwicki	1989-1990	U.S.	43	3.80%	Mean	
			33	2.40%	Mean, excluding 5 highest & 5 lowest companies	
			43	1.30%	Median	
			6	0.40%	Mean	
			6	1.40%	Median	
Houlihan Lokey Howard & Zukin	1994	U.S.	18	2.05%	Mean, 1 day	
			18	1.46%	Median, 1 day	
			18	1.52%	Mean, 60 day moving	
			18	1.15%	Median, 60 day moving	
			18	1.94%	Mean, 120 day moving	
			18	1.29%	Median, 120 day moving	
			18	2.53%	Mean, 180 day moving	
			18	1.88%	Median, 180 day moving	
			18	3.20%	Mean, 260 day moving	
			18	2.73%	Median, 260 day moving	
Smith and Amoako-Adu	1981-1986	Toronto	81	7.84%	Mean	
			81	4.17%	Median	
	1988-1992		81	19.31%	Mean (includes 2 companies with premiums > 100%)	
			81	6.37%	Median	
Zingales	1984-1990	U.S.	94	10.47%	Mean	
			94	3.02%	Median	
	1987-1990		Milan	84	81.50%	Mean
				84	73.70%	Median
Kunz and Angel	1990-1991	Switzerland	29	18.16%	Average, bearer stock	
			29	6.47%	Average, registered stock	
Rydqvist	1983-1990	Sweden	65	12.00%	Simple mean	
			65	17.00%	Simple median	
			65	4.00%	Adjusted mean	
			65	4.00%	Adjusted median	
Megginson	1995-1982	Britain	152	13.30%	Mean	
Levy	1981	Israel	25	45.50%	Mean	

Sources:

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results of the two aforementioned studies, (2) reaches independent conclusions regarding the DLVR/PVR for the subject time periods, and (3) quantifies the value of voting rights alone as a percent of the total bundle of legal rights associated with common stock ownership.

### THE WMA DLVR/PVR

In the WMA DLVR/PVR study, first, we identified corporations with two classes of common stock outstanding (1) as of December 31, 1994, or (2) as of December 31, 1999.

Second, we collected and analyzed stock price data regarding superior voting rights shares versus inferior voting rights shares. Because of this, we limited our study to corporations with classes of stock that differed only in voting rights. Other security features, such as differences in dividend rights and liquidation preference, can also affect share price.

Third, to ensure that the price discount/price premium data we collected/analyzed were only related to voting rights, we excluded from our study all corporations with differing dividend, liquidation, and other security ownership rights.

We identified multiple stock class companies using the Standard & Poor's Compustat database. We identified all corporations listed in the Compustat database that had two classes of common stock outstanding as of either December 31, 1994, or December 31, 1999. From this list of multiple common stock class corporations, we eliminated all corporations with two classes of common stock with ownership differences other than voting rights.

From this reduced list, we eliminated all multiple common stock class corporations (1) that were not domestic (i.e., United States) based companies, (2) that were inactively traded at any time during our observation period, and (3) were penny stocks (defined herein as trading for less than \$1 per share) at any time during our observation period.

From this further reduced list, we reviewed both the Compustat data and the most recent (as of December 31, 1994, or December 31, 1999) SEC Form 10-K for each of the remaining corporations. Specifically, we wanted to ensure that the selected corporations had multiple classes of common stock that differed only in voting rights. Based on this criteria, we selected 28 multiple common stock class corporations as of December 31, 1994, and 28 multiple common stock class corporations as of December 31, 1999.

### THE 1994 WMA DLVR/PVR STUDY

The first group of multiple stock class corporations analyzed in our study involved stock market data as of December 31, 1994

("the 1994 Study"). We included 28 domestic corporations in the 1994 Study. For each corporation, both (1) the closing price as of December 30, 1994 (i.e., the December 30, 1994, closing price because December 31, 1994 was a Saturday) and (2) the average closing price for the three-month period October to December 1994, were compared for each class of common stock.

This analysis also considered the following descriptive data: (1) the primary industry Standard Industrial Classification (SIC) code, as reported by Compustat, (2) the number of shares outstanding (in each class of stock) as of December 31, 1994, (3) the total market capitalization (including both (a) total common equity and (b) total equity), and (4) the composition (e.g. insider, institutional, block owners, etc.) of stock ownership.

The 28 companies analyzed in the 1994 Study, and their associated price, volume, and other descriptive data, are presented on Exhibit 2A.

As indicated on Exhibit 2B, for the 28 corporations included in the analysis, the mean PVR was 3.0 percent and the median PVR was 1.5 percent as of December 31, 1994. The mean PVR for the three-month period of October to December 1994 was 2.8 percent, and the median PVR for the same three-month period was 2.0 percent.

The mean DLVR was 2.9 percent and the median DLVR was 1.5 percent as of December 31, 1994. For the three-month period October to December 1994, the mean DLVR was 2.7 percent and the median DLVR was 2.0 percent.

For the 1994 Study, our analysis of the value of voting rights as a percent of total common equity value is presented in Exhibits 3A and 3B.

For all 28 corporations included in the analysis on Exhibits 3A and 3B, (1) the mean value of voting rights represented 0.8 percent of total common equity value and (2) the median value of voting rights represented 0.4 percent of the total common equity value. Both of these conclusions relate to pricing data as of December 31, 1994.

These conclusions can be interpreted as follows: of the total value of all common equity ownership rights in the selected corporations, 0.8 percent (as the mean), and 0.4 percent (as the median) represented the single influence related to the value of voting rights only.

The 1994 Study also attempts to identify factors that affect the magnitude of the DLVR/PVR. We considered the following factors in the analysis: (1) the size of the subject company, (2) the stock exchange the stock is listed on, (3) the principal industry of the subject, (4) voting/nonvoting versus super voting/ voting, and (5) the percent of stock owned by company founders/insiders.

*"Based on this criteria, we selected 28 multiple common stock class corporations as of December 31, 1994, and 28 multiple common stock class corporations as of December 31, 1999."*

The first factor we considered was the size of the subject company. We measured the size of the company using the total common equity value. As indicated on Exhibit 2A, the Readers Digest Association, Inc., stock experienced a PVR "discount" of almost 9 percent. Readers Digest Association, Inc., was also one of the larger companies included in the 1994 Study, with a total common equity of near \$5.4 billion.

The stock of the two largest companies in the 1994 Study, Tele Communications, Inc., and Viacom, Inc, experienced PVR of 6.9 and 2.2 percent, respectively. Other companies with total common equity value over \$1 billion experienced a PVR range of from 0 percent to over 5 percent. Accordingly, the large equity size does not predict/influence the size of the DLVR/PVR.

The smaller companies included in the 1994 Study did not indicate a pattern with regard to DLVR/PVR either. The two smallest companies in the 1994 Study, (i.e., Federal Agriculture and Plymouth Rubber), both experienced a PVR of 0 percent. However, the next smallest company (i.e., Exx, Inc.) experienced a PVR of 1.6 percent. Therefore, we concluded that the size of the subject company is not a significant factor in predicting/influencing the size of the DLVR/PVR.

