SHOULD EQUITY INDEXES INCLUDE STOCKS OF COMPANIES WITH SHARE CLASSES HAVING UNEQUAL VOTING RIGHTS?

MSCI proposes that they should, but with reduced weight, to reflect lower aggregate voting power

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EXECUTIVE SUMMARY

Indexes rely on a set of criteria to determine the selection and weighting of constituents. For the most widely used broad market equity indexes, the main criteria include size, liquidity and free float. From all listed equity securities, only those that have sufficient size and liquidity are eligible for index inclusion, with weights proportional to free float. Recent trends in corporate governance and institutional investing, namely the growing popularity of passive investing and an increasing number of large, newly listed equities with low voting rights, may support the addition of voting power as another criterion in index construction.

We address the question of whether listed stocks of companies with unequal voting rights among multiple share classes should be included in equity indexes and whether the weights of these stocks should be adjusted to reflect unequal voting power. We argue that listed unequal voting shares should be eligible for inclusion in indexes because they meet the definition of equity, as in historical practice equity has implied fractional ownership and economic rights, not necessarily control or equal voting rights. However, we note that low voting shares cause a dilemma for investors who choose to passively track an index and thus hold all index constituents. Unlike active investors who have multiple avenues for expressing their displeasure with the direction of a company, including both selling or voting their shares, passive investors are constrained from selling. Since voting is passive investors' main opportunity for seeking to influence company policy, unequal voting rights, in theory, should have a greater impact on passive investors, which is not to say that it is not of concern to active investors as well.

Following an introduction, this paper is organized in two parts. In the first part, we review theoretical arguments and empirical evidence related to unequal voting structures. In the second part, we examine the case for including unequal voting stocks in equity indexes and put forward a proposal to adjust the weights of these stocks through an inclusion factor proportional to free float and company-level listed voting power.

The proposal in this paper is part of a consultation that MSCI is conducting with stakeholders globally on the topic of the eligibility for inclusion in MSCI's indexes of stocks of companies with unequal voting rights share classes. The consultation may or may not result in the adoption, in whole or in part, of the consultation proposal[s]. Any changes to current eligibility requirements will be announced in advance of implementation in the indexes.

INTRODUCTION

Equity indexes have evolved to fulfil multiple roles in the investment process and meet the needs of various types of investors. All institutional investors use indexes as market indicators and research tools. Asset owners employ them as policy benchmarks in their asset allocation. Active managers use them as performance benchmarks while passive investors use indexes as the basis for investment vehicles. To fulfil these multiple roles successfully, equity indexes aim to achieve comprehensive coverage of the underlying opportunity set by including all investable equity securities listed in the markets they seek to represent. In this paper, we address the question of whether stocks of companies with multiple share classes having unequal voting rights ("unequal voting shares or stocks") should be eligible for inclusion in equity indexes. We approach the question in two steps. First, we assess if unequal voting shares meet the definition of equity. Then, we examine the impact of unequal voting stocks from different institutional investor perspectives.

Are share classes with unequal voting rights equity securities? Are economic rights alone sufficient for a security to be deemed to be equity? Or are control rights also an inherent characteristic of equity? Separation between ownership and control is a common premise underpinning many corporate and investment structures. Examples include general partners and limited partners in private equity funds, investment managers and unit holders in mutual funds, and plan sponsors and beneficiaries in defined benefit pension funds. In the corporate world, companies obtain funding through different types of debt and equity capital. Investors hold particular debt and equity instruments to meet their objectives and constraints. Unequal voting rights stocks may be attractive to issuers who wish to separate ownership from control and to investors who require economic exposure without the need or desire to exercise control.

In addition to meeting the definition of equity, a security must be deemed to be investable in order to qualify for benchmark inclusion. In particular, the security must be deemed investable from the perspective of different types of international institutional investors, including asset owners, active managers and passive managers. Investability for the purpose of index inclusion is typically assessed in terms of company size, trading liquidity and security free float. As more unequal voting power issues come to the market and as indexes are increasingly used as portfolio implementation tools in passive investing, it may be appropriate to add voting to the existing criteria for index construction.

The need to add a new category of inclusion eligibility criteria to the set of investability criteria used in index construction results from the fact that unequal voting rights affect different investors in different ways. Active investors may judge for themselves if the growth prospects of a particular company or the superior skills of a visionary founder justify relinquishing voting rights. After assessing the potential benefits and drawbacks, an active investor may decide not to buy or to sell at a later stage. Passive investors have no such choice, their process mandates holding all index constituents. Large institutions with a long-term investment horizon (universal owners) also have little choice but to hold all index constituents. These investors may influence corporate policy only through voting, making voting rights an important dimension of investability for this group.

In this paper, we argue that unequal voting shares represent equity securities and therefore should be eligible for index inclusion. However, we note that these securities have different impacts from certain investor perspectives. As a result, we propose to adjust the index weights of unequal voting stocks to reflect both their free float as well as their company-level listed voting power. Before discussing the rationale and implications of this proposal, we review the theoretical and empirical evidence around unequal voting structures.

PART I

THE CASE FOR "ONE SHARE, ONE VOTE"

The fundamental argument in support of equal voting rights is that shareholders as the owners and residual claimants against company assets have the incentive to maximize firm value and therefore should participate in all important decisions in proportion to the capital they have committed to the firm. Owners of public companies are not involved in the day-to-day running of these companies; this responsibility has been delegated to management. Other than selling or threatening to sell their shares or applying indirect pressure through publicity, voting is the main avenue that owners of public companies have to influence management and affect corporate policy. Differential voting structures can reduce the ability of shareholders to effect changes in the board of directors and challenge the management of the firm.