However, the 1994 Study does indicate that as the size of the subject company increases, the value of voting rights tends to represent a smaller percentage of total common equity value outstanding. This is indicated in the four size categories presented at the bottom of Exhibit 3A.

The second factor we considered was the stock exchange on which the subject company is listed. Common stocks listed on the Nasdaq experienced the highest mean and median PVR, 5.5 percent and 3.9 percent, respectively. For common stocks listed on the American Stock Exchange, the mean PVR was 2.5 percent and the median PVR was 1.6 percent.

The common stocks listed on the New York Stock Exchange experienced the lowest PVR, with a mean PVR "discount" of 2.4 percent and a median PVR "discount" of 1.2 percent. Due to the significant differences between the PVR indications, it seems that the exchange on which a stock is traded does affect the magnitude of the PVR.

The third factor we considered was the principal industry of the subject company. The principal industry was determined using the SIC code. The multiple stock class corporations included companies in the following industries: (1) manufacturing, (2) transportation, communications, electric gas, and sanitary services, (3) retail trade, (4) finance, insurance, and real estate, and (5) services. Companies operating primarily in the manufacturing industry experienced a mean PVR of 0.1 percent and a median PVR of 0.6 percent.

Companies operating primarily in the transportation, communications, electric, gas, and sanitary services industry sector experienced a mean PVR of 1.8 percent and a median PVR of 1.4 percent.

Companies operating primarily in the retail trade industry experienced the highest mean and median PVR. The mean PVR was 7.3 percent and the median PVR was 6.3 percent. Companies operating primarily in the finance, insurance, and real estate industry sector experienced a mean PVR of 8.7 percent and a median PVR of 0 percent. There was one company that operated primarily in the services industry, and it had a PVR of 5.5 percent.

The lowest mean and median PVR was experienced by companies operating in the manufacturing industry. The highest mean PVR was experienced by companies operating in the finance, insurance, and real estate industry, and the highest median PVR was experienced by companies operating in the retail industry.

However, the 1994 Study does indicate that as the size of the subject company increases, the value of voting rights tends to represent a smaller percentage of total common equity value outstanding. This is indicated in the four size categories presented at the bottom of Exhibit 3A.

The fourth factor we considered was the relative voting rights relationship of the multiple classes of stock (i.e., whether the corporation had (1) voting/nonvoting classes of stock or (2) voting/supervoting classes of stock). The mean PVR for companies with both voting and nonvoting shares was 3.1 percent. The mean PVR for companies with both super voting and voting shares was lower, at 2.9 percent.

However, the relationship of the median PVR was reversed. The median PVR for companies with both voting and nonvoting shares was 0.0 percent. The median PVR for companies with both super voting and voting shares was higher, at 2.7 percent.

Accordingly, the relative voting rights classes of stock outstanding does not appear to predict/influence the size of the DLVR/PVR.

The fifth factor we considered was the percentage of common shares outstanding that was controlled by company founders and/or insiders (e.g., management). There were only three companies in the 1994 Study where the largest single shareholder owned more than 50 percent of the outstanding shares. In one instance, the subject company actually experienced a "discount" related to the voting class of stock versus the nonvoting class of stock.

In another such instance, there was no PVR related to the voting rights stock versus the nonvoting rights stock. And in the third instance, the indicated PVR was less than the mean PVR for all companies in the 1994 Study.

One would expect that there would be a very small PVR if a single shareholder owned more than 50 percent of the outstanding shares. In such a case, the voting rights would not carry as much importance to the minority stockholders. This is because one majority shareholder could effectively control the vote.

For companies where corporate insiders owned a majority (or nearly a majority) of the voting shares outstanding, the PVR was generally negative. There was one instance where the PVR was 0 percent, and one instance where the PVR was 2.1 percent. In general, if a single individual or a handful of individual insiders owns the majority of the voting shares outstanding, then the PVR will be lower than it would otherwise be, all other factors being equal.

### THE 1999 WMA DLVR/PVR STUDY

The second group of multiple stock class corporations analyzed in our study involved stock market data as of December 31, 1999. We included 28 domestic corporations in the 1999 Study.

In the 1999 Study, we collected the same capital market data and the same descriptive company data as in the 1994 Study. The DLVR/PVR was calculated using market closing stock price data as of December 31, 1999. As with the 1994 Study, we also considered the average daily closing stock prices for the three-month period October through December 1999.

The 28 companies analyzed in the 1999 Study, and their associated price, volume, and other data, are presented in Exhibit 4A.

For the 1999 Study, our analysis of the value of voting rights as a percent of total common equity value is presented in Exhibits 5A and 5B.

As indicated on Exhibit 4B, for the 1999 Study, the mean PVR was 12.7 percent for the entire sample of 28 corporations. This PVR conclusion is unexpectedly high given (1) the results of the 1994 Study and (2) the conclusions of previous published DLVR/PVR studies. It is noteworthy that one company, Acmat Corporation, experienced a PVR of 180 percent. As of December 31, 1999, the mean PVR excluding Acmat Corporation was 6.5 percent. The median PVR for all 28 companies as of December 31, 1999, was 2.8 percent.

The three-month price data indicated a mean PVR of 13.2 percent including Acmat Corporation and a 7.8 percent PVR excluding Acmat Corporation. The three-month median PVR was 0.6 percent.

As of December 31, 1999, the mean DLVR was 6.1 percent (excluding Acmat Corporation). As of December 31, 1999, the median DLVR was 2.7 percent. For the three months of October to December 1999, the mean DLVR was 7.2 percent (excluding Acmat Corporation). For the three months of October to December 1999, the median DLVR was 0.6 percent.

As indicated on Exhibit 5A, the mean value of voting rights alone represented 2.8 percent of the total common stock value of the 28 corporations included in the 1999 Study. The mean value of voting rights alone represented 1.9 percent of the total common stock value of the 27 corporations included in the 1999 Study after excluding the outlier Acmat Corporation. The median value of voting rights alone represented only 0.2 percent of the total common stock value of the 28 corporations included in the 1999 Study.

Even after removing the outlier, Acmat Corporation, the PVR results in 1999 were higher than the PVR results in 1994. To analyze what was affecting these results, we considered the same factors as for the 1994 Study results.

First, of the 9 companies with total common equity value over \$1 billion, 6 companies experienced PVR "discounts." And, of the 9 companies that experienced PVR "discounts," 6 companies had a total common equity over \$1 billion. One of the larger companies had a PVR of 0 percent, and the other two large companies had a PVR lower than the average.

All of the companies with total common equity value over \$1 billion experienced a PVR lower than the average. The majority of companies with total common equity value under \$100 million experienced a PVR greater than the average. Accordingly, there appears to be a stronger relationship between the size of the company and the PVR in the 1999 Study results than in the 1994 Study results.

The 1999 Study indicates that as the size of the subject company increases, the value of voting rights represents a smaller percentage of total common equity value outstanding. This is indicated in the four size categories presented at the bottom of Exhibit 5A.

Second, unlike the 1994 data, the mean PVR for companies traded on the Nasdaq (excluding Acmat Corporation) in 1999 was the lowest of the three stock exchanges. The mean PVR of the Nasdaq companies was 4.0 percent and the median PVR of the Nasdaq companies was 1.2 percent.

The New York Stock Exchange and American Stock Exchange companies experienced a similar mean PVR, with 8.0 percent and 8.8 percent, respectively. The New York Stock Exchange companies experienced a median PVR of 2.8 percent and American Stock Exchange companies experienced a median PVR of 7.1 percent.

Third, we considered was the principal industry of the subject company. The principal industry was determined using the SIC code. The multiple stock class corporations included companies in the following industries: (1) manufacturing, (2) transportation, communications, electric gas, and sanitary services,

*"The median value of voting rights alone represented only 0.2 percent of the total common stock value of the 28 corporations included in the 1999 Study."*

(3) retail trade, (4) finance, insurance, and real estate, and (5) services.

Companies operating primarily in the manufacturing industry experienced a mean PVR of 5.7 percent and a median PVR of 3.0 percent. Companies operating primarily in the transportation, communications, electric, gas, and sanitary services industry sector experienced a mean PVR of 10.4 percent and a median PVR of 7.9 percent.

There was one company that operated primarily in the retail trade industry and it had a PVR of 11.8 percent. Companies operating primarily in the finance, insurance, and real estate industry sector experienced a mean PVR (excluding Acmat) of 3.8 percent and a median PVR of 10.9 percent. Companies operating primarily in the services industry experienced a mean PVR of 6.1 percent and a median PVR of 1.2 percent.

The lowest mean and median PVR was experienced by companies operating in the finance, insurance, and real estate industry (excluding Acmat). The highest mean PVR was experienced by the one company operating in the retail industry, and the highest median PVR was experienced by companies operating in the finance, insurance, and real estate industries.

Fourth, the mean PVR was 5.6 percent for companies with voting and nonvoting shares. For companies with super voting and voting shares, the mean PVR was higher, at 7.2 percent (without Acmat). In 1994, the mean PVR for voting/nonvoting shares was higher than the overall mean PVR. And, the super voting/voting mean PVR was lower than the overall mean PVR.

The 1999 Study indicates the opposite relationship. The mean PVR for voting/nonvoting is lower than the overall mean PVR. And, the super voting/voting mean PVR is higher than the overall mean PVR.

In the 1999 Study, the median PVR for companies with both voting and nonvoting shares was 1.4 percent, and the median PVR for companies with both super voting and voting shares was 3.0 percent.

Fifth, there were only two companies where the largest shareholder owned more than 50 percent of the shares in the 1999 Study. One company experienced a PVR "discount" of 9.4 percent, while the other company experienced a PVR of 22.4 percent. Because the 22.4 percent PVR is unusual for a company where the majority of the shares are owned by a single shareholder, there is likely another factor responsible for producing that level of PVR.

There were five companies where insiders held a majority of the voting shares. The average PVR for these companies was significantly larger than the overall average PVR. This is the opposite result from what we found for the companies included in the 1994 Study.

## SUMMARY AND CONCLUSION

The WMA DLVR/PVR study had the following principal research objectives:

1. to quantify the market-derived price discount related to the lack of voting rights (or inferior voting rights) of common shares;
2. to quantify the market-derived price premium related to the voting rights associated (or superior voting rights) of common shares; and
3. to quantify the value of voting rights alone as a percent of the total bundle of legal rights associated with common stock ownership.

It was also a research objective of the WMA study to identify any factors or attributes of a company that may predict/influence the magnitude of the DLVR/PVR.

The WMA study concluded that the mean PVR was 3.0 percent and the median PVR was 1.5 percent, both as of December 31, 1994. The mean DLVR was 2.9 percent and the median DLVR was 1.5 percent, both as of December 31, 1994.

As of December 31, 1999, the mean PVR was 6.5 percent and the median PVR was 2.8 percent. As of December 31, 1999, the mean DLVR was 6.1 percent and the median DLVR was 2.7 percent. These results are fundamentally consistent with previous DLVR/PVR studies of U.S. corporations on domestic stock exchanges.

At least with regard to the corporate attributes considered in the WMA study, there was inconclusive evidence as to the factors that predict/influence the size of the DLVR/PVR.

As of December 31, 1994, the value of voting rights represents a mean 0.8 percent and a median 0.4 percent of the value of the total common equity of the selected multiple stock class corporations.

As of December 31, 1999, the value of voting rights represented a mean 1.9 percent and a median 0.2 percent of the value of the total common equity of the selected multiple stock class corporations.

And, for both time periods, the size of the voting rights as a percent of the total bundle of equity ownership rights is inversely related to the size of the equity value of the multiple stock class corporations.

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**Exhibit 2A**  
**Selected Data for the Willamette Management Associates 1994 Study**  
**Discount for Lack of Voting Rights/Premium for Voting Rights**