According to equal voting-rights proponents (whether active or passive investors), cash flow rights and proportional control rights are indispensable aspects of owning equity. If entrepreneurs wish to retain control over their companies, they have alternative

methods of funding expansion other than issuing new shares, such as bank loans, corporate bonds and preferred stock. An entrepreneur who decides to raise equity capital in public markets should be prepared and required to relinquish control rights in line with the number of new shares, according to this view. Outside equity investors should be offered the same legal protection and the same voting rights as insiders and founders. According to this view, offering third-party investors the same rights as insiders is justified on both economic and moral grounds: Equal voting rights for all shareholders in a company is as self-evident a principle as equal voting rights for all citizens in a democracy.

The "one share, one vote" debate is often framed in terms of the balance between outside investors and company insiders. What are the risks if insiders retain superior voting power over important corporate decisions? Proponents of the one share, one vote principle argue that unequal voting rights protect insiders from outside control and accountability, leading to potential entrenchment and agency issues. According to this argument, if outside shareholders are unable to assert influence over important corporate decisions through voting, insiders may seek to obtain excessive private benefits from the company. Examples of such benefits include excessive compensation or perquisites, or even expropriation of company assets through uncontested decisions to sell these assets at discounted prices to other entities controlled by the insiders. Equal voting rights allow outside shareholders to assert some influence over important corporate decisions and can prevent insiders from deriving excessive private benefits at the expense of cash flows that should be accruing to shareholders.

In addition, supporters of the one share, one vote principle argue that unequal voting rights may be used as a mechanism to protect insiders from takeover threats. Management and board entrenchment can weaken the company as insiders may continue to mismanage it for long periods of time. Under the one share, one vote paradigm, it is easier for third parties to take over an underperforming corporation, to the benefit of existing shareholders who can either sell their shares at a premium during the takeover or retain them and enjoy the prospect of improved performance in the future.

Finally, it is argued that unequal voting rights may have negative implications for financial markets and economic activity in general. According to this argument, shares with reduced voting power may need to be issued at a lower valuation to attract investors, therefore increasing the cost of capital for the issuing company and consequently raising the hurdle for the type of projects and investments that the company can pursue. Also, the separation of voting rights and cash flow claims increases

agency costs, making the monitoring of management decisions potentially more difficult and costly for third-party shareholders, which would also have a negative impact on the firm's cost of capital.

THE CASE FOR UNEQUAL VOTING RIGHTS

The main argument supporting the existence of multiple-share class structures is that these structures are the result of voluntary decisions by informed agents in a free market: Company founders decide to offer shares in their company with limited control and outside investors decide to accept the offer, if they believe it represents an attractive investment opportunity, despite the lack of proportional control. In other words, competition for funding among companies and for investments among institutions will ensure that transparent differential voting structures will be priced efficiently in the IPO market.

Supporters of differential voting rights structures claim that prohibiting these structures would be inefficient as it would prevent the use of multiple share classes by companies and investors that may find such structures mutually advantageous. Some entrepreneurs may be happy to accept a higher cost of capital in order to retain control over their company and implement their long-term plans with more limited outside control or influence. In the past, this was often the case for media companies, who wished to preserve editorial independence, and consumer companies, who aimed to build a strong brand. More recently, several high-profile technology companies have opted for multiple-share class structures when going public. In these cases, the stated / presumed motivation behind adopting differential voting rights has been the desire to invest for the long term in order to reinvent existing businesses or create new ones.

Supporters of unequal voting structures argue that certain investors may find multiple-share class companies an attractive investment opportunity despite the lack of voting power for outside shareholders. According to this argument, the existence of multiple listed share classes also enables different types of investors to select the share class that more closely matches their skills and experience. Uninformed investors who may not have the resources to research the company may choose to gain exposure through the lower voting power class that often offers liquidity or dividend advantages and leave corporate governance decisions to the experts, while informed participants may elect to hold shares with higher voting power as they can exercise these rights appropriately.

In addition, proponents of multiple-share class structures argue that the motivation behind unequal voting rights is not the intention by insiders to extract private benefits, but the desire by founders to shield their company from outside investor pressure to

maximize short-term profits; the existence of multiple-share class structures may help such companies pursue risky projects that may yield superior long-term results. According to this argument, external shareholders such as activist investors and mutual funds place excessive emphasis on short-term performance as opposed to long-term value creation. Unequal voting rights can protect company founders from these short-term demands by public market investors and enable them to pursue strategic projects with uncertain short-term payoffs but substantial shareholder value creation potential over the long run.

Effectively, according to their supporters, multiple-share class structures offer the best of both worlds. They enable companies to fund expansion efficiently by tapping public markets while also retaining some of the key benefits enjoyed by private companies, specifically, the ability not to be unduly distracted by quarterly earnings reports and the discretion to invest for long-term results. Paradoxically, under this argument, reducing voting pressure and outside shareholder engagement actually promotes long termism. How can mutual funds with a holding period of one year and hedge funds with a holding period of months use voting power to maximize long-term value? However, there are also prominent examples of public companies such as Amazon.com Inc. and Tesla Motors Inc. where visionary founders have been allowed to implement long-term investments and sustain multi-year losses without multiple share classes. Public markets can also be patient and long term in their assessment of certain companies.

EXAMINING THE EMPIRICAL EVIDENCE

The theoretical arguments for and against unequal voting rights are finely balanced. What about the empirical evidence? Does the existence of multiple-share class structures enhance or destroy shareholder value? Before conducting our own analysis using MSCI index data, we review briefly empirical results reported in the academic literature.

Several research studies provide empirical support for the one share, one vote principle. Bennedsen and Nielsen (2006) studied a large sample of European companies and reported a negative relationship between unequal voting rights and price-to-book ratios. However, they found no impact from differential ownership on operating performance, likelihood of bankruptcy, dividend policy, or growth. Smart et al. (2007) reported that multiple-class firms traded at lower prices than single-class firms, both at the IPO and for at least the subsequent five years. They also reported statistically and economically significant value gains when multiple-class firms unify their share classes. Adams and Ferreira (2008) conducted a literature review and concluded that “overall,

there is some support in the literature for the hypothesis that deviations from one share-one vote affect the value of outside equity negatively."

Masulis et al. (2009) found that firm value decreased as insider control rights and cash flow rights diverged. Similarly, Gompers et al. (2010) found strong evidence that firm value increased with insiders' cash-flow rights and decreased with insiders' voting rights. However, they pointed out that "an empirical relationship between firm value and ownership structure — even if it is causal — does not imply that any actor is behaving irrationally. A majority owner of a private company can rationally choose to sacrifice some firm value in order to maintain private benefits of control. The ability to control editorial policy at a newspaper, corporate strategy at a software company, or brand identity at a consumer company can all bring utility to individual manager-owners. Such utility can outweigh financial losses, particularly if the insiders are already very wealthy."

Two recent studies published by corporate governance advocate organizations provided strong support for the one share, one vote principle. Kamonjoh (2016), in a study commissioned by the Investor Responsibility Research Center Institute, reported that controlled companies underperformed non-controlled firms over all periods reviewed with respect to total shareholder returns, revenue growth, return on equity, and dividend payout ratios. However, controlled companies outperformed non-controlled firms with respect to return on assets. Morey (2017), in a research study commissioned by the Council of Institutional Investors, found that multi-class structures did not result in a meaningful statistical increase in long-term value creation as measured by return on invested capital.

However, other studies reported a positive relationship between unequal voting rights and measures of shareholder value. Dimitrov et al (2006) found that firms that changed their capital structure from one share, one vote into a multiple class structure experienced positive abnormal returns in a period of four years following the announcement of the recapitalization, with higher returns when additional equity was issued to grow the company. They also found that accounting performance improved after the recapitalizations. Their findings imply that switching from single- to multiple-share class structure created value for non-controlling shareholders.

Adams et al. (2009) reported a positive causal effect of founder-CEOs on firm performance. Chemmanur et al. (2012) found that multiple class IPOs were more prevalent in three kinds of firms: first, firms operating in industries where a considerable amount of value can be created by ignoring temporary trends; second, family firms and

firms run by founder entrepreneurs, who tend to have high reputations in managing the firm; and third, firms characterized by large private benefits of control.

Bauguess et al. (2012) reported that most firms that recapitalized to a multiple class structure have superior industry-adjusted operating performance and fewer bankruptcy events. These firms also tended to be takeover targets more frequently and with higher premia. Most recapitalizations were accompanied by liquidation of large holdings by the main shareholder implying that dual-class recapitalizations were not used to avoid unwanted changes in control but to facilitate voluntary control transfers at prices that may benefit all shareholders.

Finally, a number of papers from the corporate law literature also provide support for multiple share structures. For example, Goshen and Hamdani (2016) argued that "…concentrated ownership creates value for controlling and minority shareholders alike. Our analysis shows that controlling shareholders hold a control block to increase the pie's size (pursue idiosyncratic vision) rather than to dictate the pie's distribution (consume private benefits). Importantly, when the entrepreneur's idiosyncratic vision is ultimately realized, the benefits will be distributed pro rata to all investors."

ANALYSIS OF CURRENT INDEX CONSTITUENTS

In this section, we review the portfolio characteristics and factor exposures of unequal voting stocks. This analysis provides insights into the potential impact of including or excluding these stocks on index and portfolio performance. If unequal voting stocks are similar to the overall market in terms of country, sector and factor characteristics, then excluding them from indexes and portfolios may not have a large impact on long-term risk and performance. On the other hand, if unequal voting stocks differ from the overall market in terms of their exposure to risk and return drivers, omitting them from portfolios may have significant impact.

We analyzed the voting structures of the constituents of the MSCI ACWI Index as of September 1, 2017. Out of a total of 2,493 index constituents, 253 securities had unequal voting structures. These securities represented 11.2% of the index at their free-float market-cap weight. The five largest companies on this list include Alphabet, Facebook, Berkshire Hathaway, Samsung and Visa. **Exhibit 1** shows the 50 largest index constituents with unequal voting structures.

Exhibit 2 shows how unequal voting rights securities are distributed in different markets. A total of 141 of these securities are in developed markets, representing 9.9% of the weight of the MSCI World Index. North American markets are close to the global

average at 11%. In Europe, unequal voting structures are prevalent in Scandinavian markets where they represent 68% of the weight in Sweden, 53% in Denmark and 38% in Finland. Italy follows closely behind with 30%, followed by Switzerland with 25% and Netherlands with 23%. Germany was close to the global average with 12% while we found only two index constituents with unequal voting rights in the U.K. Unequal voting rights constituents had 20% weight in the MSCI Emerging Markets Index. The three country indexes with highest representation by weight are the MSCI Colombia (82%), Brazil (55%) and Korea (54%) indexes.