Item	Registrant Name	Stock Ticker	Stock Exchange	Common Stock Class	Stock Class Code	Stock Class Description	Closing Price as of 12/30/94
1	American Maize Products	AZE.A	AMEX	CL B COM, USD.8	S	1 vote, elects 70% of BOD	25.000
	American Maize Products	AZE.A	AMEX	CL A COM, USD.8	V	1 vote, elects 30% of BOD	25.500
2	Baldwin & Lyons	BWINB	NDQ	CL A COM NPV	V	voting	14.000
	Baldwin & Lyons	BWINB	NDQ	CL B COM NPV	N	nonvoting	14.750
3	Brown-Forman	BF.B	NYS	CL A COM USD.15	V	voting	31.000
	Brown-Forman	BF.B	NYS	CL B COM USD.15	N	nonvoting	30.500
4	Cannon Express Inc.	CANXA	NDQ	COM USD.01	V	voting	13.750
	Cannon Express Inc.	CANXA	NDQ	CL B COM	N	nonvoting	12.250
5	Cherry Corp	CHERB	NDQ	CL B COM USD1	V	voting	14.000
	Cherry Corp	CHERB	NDQ	CL A COM	N	nonvoting	14.500
6	Comcast Corp	CMCS.A	NDQ	CL A	V	voting	15.375
	Comcast Corp	CMCS.B	NDQ	CL A SPECIAL	N	nonvoting	15.688
7	Continental Airlines Inc.	CAL.A	NYS	CL A	S	10 votes	9.375
	Continental Airlines Inc.	CAL.B	NYS	CL B	V	1 vote	9.250
8	Crown Central Petroleum	CNP.B	AMEX	CL A COM USD5	S	1 vote	12.750
	Crown Central Petroleum	CNP.B	AMEX	CL B COM USD5	V	1/10 vote, elects 2 of BOD	12.000
9	Exx Inc.	EXX.B	AMEX	CL B COM	S	elects 2/3 of BOD	16.250
	Exx Inc.	EXX.A	AMEX	CL A COM	V	elects 1/3 of BOD	16.000
10	Federal Agriculture	FAMCA	NDQ	CL A COM USD1 VTG	V	voting	4.875
	Federal Agriculture	FAMCA	NDQ	CL C COM USD1 NVTG	N	nonvoting	4.875
11	First Commerce Bancshares	FCBIA	NDQ	CL A COM	V	voting	16.500
	First Commerce Bancshares	FCBIA	NDQ	CL B COM	N	nonvoting	11.375
12	Hubbell Inc	HUB.B	NYS	CL A COM USD5	S	20 votes	51.250
	Hubbell Inc	HUB.B	NYS	CL B COM USD5	V	1 vote	53.250
13	Kelly Services Inc	KELYA	NDQ	CL B COM USD1	V	voting	29.000
	Kelly Services Inc	KELYA	NDQ	CL A COM USD1 NVTG	N	nonvoting	27.500
14	Marsh Supermarkets	MARS.A	NDQ	CL A	V	voting	10.500
	Marsh Supermarkets	MARS.B	NDQ	CL B	N	nonvoting	9.500
15	Molex Inc	MOLX	NDQ	COM	V	voting	34.500
	Molex Inc	MOLX.A	NDQ	CL A	N	nonvoting	31.000
16	NPC International Inc.	NPCIA	NDQ	CL A COM USD.01	V	voting	5.250
	NPC International Inc.	NPCIA	NDQ	CL B NVTG	N	nonvoting	5.000
17	Odetics Inc	ODET.A	NDQ	CL B	S	1 vote	6.750
	Odetics Inc	ODET.B	NDQ	CL A	V	1/10 vote	6.500
18	Pacificare Health Systems	PHSY.A	NDQ	CL A	V	voting	65.125
	Pacificare Health Systems	PHSY.B	NDQ	CL B	N	nonvoting	66.000
19	Petroleum Helicopters	PHLHK	NDQ	COM USD.08 VTG	V	voting	10.375
	Petroleum Helicopters	PHLHK	NDQ	COM USD.08	N	nonvoting	11.250
20	Playboy Enterprises	PLA	NYS	CL A COM NPV	V	voting	9.500
	Playboy Enterprises	PLA	NYS	CL B COM NPV	N	nonvoting	10.500
21	Plymouth Rubber	PLR.A	AMEX	CL A COM USD5	V	voting	8.375
	Plymouth Rubber	PLR.A	AMEX	CL B COM USD5 NVTG	N	nonvoting	8.375
22	Provident Life and Accident Ins.	PVB	NYS	CL B COM USD1	S	1 vote	21.750
	Provident Life and Accident Ins.	PVB	NYS	CL A COM NPV	V	1/20 vote	20.750
23	Readers Digest Association, Inc.	RDA	NYS	CL B COM USD.01 VTG	V	voting	44.750
	Readers Digest Association, Inc.	RDA	NYS	CL A COM USD.01 NVTG	N	nonvoting	49.125
24	Stevens Graphics	SVG.A	AMEX	SER B COM USD.10	S	1 vote	9.188
	Stevens Graphics	SVG.A	AMEX	SER A COM USD.10	V	1/10 vote	8.375
25	Tecumseh Products Co	TECU.B	NDQ	CL B	V	voting	45.500
	Tecumseh Products Co	TECU.A	NDQ	CL A	N	nonvoting	45.000
26	Tele Communications Inc.	TCOM.B	NDQ	CL B	S	10 votes	23.250
	Tele Communications Inc.	TCOM.A	NDQ	CL A	V	1 vote	21.750
27	Turner Broadcasting	TBS.B	AMEX	CL A COM USD.125	S	1 vote	16.375
	Turner Broadcasting	TBS.B	AMEX	CL B COM USD.125	V	1/5 vote	16.375
28	Viacom Inc	VIA.B	AMEX	CL A COM USE.01	V	voting	41.625
	Viacom Inc	VIA.B	AMEX	CL B COM USD.01 NVTG	N	nonvoting	40.750

Notes: Stock Code Class: V = voting rights, N = nonvoting rights, S = supervoting (i.e., superior class of) voting rights  
BOD = board of directors

Exhibit 2A (continued)

Premium for Voting Rights 12/31/94	Average Closing Price Oct-Dec 1994	Three-Month Premium for Voting Rights	Total Shares Traded Oct-Dec	Number Shares Outstanding 12/31/94	Total Number Shares Outstanding 12/31/94	% Total Shares Owned by Largest Shareholder	% Total Shares Owned by Institutions	% Total Shares Owned by 5% Owners	% Total Shares Owned by "Insiders"
-0.0196	23.410 23.504	-0.0040	45.70 772.60	1,742,057 8,565,374	10,307,431	23.60	22.35	86.55	24.65
-0.0508	19.420 18.968	0.0238	2.32 351.04	2,446,029 12,368,209	14,814,238	10.60	1.38	0.00	18.08
0.0164	29.387 29.317	0.0024	173.70 2111.40	28,988,091 40,008,147	68,996,238	50.10	55.62	99.99	18.51
0.1224	12.835 12.620	0.0170	66.10 59.20	2,156,352 2,156,352	4,312,704	3.60	14.23	5.40	0.00
-0.0345	15.077 14.622	0.0311	491.60 1595.70	4,685,652 7,560,652	12,246,304	5.40	24.20	0.00	0.20
-0.0200	16.127 16.137	-0.0006	19743.20 66574.90	39,020,000 200,580,000	239,600,000	8.00	59.78	57.88	8.36
0.0135	14.511 14.028	0.0344	13.62 134.14	6,301,000 20,354,000	26,655,000	47.20	1.28	58.79	21.11
0.0625	15.636 14.361	0.0888	285.30 635.10	4,817,392 4,985,706	9,803,098	25.20	16.32	55.55	9.75
0.0156	22.331 22.740	-0.0180	35.07 92.46	677,000 2,031,000	2,708,000	46.41	2.32	34.80	0.00
0.0000	4.840 4.840	0.0000	9.90 9.90	670,000 1,170,301	1,840,301	2.20	4.60	0.00	6.30
0.4505	15.302 11.341	0.3493	34.10 101.30	2,606,336 10,661,222	13,267,558	12.00	1.97	11.80	12.70
-0.0376	51.750 55.480	-0.0672	176.10 1491.20	5,892,000 25,479,000	31,371,000	25.27	63.30	90.24	45.29
0.0545	30.234 27.891	0.0840	2.00 4304.30	3,603,124 34,358,941	37,962,065	37.40	37.01	7.09	39.53
0.1053	10.945 10.038	0.0904	2.25 8.99	4,487,000 3,881,000	8,368,000	18.00	48.05	39.15	10.63
0.1129	33.614 31.309	0.0736	117.99 100.11	40,068,000 39,546,000	79,614,000	46.80	19.65	23.38	32.02
0.0500	6.005 5.710	0.0517	1188.60 944.60	12,355,505 12,126,319	24,481,824	31.50	7.41	31.04	33.86
0.0385	6.608 6.653	-0.0068	1.92 24.83	1,167,000 4,769,000	5,936,000	22.30	0.96	0.00	8.95
-0.0133	69.402 67.734	0.0246	65.27 93.46	12,279,000 18,384,000	30,663,000	48.20	40.38	60.42	48.11
-0.0778	10.638 10.519	0.0113	174.50 60.20	3,278,068 2,200,000	5,478,068	37.30	11.29	42.04	46.09
-0.0952	8.351 8.639	-0.0333	187.40 2639.60	4,713,954 15,275,349	19,989,303	70.47	8.49	70.64	0.53
0.0000	8.653 9.000	-0.0386	16.40 14.60	810,586 814,267	1,624,853	27.80	3.10	4.09	30.04
0.0482	23.843 23.115	0.0315	2012.10 271.20	36,787,440 8,587,211	45,374,651	8.70	51.88	99.99	21.08
-0.0891	42.929 45.331	-0.0530	44.75 9954.70	21,515,159 90,450,383	111,965,542	15.70	31.86	0.00	64.82
0.0971	7.394 7.036	0.0509	46.80 863.30	2,234,959 7,139,243	9,374,202	7.70	39.30	20.93	6.14
0.0111	44.839 45.795	-0.0209	8.81 48.00	5,470,000 16,411,000	21,881,000	25.00	77.84	69.79	25.20
0.0690	23.307 22.412	0.0399	5.20 2609.47	47,981,000 584,663,000	632,644,000	26.00	60.10	15.36	1.68
0.0000	17.212 17.333	-0.0070	1950.30 5502.00	68,330,388 137,424,549	205,754,937	80.00	2.87	26.79	53.78
0.0215	40.252 39.044	0.0309	10956.60 62832.10	74,415,656 282,916,242	357,331,898	12.70	30.80	60.81	62.65