Overall, we find substantial regional and country variations in the presence of unequal voting rights. **Exhibit 3** shows a similar analysis for GICS® sectors.[1] We also observe substantial sector variations in the distribution of unequal voting-rights securities: Information Technology at 23% and Consumer Discretionary at 17% were the two GICS sectors with excessive representation of unequal voting structures compared to the global level of 11.2% across the MSCI ACWI Index.

Next, we analyze the portfolio characteristics and factor exposures of the basket of 253 unequal voting-rights stocks and compare them with the characteristics of the MSCI ACWI Index. This analysis provides insights into the fundamental differences of this basket compared to the overall market. These differences in factor exposures may affect the risk and performance of indexes and portfolios that have varying allocations to unequal voting-rights securities.

Exhibit 4 shows country exposures of the basket of unequal voting-rights securities ("UVR") relative to the MSCI ACWI Index. The UVR basket is underweight in developed markets by 10% relative to the MSCI ACWI Index and overweight in emerging markets by the same amount. The UVR basket has effectively double the weight in the MSCI Emerging Markets Index, compared to the MSCI ACWI Index. Within developed markets the largest overweights are Sweden at 4.9% and Switzerland at 3.3% while the largest underweights are Japan at 7.6% and U.K. at 5.6%. In Emerging Markets, the largest overweights are Korea at 6.7% and Brazil at 3.4%. **Exhibit 5** presents similar analysis from a sector perspective. The largest overweights are in Information Technology at 18.8% and in Consumer Discretionary at 6.3%. Underweights are more evenly distributed across the remaining sectors with Industrials at -4.2% and Energy at -4.6% at the bottom of the list.

[1] GICS is the global industry classification standard jointly developed by MSCI and Standard & Poor's.

Exhibit 6 shows active factor exposures, based on the MSCI Barra Global Equity Model for Long-Term Investors (GEMLT). We observe substantial positive and negative active factor exposures. UVR stocks have positive exposure to Growth, Profitability, Size, Residual Volatility and Earnings Variability. The largest negative active exposures are to Dividend Yield, Leverage and Investment Quality. This analysis shows that the UVR basket contains companies that have high growth and profitability, are relatively large but also have relatively high earnings variability and high company-specific risk. These companies are also less leveraged and offer lower yield compared to other companies in the MSCI ACWI Index. **Exhibit 7** compares valuation and profitability ratios between unequal voting rights stocks and the MSCI ACWI Index. UVR stocks have higher earnings growth, higher profit margins and higher return on equity but also pay lower dividends and trade at premium valuations relative to the broad market.

Our analysis shows that UVR stocks differ from the broad equity universe in a number of important dimensions, including country, sector and factor exposures. These differences affect the ex-ante risk characteristics of these stocks. **Exhibit 8** presents forecast risk analysis and attribution using the GEMLT risk model. According to this model, the forecast volatility of the UVR basket was 11.0% compared to 9.9% for the MSCI ACWI Index, as of Oct. 31, 2017. The ex-ante tracking error of the basket of UVR securities was 3.5% with similar amounts of active risk coming from common and specific sources.

Overall, we found substantial differences in the country, sector, factor and valuation characteristics of unequal voting-rights securities, relative to the broad equity market. These differences are likely to have a significant impact on the risk and performance of indexes and portfolios with varying exposure to unequal voting stocks.

PART II

WHY WE PROPOSE ADJUSTING INDEX WEIGHTS

Equity indexes adjust constituent weights for free float, defined as the proportion of listed equity that is available to purchase in the market. Shares deemed strategic holdings are excluded from the calculation of free float because these shares are not investable. Our proposal to adjust constituent weights according to their issuer-listed voting power follows the same logic. Only the portion of total share capital that offers voting rights is deemed to be eligible for inclusion.

The ability to influence corporate policy through voting may be less important for certain types of investors. Active investors, such as actively managed mutual funds or hedge funds, are able to act on their assessment of the growth prospects and management quality of companies that offer reduced or zero voting rights equity. Following an informed assessment of potential risks and rewards, they may decide to invest in these companies. Even without equal voting rights, active investors can subsequently sell or short the stock of companies when growth prospects deteriorate or when insiders mismanage the company or fail to use their voting power to maximize shareholder value.

On the other hand, the ability to vote is particularly important for passive investors and large asset owners that have very long investment horizons and hold the "entire" market (universal owners). These types of institutions, either because of their process or because of their size and investment horizon, have committed to not sell the stock of public companies when insiders misuse their superior control rights. In these cases, engagement through voting or public agitation is the only way to affect changes in corporate policy for the benefit of outside shareholders, making voting power a more important criterion for passive investors.

How can equity indexes continue to offer comprehensive coverage while recognizing the importance of voting power for certain types of investors? One solution that would satisfy the need for complete coverage would be to continue to include in indexes all companies at their full weight irrespective of voting power. This approach may have been satisfactory in the past when relatively few companies listed unequal voting shares and when the primary purpose of benchmarks was to act as market indicators and research tools.

However, two recent trends in corporate governance and institutional investing may render the legacy approach obsolete or inadequate. First, we have seen a rising number of companies offer reduced or even zero voting power shares to outside investors (for example, see the analysis in **Exhibit 9**). In addition, as passive investing grows in popularity, indexes become the building blocks for asset allocation and portfolio construction. In this new paradigm, the legacy approach of ignoring voting rights in index construction may no longer be adequate for passive investors and universal owners as it would create misalignment between economic exposure and voting power. In other words, it would force them to have excessive capital allocation to public companies where they have relatively low protection against insider misuse of control and limited or no possibility to influence corporate policy through engagement and voting.

At the other extreme, a solution that would recognize the importance of voting power would be to exclude all companies that offer differential voting rights from equity indexes. This approach would also be problematic for all index-linked investors as it would reduce their opportunity set and violate the basic index principle of offering comprehensive coverage of the listed investable equity market.

Other possible solutions that would avoid the two extremes of full inclusion irrespective of voting power or complete exclusion of all unequal voting structures would require arbitrary thresholds to determine at what level of listed voting power securities should be included in benchmarks. The challenge with these approaches is that there is no clear theoretical or empirical basis on which to select an appropriate exclusion level. Fifty percent appears to be an intuitively appealing middle point but screening out companies with listed voting power below 50% may lead to the exclusion from indexes of several successful high-profile companies. This would deprive investors of the opportunity to benefit from the growth prospects and diversification potential offered by these companies.

In the next section, we propose to continue to include unequal voting stocks in equity indexes but to adjust their weights to reflect both free float and listed voting power. This proposal recognizes the additional constraints of passive investors and universal owners by aligning economic exposure and listed voting power, while continuing to offer all investors access to the entire universe of listed and investable equity securities.

PROPOSED ADJUSTMENT TO INDEX WEIGHTS

We propose to adjust the index weights of unequal voting rights securities through an inclusion factor that combines company free float and company listed voting power. We derive this inclusion factor in two steps. In the first step, we compute company level listed voting power (CVP) as follows:

$$company\ voting\ power = \frac{\sum number\ of\ shares * votes\ per\ share * security\ free\ float}{\sum number\ of\ shares * votes\ per\ share}$$

In this formula, the summation applies over all share classes (listed and unlisted) of each company. The derived company level listed voting power has a simple and intuitive interpretation: It provides the percentage of votes that are attached to shares that are listed and available to outside investors. In the second step, we derive a vote-adjusted

security free float (VAF) by multiplying security free float by the ratio of company level voting power to the total free float of the company:

$$vote\ adjusted\ security\ free\ float = security\ free\ float * \frac{\text{company voting power}}{company\ free\ float}$$

Most companies with unequal voting structures have company free float in excess of company level listed voting power. As a result, the ratio in the above formula is below one, leading to a vote-adjusted free float that is below one. However, in a small number of cases, listed voting power exceeds free float, leading to a ratio that is greater than one. So, in order to reflect the investability of the company and derive the index market cap for unequal voting-rights securities, we multiply their full market cap by the lower of vote-adjusted security free float and security free float:

$$index\ mcap = \text{security mcap} * \min(security\ free\ float, vote\ adj.security\ free\ float)$$

We apply this adjustment only on unequal voting-rights securities. The calculation of index market cap for all other constituents remains unchanged. As an example, **Exhibit 10** provides step-by-step calculations to derive the voting power of Alphabet Inc., the largest multi-share class index constituent. Using these formulas, we calculate the company-level listed voting power for the 253 MSCI ACWI index constituents that had unequal voting structures, as of Sept. 1, 2017. In **Exhibit 11**, we analyze the distribution and, in **Exhibit 12**, the cumulative distribution of company-level listed voting power by number of securities and by MSCI ACWI weight. The plots allow us to look for potential break points and discontinuities in the distributions. For example, do unequal voting rights companies offer listed voting power that is concentrated below a certain level, such as 50% or 25%? Such break points could be potential thresholds to determine the index eligibility of unequal voting shares.

We gain some interesting insights from analyzing these distributions. First, we observe that listed voting power of unequal voting rights securities is spread across the entire range of 0% - 100% without obvious break points or excessive concentration in a particular interval. Having said that, the 30% - 40% listed voting power range is the most common: 40 out of 253 UVR securities, representing 3.1% of ACWI, offer voting power to outside shareholders within this range, i.e., substantial but lower than 50%. Finally, we note that the median of the company-level listed voting power distribution is 42%,

with the majority of UVR index constituents (153 out of 253) providing less than 50% voting power to outside investors.

A key benefit of the proposed continuous adjustment to index weights is that it leads to the exclusion of only a small number of securities from the index. Specifically, 12 of the 253 unequal voting structure securities would be deleted as they have zero listed voting power. These securities are listed in **Exhibit 13**. In total, these 12 securities represented 0.23% of the MSCI ACWI Index as of Sept. 1, 2017. The remaining 241 securities would be maintained at reduced weights, proportional to the lower of their security free float and adjusted security free float. These securities had a total weight of 11.0% on Sept. 1, 2017 and would have a total weight of 6.9% in MSCI ACWI following the adjustment.

Another appealing feature of this proposal is that it penalizes multiple-share class companies more when free float and listed voting power diverge the most, specifically, when listed voting power is significantly lower than company free float. In these cases, companies have used public markets for a substantial portion of their equity capital (high free float) without providing commensurate level of control to outside shareholders (low listed voting power). **Exhibit 14** plots adjusted index weights and the ratio of security free float over vote-adjusted security free float. As this ratio increases, adjusted weights fall steeply, penalizing companies that have raised substantial equity capital in public markets without providing proportionate voting rights to outside shareholders.

Exhibit 15 shows adjusted weights as a function of the gap between free float and vote adjusted security free float. As this gap increases, indicating greater misalignment between free float and voting rights, adjusted weights decrease. Unequal voting stocks with 100% free float form the upper bound on this chart: For a given voting gap, securities with full float are the most investable, and therefore have higher adjusted weights relative to current weights. **Exhibit 16** plots adjusted weights against vote-adjusted security free float. Securities with no voting gap, i.e., those for which listed voting power matches or exceeds their free float, form the upper bound, while securities with 100% free float form the lower bound. Overall, these exhibits confirm that the proposed adjusted weights continue to capture free float while imposing additional weight reduction on constituents with low voting power relative to free float.