**Exhibit 2B**  
**Conclusions to WMA 1994 Study**  
**Discount for Lack of Voting Rights/Premium for Voting Rights**

		<u>Actual</u>		<u>Actual</u>
Premium for Voting Rights	Mean	0.0304	Mean	0.0281
	Median	0.0146	Median	0.0204
		<u>Rounded %</u>		<u>Rounded %</u>
Premium for Voting Rights	Mean	3.0%	Mean	2.8%
Premium for Voting Rights	Median	1.5%	Median	2.0%
Discount for Lack of Voting Rights	Mean	2.9%	Mean	2.7%
Discount for Lack of Voting Rights	Median	1.5%	Median	2.0%

**Exhibit 3A**  
**Conclusions to WMA 1994 Study**  
**Value of Voting Rights as a Percent of Total Common Equity Value**

		<u>Actual</u>	<u>Rounded %</u>
<u>Total All Companies</u>			
Value of Voting Rights as Percent of			
Total Bundle of Rights of Common Stock Ownership	Mean	0.008071	0.81%
Value of Voting Rights as Percent of			
Total Bundle of Rights of Common Stock Ownership	Median	0.003538	0.35%
<u>Total Common Equity Value under \$100 mil</u>			
Value of Voting Rights as Percent of			
Total Bundle of Rights of Common Stock Ownership	Mean	0.012040	1.20%
Value of Voting Rights as Percent of			
Total Bundle of Rights of Common Stock Ownership	Median	0.005698	0.57%
<u>Total Common Equity Value \$100 mil-\$500 mil</u>			
Value of Voting Rights as Percent of			
Total Bundle of Rights of Common Stock Ownership	Mean	0.011346	1.13%
Value of Voting Rights as Percent of			
Total Bundle of Rights of Common Stock Ownership	Median	(0.000070)	-0.01%
<u>Total Common Equity Value \$500 mil-\$1 bil</u>			
Value of Voting Rights as Percent of			
Total Bundle of Rights of Common Stock Ownership	Mean	0.020186	2.02%
Value of Voting Rights as Percent of			
Total Bundle of Rights of Common Stock Ownership	Median	0.020186	2.02%
<u>Total Common Equity Value over \$1 bil</u>			
Value of Voting Rights as Percent of			
Total Bundle of Rights of Common Stock Ownership	Mean	(0.000148)	-0.01%
Value of Voting Rights as Percent of			
Total Bundle of Rights of Common Stock Ownership	Median	0.002226	0.22%

**Exhibit 3B**  
**Willamette Management Associates 1994 Study**  
**Value of Voting Rights as a Percent of Total Common Equity Value**

Item	Registrant Name	Voting/ Supervoting Common Stock Price as of 12/31/94	Number of Shares Outstanding	Voting Stock Price * Shares	Nonvoting/ Limited Vote Common Stock Price as of 12/31/94	Number of Shares Outstanding	Nonvoting Stock Price * Shares	Total Common Equity Value as of 12/31/94	Value of Voting Rights as a % of Total Common Equity Value as of 12/31/94 (Actual)	Value of Voting Rights as a % of Total Common Equity Value as of 12/31/94 (Rounded)
1	American Maize Products	25.000	1,742,057	43,551,425	25.500	8,565,374	218,417,037	261,968,462	(0.003325)	-0.33%
2	Baldwin & Lyons	14.000	2,446,029	34,244,406	14.750	12,368,209	182,431,083	216,675,489	(0.008467)	-0.85%
3	Brown-Forman	31.000	28,988,091	898,630,821	30.500	40,008,147	1,220,248,484	2,118,879,305	0.006840	0.68%
4	Cannon Express Inc.	13.750	2,156,352	29,649,840	12.250	2,156,352	26,415,312	56,065,152	0.057692	5.77%
5	Cherry Corp	14.000	4,685,652	65,599,128	14.500	7,560,652	109,629,454	175,228,582	(0.013370)	-1.34%
6	Comcast Corp	15.375	39,020,000	599,932,500	15.688	200,580,000	3,146,699,040	3,746,631,540	(0.003260)	-0.33%
7	Continental Airlines Inc.	9.375	6,301,000	59,071,875	9.250	20,354,000	188,274,500	247,346,375	0.003184	0.32%
8	Crown Central Petroleum	12.750	4,817,392	61,421,748	12.000	4,985,706	59,828,472	121,250,220	0.029798	2.98%
9	Exx Inc	16.250	677,000	11,001,250	16.000	2,031,000	32,496,000	43,497,250	0.003891	0.39%
10	Federal Agriculture	4.875	670,000	3,266,250	4.875	1,170,301	5,705,217	8,971,467	--	0.00%
11	First Commerce Bancshares	16.500	2,606,336	43,004,544	11.375	10,661,222	121,271,400	164,275,944	0.081311	8.13%
12	Hubbell Inc	51.250	5,892,000	301,965,000	53.250	25,479,000	1,356,756,750	1,658,721,750	(0.007104)	-0.71%
13	Kelly Services Inc	29.000	3,603,124	104,490,596	27.500	34,358,941	944,870,878	1,049,361,474	0.005150	0.52%
14	Marsh Supermarkets	10.500	4,487,000	47,113,500	9.500	3,881,000	36,869,500	83,983,000	0.053427	5.34%
15	Molex Inc.	34.500	3,881,000	133,894,500	31.000	39,546,000	1,225,926,000	1,359,820,500	0.009989	1.00%
16	NPC International Inc	5.250	12,355,505	64,866,401	5.000	12,126,319	60,631,595	125,497,996	0.024613	2.46%
17	Odetics Inc.	6.750	1,167,000	7,877,250	6.500	4,769,000	30,998,500	38,875,750	0.007505	0.75%
18	Pacific Health Systems	65.125	12,279,000	799,669,875	66.000	18,384,000	1,213,344,000	2,013,013,875	(0.005337)	-0.53%
19	Petroleum Helicopters	10.375	3,278,068	34,009,956	11.250	2,200,000	24,750,000	58,759,956	(0.048814)	-4.88%
20	Playboy Enterprises	9.500	4,713,954	44,782,563	10.500	15,275,349	160,391,165	205,173,728	(0.022975)	-2.30%
21	Plymouth Rubber	8.375	810,586	6,788,658	8.375	814,267	6,819,486	13,608,144	--	0.00%
22	Provident Life and Accident Ins.	21.750	36,787,440	800,126,820	20.750	8,587,211	178,184,628	978,311,448	0.037603	3.76%
23	Readers Digest Association, Inc.	44.750	21,515,159	962,803,365	49.125	90,450,383	4,443,375,065	5,406,178,430	(0.017411)	-1.74%
24	Stevens Graphics	9.188	2,234,959	20,534,803	8.375	7,139,243	59,791,160	80,325,963	0.022621	2.26%
25	Tecumseh Products Co.	45.500	5,470,000	248,885,000	45.000	16,411,000	738,495,000	987,380,000	0.002770	0.28%
26	Tele Communications Inc.	23.250	47,981,000	1,115,558,250	21.750	584,663,000	12,716,420,250	13,831,978,500	0.005203	0.52%
27	Turner Broadcasting	16.375	68,330,388	1,118,910,104	16.375	137,424,549	2,250,326,990	3,369,237,093	--	0.00%
28	Viacom Inc.	41.625	74,415,656	3,097,551,681	40.750	282,916,242	11,528,836,862	14,626,388,543	0.004452	0.45%