CONCLUSION

A quote from *Financial Times* journalist Andrew Hill aptly summarizes the ambiguous nature of the one share, one vote debate: "The advantage of a dual class share structure is that it protects entrepreneurial management from the demands of shareholders. The disadvantage of a dual class share structure is that it protects entrepreneurial management from the demands of shareholders."

We examined the literature surrounding unequal voting structures. We found credible theoretical arguments both for and against the existence of these structures. The empirical evidence regarding the impact of unequal voting rights on company performance and portfolio returns was also mixed, with roughly similar number of studies reporting positive and negative effects. Our own analysis of index constituents with unequal voting power revealed substantial differences in the exposures of these securities to risk and return drivers, compared to the overall equity market. These differences are likely to have an impact on the performance of portfolios and indexes with varying allocations to unequal voting stocks.

Equity indexes aim to include all investable equity securities. Therefore, unequal voting shares must pass two tests to qualify for index inclusion. First, they must be listed equity. This is indeed often the case, as they offer economic rights and proportional ownership and many exchanges will agree to list such securities. Second, they must be deemed to be investable. Many unequal voting stocks may be highly investable in terms of size, liquidity and free float. However, we argued that the rising number of new issues with unequal voting rights and the increasing popularity of passive investing through indexes call for adding another eligibility requirement. The challenge for index construction is to include differential voting rights shares in the index to maintain comprehensive coverage of the equity universe, while appropriately reflecting the reduced voting power characteristics of these securities in index weights.

Our proposed solution: Continue to include in equity indexes securities with differential voting rights but with adjusted weights that reflect both free float and company-level listed voting power. This approach offers several potential benefits. It avoids artificial cut-off points that create binary outcomes and may be subject to gaming. It provides an incentive to companies to reduce the gap between free float and voting power. It penalizes companies that offer low voting power but excludes only a very small number of companies, such as Snap Inc., that provide zero voting power to outside shareholders. It enables indexes to continue to capture all investable equity securities and offer all investors the possibility of benefitting from the growth prospects of new companies

that may have elected to offer differential voting rights. At the same time, the weight of constituents with reduced voting rights is adjusted according to company-level listed voting power, recognizing the impact of unequal voting rights, particularly for passive investors.

Equity markets and investment processes evolve through time. Index methodologies should follow this evolution to ensure they continue to serve the needs of market participants. We believe our proposal achieves the right balance between comprehensive coverage and index investability, and appropriately reflects the evolving needs and priorities of different types of investors by keeping unequal voting shares in indexes with weights that align economic exposure and listed voting power.

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Exhibit 1
50 Largest MSCI ACWI Index Constituents with Unequal Voting Power, Ranked by Company Full Market Capitalization, Indicative Data as of Sept.1, 2017

No	Security Name	Country	Sector	Company Mkt Cap	ACWI Weight	Country Weight
1	ALPHABET C	USA	Information Technology	653,455	0.68%	1.32%
2	ALPHABET A	USA	Information Technology	653,455	0.66%	1.28%
3	FACEBOOK A	USA	Information Technology	498,544	0.95%	1.83%
4	BERKSHIRE HATHAWAY B	USA	Financials	445,811	0.53%	1.02%
5	SAMSUNG ELECTRONICS CO	Korea	Information Technology	302,093	0.47%	27.49%
6	SAMSUNG ELECTRONICS PREF	Korea	Information Technology	302,093	0.07%	4.07%
7	VISA A	USA	Information Technology	239,559	0.45%	0.86%
8	ROCHE HOLDING GENUSS	Switzerland	Health Care	219,276	0.42%	15.31%
9	COMCAST CORP A (NEW)	USA	Consumer Discretionary	194,746	0.45%	0.88%
10	MASTERCARD A	USA	Information Technology	142,817	0.30%	0.57%
11	NOVO NORDISK B	Denmark	Health Care	119,149	0.21%	32.96%
12	UNILEVER NV (NL) CERT	Netherlands	Consumer Staples	101,968	0.23%	18.68%
13	NASPERS N	South Africa	Consumer Discretionary	99,616	0.23%	28.90%
14	UNITED PARCEL SERVICE B	USA	Industrials	99,263	0.18%	0.35%
15	ITAU UNIBANCO PN	Brazil	Financials	81,374	0.10%	11.46%
16	BAIDU ADR	China	Information Technology	80,697	0.15%	4.34%
17	VOLKSWAGEN VORZUG	Germany	Consumer Discretionary	76,924	0.07%	2.08%
18	VOLKSWAGEN STAMM	Germany	Consumer Discretionary	76,924	0.01%	0.38%
19	SBERBANK RUSSIA COM(RUB)	Russia	Financials	71,669	0.08%	20.89%
20	BANCO BRADESCO PN	Brazil	Financials	65,574	0.08%	9.02%
21	BANCO BRADESCO ON	Brazil	Financials	65,574	0.02%	2.60%
22	BMW STAMM	Germany	Consumer Discretionary	61,026	0.07%	2.32%
23	BMW VORZUG	Germany	Consumer Discretionary	61,026	0.01%	0.34%
24	AMERICA MOVIL L	Mexico	Telecommunication Services	61,012	0.07%	17.23%
25	VALE ON	Brazil	Materials	60,221	0.07%	8.44%
26	VALE PN A	Brazil	Materials	60,221	0.01%	0.87%
27	JD.COM ADR	China	Consumer Discretionary	59,977	0.06%	1.88%
28	PETROBRAS PN	Brazil	Energy	59,831	0.04%	4.74%
29	PETROBRAS ON	Brazil	Energy	59,831	0.03%	3.74%
30	DELL TECHNOLOGIES	USA	Information Technology	57,821	0.04%	0.07%
31	INTESA SANPAOLO	Italy	Financials	56,487	0.10%	12.37%
32	INTESA SANPAOLO RNC	Italy	Financials	56,487	0.01%	0.85%
33	HENKEL VORZUG	Germany	Consumer Staples	55,503	0.06%	1.79%
34	HENKEL STAMM	Germany	Consumer Staples	55,503	0.03%	0.94%
35	REGENERON PHARMACEUTICAL	USA	Health Care	53,570	0.09%	0.18%
36	FIN RICHEMONT NAMEN A	Switzerland	Consumer Discretionary	51,387	0.11%	4.01%
37	21ST CENTURY FOX A	USA	Consumer Discretionary	50,473	0.07%	0.13%
38	21ST CENTURY FOX B	USA	Consumer Discretionary	50,473	0.03%	0.05%
39	SIMON PROPERTY GROUP	USA	Real Estate	49,387	0.12%	0.22%
40	MERCK KGAA STAMM	Germany	Health Care	47,583	0.03%	1.06%
41	ATLAS COPCO A	Sweden	Industrials	46,945	0.06%	6.42%
42	ATLAS COPCO B	Sweden	Industrials	46,945	0.03%	3.38%
43	UNICREDIT	Italy	Financials	45,759	0.10%	11.88%
44	FORD MOTOR CO	USA	Consumer Discretionary	45,196	0.10%	0.19%
45	VMWARE A	USA	Information Technology	43,896	0.02%	0.03%
46	CME GROUP	USA	Financials	42,899	0.10%	0.19%
47	EMIRATES TELECOM CORP	United Arab Emirates	Telecommunication Services	42,618	0.02%	23.28%
48	HENNES & MAURITZ B	Sweden	Consumer Discretionary	41,617	0.06%	5.80%
49	AP MOLLER MAERSK B	Denmark	Industrials	40,963	0.03%	4.89%
50	AP MOLLER MAERSK A	Denmark	Industrials	40,963	0.02%	2.68%

Exhibit 2
Country Distribution of Securities with Unequal Voting Rights, indicative data as of Sept.1, 2017

	Number of Sec's	Index Mkt Cap	Index Weight
World	141	3,738,708	9.9%
North America			
USA	53	2,420,698	10.9%
Canada	17	150,153	11.0%
EMEA			
United Kingdom	2	10,872	0.4%
France	-	-	-
Germany	13	154,721	11.6%
Switzerland	10	286,007	24.6%
Netherlands	4	120,041	23.1%
Spain	-	-	-
Sweden	21	281,186	68.3%
Italy	6	104,529	30.2%
Denmark	6	142,898	53.0%
Belgium	-	-	-
Finland	4	54,065	37.8%
Israel	-	-	-
Norway	2	3,927	4.0%
Ireland	-	-	-
Austria	-	-	-
Portugal	-	-	-
Asia Pacific			
Japan	1	1,269	0.0%
Australia	-	-	-
Hong Kong	1	5,087	1.0%
Singapore	1	3,255	1.8%
New Zealand	-	-	-

	Number of Sec's	Index Mkt Cap	Index Weight
EM	112	1,043,346	20.6%
EM Asia			
China	8	121,605	8.3%
Korea	38	403,664	54.7%
Taiwan	-	-	-
India	2	11,032	2.5%
Indonesia	1	4,109	3.6%
Malaysia	-	-	-
Thailand	-	-	-
Philippines	10	25,761	46.4%
Pakistan	-	-	-
EM EMEA			
South Africa	4	116,153	33.7%
Russia	6	54,009	32.7%
Poland	3	6,804	9.9%
Turkey	2	7,458	12.0%
United Arab Emi	1	8,524	23.3%
Qatar	-	-	-
Greece	-	-	-
Hungary	-	-	-
Czech Republic	-	-	-
Egypt	-	-	-
EM Lat America			
Brazil	24	205,891	55.5%
Mexico	5	58,731	32.6%
Chile	1	1,254	2.0%
Colombia	7	18,350	81.8%

Exhibit 3
Sector Distribution of Securities with Unequal Voting Rights, Indicative Ddata as of Sept. 1, 2017

Index	Number of Securities	Index Market Cap	Index Weight
MSCI ACWI	253	4,782,053	11.2%
Information Technology	24	1,740,097	23.2%
Consumer Discretionary	61	870,424	17.1%
Consumer Staples	29	388,716	10.1%
Financials	44	722,027	9.1%
Health Care	11	358,682	7.5%
Industrials	30	306,094	6.7%
Telecommunication Services	10	90,228	6.6%
Materials	19	136,032	5.9%
Real Estate	6	70,459	5.2%
Energy	10	71,168	2.8%
Utilities	9	28,126	2.1%

Exhibit 4
Country Weights of Basket of Unequal Voting Rights Securities, Indicative Data as of Sept. 1, 2017