**Exhibit 4A**  
**Selected Data for the Willamette Management Associates 1999 Study**  
**Discount for Lack of Voting Rights/Premium for Voting Rights**

Item	Registrant Name	Stock Ticker	Stock Exchange	Common Stock Class	Stock Class Code	Stock Class Description	Closing Price as of 12/31/99
1	Continental Airlines	CAL	NYS	CL. A COM.	S	10 votes	44.125
	Continental Airlines	CAL.B	NYS	CL. B COM.	V	1 vote	44.375
2	Crown Central Petroleum Corp.	CL.A	AMEX	CL. A COM.	S	1 vote, elect other directors	5.625
	Crown Central Petroleum Corp.	CL.B	AMEX	CL. B COM.	V	1/10 vote, elects 2 of BOD	5.250
3	Brown- Forman	BFA	NYS	CL. A COM.	V	voting	53.938
	Brown- Forman	BF.B	NYS	CL. B COM.	N	non-voting	57.250
4	Aaron Rents, Inc.	ARONA	NYS	CL. A COM.	V	voting	18.250
	Aaron Rents, Inc.	ARON	NYS	COMMON	N	non-voting	17.750
5	Acmat Corporation	ACMT	NDQ	COMMON	S	1 vote	21.000
	Acmat Corporation	ACMTA	NDQ	CL. A COM.	V	1/10 vote, elects 2 of BOD	7.500
6	Amsurg Corp.	AMSGB	NDQ	CL. B COM.	S	10 votes BOD	6.500
	Amsurg Corp.	AMSGA	NDQ	CL. A COM.	V	1 vote BOD	6.500
7	Baldwin & Lyons, Inc.	BWINA	NDQ	CL. A COM.	V	voting	21.781
	Baldwin & Lyons, Inc.	BWINB	NDQ	CL. B COM.	N	non-voting	22.125
8	First Commerce Bancshares, Inc	FCBIA	NDQ	CL. A COM.	V	voting	22.250
	First Commerce Bancshares, Inc	FCIBB	NDQ	CL. B COM.	N	non-voting	19.688
9	Forest City Enterprises, Inc.	FCE/B	NYS	CL. B COM.	S	10 votes, elect 75% of BOD	31.063
	Forest City Enterprises, Inc.	FCE/A	NYS	CL. A COM.	V	1 vote, elect 25% of BOD	28.000
10	Jo-Ann Stores, Inc.	JAS.A	NYS	CL. A COM.	V	voting	11.250
	Jo-Ann Stores, Inc.	JAS.B	NYS	CL. B COM.	N	non-voting	10.063
11	Gray Communications Systems, Inc.	GCS	NYS	CL. A COM.	S	10 votes	17.688
	Gray Communications Systems, Inc.	GCS.B	NYS	CL. B COM.	V	1 vote	13.500
12	International Speedway Corp.	ISCB	NDQ	CL. B COM.	S	1 vote	50.000
	International Speedway Corp.	ISCA	NDQ	CL. A COM.	V	1/5 vote	50.375
13	Kelly Services, Inc.	KELYB	NDQ	CL. B COM.	V	voting	27.344
	Kelly Services, Inc.	KELYA	NDQ	CL. A COM.	N	non-voting	25.125
14	General Communication, Inc.	GNCMB	NDQ	CL. B COM.	S	10 votes	5.094
	General Communication, Inc.	GNCMA	NDQ	CL. A COM.	V	1 vote	4.375
15	Nelson Thomas, Inc.	TNM.B	NYS	CL. B COM.	S	10 votes	9.500
	Nelson Thomas, Inc.	TNM	NYS	COMMON	V	1 vote	9.250
16	Plymouth Rubber Co., Inc.	PLR.A	AMEX	CL. A COM.	V	voting	8.125
	Plymouth Rubber Co., Inc.	PLR.B	AMEX	CL. B COM.	N	non-voting	6.813
17	Viacom, Inc.	VIA	AMEX	CL. A COM.	V	voting	60.438
	Viacom, Inc.	VIA.B	AMEX	CL. B COM.	N	non-voting	60.438
18	Waddell & Reed Financial, Inc.	WDR.B	NYS	CL. B COM.	S	5 votes	25.125
	Waddell & Reed Financial, Inc.	WDR	NYS	CL. A COM.	V	1 vote	27.125
19	Reader's Digest Association, Inc.	RDB	NYS	CL. B COM.	V	voting	26.500
	Reader's Digest Association, Inc.	RDA	NYS	CL. A COM.	N	non-voting	29.250
20	Gartner Group, Inc.	IT/B	NYS	CL. B COM.	S	elects at least 80% of BOD	13.813
	Gartner Group, Inc.	IT	NYS	CL. A COM.	V	elects remaining of BOD	15.250
21	Hubbell, Inc.	HUBA	NYS	CL. A COM.	S	20 votes	28.125
	Hubbell, Inc.	HUBB	NYS	CL. B COM.	V	1 vote	27.250
22	Petroleum Helicopters, Inc.	PHEL	NDQ	VOTING COM.	V	voting	9.250
	Petroleum Helicopters, Inc.	PHELK	NDQ	NONVOTING COM.	N	non-voting	9.750
23	Pilgrim's Pride Corp.	CHX	NYS	CL. B COM.	S	20 votes	8.313
	Pilgrim's Pride Corp.	CHX.A	NYS	CL. A COM.	V	1 vote	6.438
24	Tecumseh Products Co.	TECUB	NDQ	CL. B COM.	V	voting	41.750
	Tecumseh Products Co.	TECUA	NDQ	CL. A COM.	N	non-voting	47.188
25	Seneca Foods Corp.	SENEB	NDQ	CL. B COM.	S	1 vote	11.500
	Seneca Foods Corp.	SENEA	NDQ	CL. A COM.	V	1/20 vote	11.500
26	Wackenhut Corp.	WAK	NYS	SER. A COM.	V	voting	14.938
	Wackenhut Corp.	WAKB	NYS	SER. B COM.	N	non-voting	10.313
27	Stevens International, Inc.	SVEIB	NDQ	SER. B COM.	S	1 vote, elects 75% of BOD	0.344
	Stevens International, Inc.	SVEIA	NDQ	SER. A COM.	V	1/10 vote, elects 25% of BOD	0.281
28	TCI Satellite Entertainment, Inc.	TSATB	NDQ	CL. B COM.	S	10 votes	16.375
	TCI Satellite Entertainment, Inc.	TSATA	NDQ	CL. A COM.	V	1 vote	16.000

Notes: Stock Code Class: V = voting rights, N = nonvoting rights, S = supervoting (i.e., superior class of) voting rights  
BOD = board of directors

Exhibit 4A (continued)

Premium for Voting Rights 12/31/99	Average Closing Price Oct-Dec 1999	Three-Month Premium for Voting Rights	Total Shares Traded Oct-Dec	Number Shares Outstanding 12/31/99	Total Number Shares Outstanding 12/31/99	% Total Shares Owned by Largest Shareholder	% Total Shares Owned by Institutions	% Total Shares Owned by 5% Owners	% Total Shares Owned by "Insiders"
-0.0056	39.232 39.251	-0.0005	189.50 27033.90	11,265,349 52,996,832	64,262,181	14.80	0.86	99.99	0.00
0.0714	5.939 5.668	0.0478	582.80 615.10	4,817,394 5,253,862	10,071,256	0.29	6.73	83.49	99.99
-0.0579	58.277 62.793	-0.0719	245.70 3747.80	28,988,091 39,522,081	68,510,172	0.24	54.13	99.99	13.86
0.0282	16.564 17.421	-0.0492	139.60 1752.40	3,829,506 16,079,031	19,908,537	5.20	60.36	18.39	0.76
1.8000	20.906 8.076	1.5887	1.10 195.20	570,568 2,288,527	2,859,095	16.60	0.00	34.30	99.99
0.0000	6.006 6.293	-0.0456	213.00 533.10	4,787,131 9,746,983	14,534,114	11.30	52.87	41.37	14.47
-0.0155	26.302 26.224	0.0030	23.36 354.16	2,321,154 10,744,887	13,066,041	2.30	4.33	14.03	0.09
0.1301	21.693 20.175	0.0752	31.20 331.80	2,568,892 10,769,926	13,338,818	11.70	11.20	66.05	0.28
0.1094	28.003 24.935	0.1230	71.30 511.80	10,659,096 19,370,606	30,029,702	7.30	58.35	47.97	2.91
0.1180	12.905 11.624	0.1102	659.30 277.20	8,973,326 8,859,441	17,832,767	5.00	46.81	35.97	6.84
0.3102	17.806 13.467	0.3222	368.00 178.00	6,832,042 8,590,044	15,422,086	35.40	16.67	85.07	72.17
-0.0074	54.966 55.126	-0.0029	186.20 16648.10	29,965,142 23,136,011	53,101,153	8.60	49.19	74.94	0.78
0.0883	27.231 26.917	0.0117	33.90 3530.60	3,510,406 32,381,813	35,892,219	46.50	81.60	65.35	41.73
0.1643	5.754 4.904	0.1733	3.40 12263.50	3,909,014 47,395,894	51,304,908	31.00	38.42	88.32	7.50
0.0270	9.67 9.582	0.0092	20.10 1543.30	1,085,819 13,144,776	14,230,595	11.70	42.18	39.59	9.33
0.1926	7.772 6.52	0.1920	64.00 30.80	810,586 1,241,104	2,051,690	17.00	0.08	7.87	43.13
0.0000	49.325 48.979	0.0071	9236.20 81112.70	138,340,683 558,646,382	696,987,065	13.40	23.88	99.99	67.70
-0.0737	23.151 24.314	-0.0478	2710.60 3197.20	27,145,647 28,803,015	55,948,662	5.90	86.32	37.16	27.58
-0.0940	26.653 29.397	-0.0933	447.30 29823.70	12,432,164 94,209,381	106,641,545	11.30	54.85	0.00	18.01
-0.0942	12.657 13.187	-0.0402	14775.90 43338.30	34,174,116 53,674,606	87,848,722	54.90	47.71	91.41	51.84
0.0321	28.474 28.432	0.0015	619.20 11314.90	10,337,000 54,413,000	64,750,000	8.20	64.67	95.80	1.85
-0.0513	9.567 9.573	-0.0006	182.30 274.10	2,793,386 2,366,175	5,159,561	28.00	29.35	98.47	0.24
0.2912	7.741 5.696	0.3590	4084.40 2486.90	27,589,250 13,794,529	41,383,779	4.30	21.62	0.00	6.89
-0.1152	42.612 46.65	-0.0866	920.70 5140.70	5,470,146 14,484,438	19,954,584	13.10	77.98	32.95	--
0.0000	11.784 11.854	-0.0059	172.30 225.00	2,767,357 3,803,938	6,571,295	2.50	9.14	30.13	14.03
0.4485	16.493 11.993	0.3752	1144.60 2085.30	3,855,582 11,111,149	14,966,731	12.90	44.85	66.41	0.02
0.2242	0.443 0.254	0.7441	15.70 1872.00	2,042,659 7,459,474	9,502,133	71.20	0.00	99.99	15.91
0.0234	7.328 7.298	0.0041	349.40 46658.80	8,465,224 62,894,446	71,359,670	6.00	9.79	8.63	2.77

**Exhibit 4B**  
**Conclusions to WMA 1999 Study**  
**Discount for Lack of Voting Rights/Premium for Voting Rights**

Premium for Voting Rights	Mean	<u>Actual</u> 0.1266	Mean	<u>Actual</u> 0.1322
Premium for Voting Rights	Mean without Acmat Corp.	0.0646	Mean without Acmat Corp.	0.0783
Premium for Voting Rights	Median	0.0276	Median	0.0056
Premium for Voting Rights	Mean	<u>Rounded %</u> 6.5%	Mean	<u>Rounded %</u> 7.8%
Premium for Voting Rights	Median	2.8%	Median	0.6%
Discount for Lack of Voting Rights	Mean	6.1%	Mean	7.2%
Discount for Lack of Voting Rights	Median	2.7%	Median	0.6%

**Exhibit 5A**  
**Conclusions to WMA 1999 Study**  
**Value of Voting Rights as a Percent of Total Common Equity Value**

		<u>Actual</u>	<u>Rounded %</u>
Value of Voting Rights as Percent of Total Bundle of Rights of Common Stock Ownership	Mean	0.027504	2.8%
Value of Voting Rights as Percent of Total Bundle of Rights of Common Stock Ownership	Mean without Acmat	0.018734	1.9%
Value of Voting Rights as Percent of Total Bundle of Rights of Common Stock Ownership	Median	0.002415	0.2%
<u>Total Common Equity Value Under \$100 mil</u>			
Value of Voting Rights as Percent of Total Bundle of Rights of Common Stock Ownership	Mean without Acmat	0.055063	5.5%
Value of Voting Rights as Percent of Total Bundle of Rights of Common Stock Ownership	Median	0.033038	3.3%
<u>Total Common Equity Value \$100 mil-\$500 mil</u>			
Value of Voting Rights as Percent of Total Bundle of Rights of Common Stock Ownership	Mean	0.053834	5.4%
Value of Voting Rights as Percent of Total Bundle of Rights of Common Stock Ownership	Median	0.024449	2.4%
<u>Total Common Equity Value \$500 mil-\$1 bil</u>			
Value of Voting Rights as Percent of Total Bundle of Rights of Common Stock Ownership	Mean	0.004440	0.4%
Value of Voting Rights as Percent of Total Bundle of Rights of Common Stock Ownership	Median	0.008564	0.9%
<u>Total Common Equity Value over \$1 bil</u>			
Value of Voting Rights as Percent of Total Bundle of Rights of Common Stock Ownership	Mean	(0.012574)	-1.3%
Value of Voting Rights as Percent of Total Bundle of Rights of Common Stock Ownership	Median	(0.004218)	-0.4%

**Exhibit 5B**  
**Willamette Management Associates 1999 Study**  
**Value of Voting Rights as a Percent of Total Common Equity Value**

Item	Registrant Name	Voting/ Supervoting Common Stock Price as of 12/31/99	Number of Shares Outstanding	Voting Stock Price * Shares	Nonvoting/ Limited Vote Common Stock Price as of 12/31/99	Number of Shares Outstanding	Nonvoting Stock Price * Shares	Total Common Equity Value as of 12/31/99	Value of Voting Rights as a % of Total Common Equity Value as of 12/31/99 (Actual) (Rounded)
1	Continental Airlines	44.125	11,265,349	497,083,525	44.375	52,996,832	2,351,734,420	2,848,817,945	(0.000989) -0.10%
2	Crown Central Petroleum Corp.	5.625	4,817,394	27,097,841	5.250	5,253,862	27,582,776	54,680,617	0.033038 3.30%
3	Brown-Forman	53.938	28,988,091	1,563,559,652	57.250	39,522,081	2,262,639,137	3,826,198,790	(0.025092) -2.51%
4	Aaron Rents, Inc.	18.250	3,829,506	69,888,485	17.750	16,079,031	285,402,800	355,291,285	0.005389 0.54%
5	Acmat Corporation	21.000	570,568	11,981,928	7.500	2,288,527	17,163,953	29,145,881	0.264280 26.43%
6	Amsurg Corp.	6.500	4,787,131	31,116,352	6.500	9,746,983	63,355,390	94,471,741	-- 0.00%
7	Baldwin & Lyons, Inc.	21.781	2,321,154	50,557,055	22.125	10,744,887	237,730,625	288,287,680	(0.002770) -0.28%
8	First Commerce Bancshares, Inc.	22.250	2,568,892	57,157,847	19.688	10,769,926	212,038,303	269,196,150	0.024449 2.44%
9	Forest City Enterprise, Inc.	31.063	10,659,096	331,103,499	28.000	19,370,606	542,376,968	873,480,467	0.037378 3.74%
10	Jo-Ann Stores, Inc.	11.250	8,973,326	100,949,918	10.063	8,859,441	89,152,555	190,102,472	0.056029 5.60%
11	Gray Communications System, Inc.	17.688	6,832,042	120,845,159	13.500	8,590,044	115,965,594	236,810,753	0.120825 12.08%
12	International Speedway Corp.	50.000	29,965,142	1,498,257,100	50.375	23,136,011	1,165,476,554	2,663,733,654	(0.004218) -0.42%
13	Kelly Services, Inc.	27.344	3,510,406	95,988,542	25.125	32,381,813	813,593,052	909,581,593	0.008564 0.86%
14	General Communication, Inc.	5.094	3,909,014	19,912,517	4.375	47,395,894	207,357,036	227,269,554	0.012367 1.24%
15	Nelson Thomas, Inc.	9.500	1,085,819	10,315,281	9.250	13,144,776	121,589,178	131,904,459	0.002058 0.21%
16	Plymouth Rubber Co., Inc.	8.125	810,586	6,586,011	6.813	1,241,104	8,455,642	15,041,653	0.070703 7.07%
17	Viacom, Inc.	60.438	138,340,683	8,361,034,199	60.438	558,646,382	33,763,470,035	42,124,504,234	-- 0.00%
18	Waddell & Reed Financial, Inc.	25.125	27,145,647	682,034,381	27.125	28,803,015	781,281,782	1,463,316,163	(0.037102) -3.71%
19	Reader's Digest Association, Inc.	26.500	12,432,164	329,452,346	29.250	94,209,381	2,755,624,394	3,085,076,740	(0.011082) -1.11%
20	Gartner Group, Inc.	13.813	34,174,116	472,047,064	15.250	53,674,606	818,537,742	1,290,584,806	(0.038051) -3.81%
21	Hubbell Inc	28.125	1,033,700	29,072,813	27.250	54,413,000	1,482,754,250	1,511,827,063	0.000598 0.06%
22	Petroleum Helicopters, Inc.	9.250	2,793,386	25,838,821	9.750	2,366,175	23,070,206	48,909,027	(0.028557) -2.86%
23	Pilgrim's Pride Corp.	8.313	27,589,250	229,349,435	6.438	13,794,529	88,809,178	318,158,613	0.162591 16.26%
24	Tecumseh Products Co.	41.750	5,470,146	228,378,596	47.188	14,484,438	683,491,660	911,870,256	(0.032622) -3.26%
25	Seneca Foods Corp.	11.500	2,767,357	31,824,606	11.500	3,803,938	43,745,287	75,569,893	-- 0.00%
26	Wackenhut Corp.	14.938	3,855,582	57,594,684	10.313	11,111,149	114,589,280	172,183,964	0.103564 10.36%
27	Stevens International, Inc.	0.344	2,042,659	702,675	0.281	7,459,474	2,096,112	2,798,787	0.045980 4.60%
28	TCL Satellite Entertainment, Inc.	16.375	8,465,224	138,618,043	16.000	62,894,446	1,006,311,136	1,144,929,179	0.002773 0.28%