Country Weights	MSCI ACWI	UVR Basket	Active Weight
Developed Markets	88.2%	78.2%	-10.0%
North America			
USA	52.0%	50.6%	-1.3%
Canada	3.2%	3.1%	0.0%
EMEA			
United Kingdom	5.8%	0.2%	-5.6%
France	3.5%	0.0%	-3.5%
Germany	3.1%	3.2%	0.1%
Switzerland	2.7%	6.0%	3.3%
Netherlands	1.2%	2.5%	1.3%
Spain	1.2%	0.0%	-1.2%
Sweden	1.0%	5.9%	4.9%
Italy	0.8%	2.2%	1.4%
Denmark	0.6%	3.0%	2.4%
Belgium	0.4%	0.0%	-0.4%
Finland	0.3%	1.1%	0.8%
Israel	0.2%	0.0%	-0.2%
Norway	0.2%	0.1%	-0.1%
Ireland	0.1%	0.0%	-0.1%
Austria	0.1%	0.0%	-0.1%
Portugal	0.1%	0.0%	-0.1%
Asia Pacific			
Japan	7.7%	0.0%	-7.6%
Australia	2.4%	0.0%	-2.4%
Hong Kong	1.2%	0.1%	-1.1%
Singapore	0.4%	0.1%	-0.4%
New Zealand	0.1%	0.0%	-0.1%

Country Weights	MSCI ACWI	UVR Basket	Active Weight
Emerging Markets	11.8%	21.8%	10.0%
EM Asia			
China	3.4%	2.5%	-0.9%
Korea	1.7%	8.4%	6.7%
Taiwan	1.4%	0.0%	-1.4%
India	1.0%	0.2%	-0.8%
Indonesia	0.3%	0.1%	-0.2%
Malaysia	0.3%	0.0%	-0.3%
Thailand	0.3%	0.0%	-0.3%
Philippines	0.1%	0.5%	0.4%
Pakistan	0.0%	0.0%	0.0%
EM EMEA			
South Africa	0.8%	2.4%	1.6%
Russia	0.4%	1.1%	0.7%
Poland	0.2%	0.1%	0.0%
Turkey	0.1%	0.2%	0.0%
United Arab Emi	0.1%	0.2%	0.1%
Qatar	0.1%	0.0%	-0.1%
Greece	0.0%	0.0%	0.0%
Hungary	0.0%	0.0%	0.0%
Czech Republic	0.0%	0.0%	0.0%
Egypt	0.0%	0.0%	0.0%
EM Lat America			
Brazil	0.9%	4.3%	3.4%
Mexico	0.4%	1.2%	0.8%
Chile	0.1%	0.0%	-0.1%
Colombia	0.1%	0.4%	0.3%

Exhibit 5
Sector Weights of Basket of Unequal Voting Rights Securities, Indicative Data as of Sept. 1, 2017

Sector Weights	MSCI ACWI	UVR Basket	Active Weight
Information Technology	17.6%	36.4%	18.8%
Consumer Discretionary	11.9%	18.2%	6.3%
Consumer Staples	9.0%	8.1%	-0.9%
Telecommunication Services	3.2%	1.9%	-1.3%
Real Estate	3.2%	1.5%	-1.7%
Materials	5.4%	2.8%	-2.6%
Utilities	3.2%	0.6%	-2.6%
Financials	18.6%	15.1%	-3.5%
Health Care	11.2%	7.5%	-3.7%
Industrials	10.6%	6.4%	-4.2%
Energy	6.0%	1.5%	-4.6%

Exhibit 6
GEMLT Factor Exposures of Unequal Voting Rights Securities, Indicative Data as of Sept. 1, 2017

GEMLT Factors	MSCI ACWI	UVR Basket	Active Exposure
Growth	-0.01	0.38	0.39
Profitability	-0.01	0.35	0.36
Size	0.31	0.55	0.24
Residual Volatility	-0.08	0.08	0.16
Earnings Variability	-0.07	0.03	0.10
Momentum	-0.01	0.06	0.08
Earnings Quality	-0.01	0.01	0.03
Liquidity	0.01	0.03	0.02
Beta	0.00	0.01	0.01
Long-Term Reversal	-0.02	-0.05	-0.03
Earnings Yield	0.04	-0.06	-0.10
Book-to-Price	-0.02	-0.14	-0.13
Mid Capitalization	-0.09	-0.25	-0.16
Investment Quality	0.07	-0.14	-0.21
Leverage	0.01	-0.27	-0.28
Dividend Yield	0.06	-0.41	-0.46

Exhibit 7
Valuations and Profitability of Unequal Voting Rights Stocks, Indicative Data as of Sept. 1, 2017

Valuation and Profitability Ratios	MSCI ACWI	UVR Basket	UVR/ACWI
Long Term Fwd EPS Growth (%)	13.6	17.8	1.31
Price To Book Value	2.32	2.69	1.16
Price To Earnings	20.5	22.9	1.12
Profit Margin (EPS/SPS, %)	7.97	8.35	1.05
Return on Equity (%)	11.3	11.7	1.03
Financial Leverage - Debt to Equity	1.34	1.36	1.02
Dividend Yield (%)	2.33	1.40	0.60

Exhibit 8
GEMLT Forecast Risk Analysis of Unequal Voting Rights Stocks, Indicative Data as of Sept. 1, 2017

Risk Source	MSCI ACWI	UVR Basket	Active Risk
Total Risk	9.88%	10.99%	3.53%
Currency	2.32%	2.83%	1.19%
Local Excess	9.34%	9.83%	3.41%
Asset Specific	0.69%	2.40%	2.23%
Common Factor	9.32%	9.53%	2.58%
Risk Indices	0.48%	0.91%	0.71%
Industry	0.56%	2.16%	1.94%
Country	0.68%	1.38%	1.27%
World	9.14%	9.14%	0.00%

Exhibit 9

The charts show the weight and the number of unequal voting rights in the MSCI World Index, based on index constituent data as of Sept.1, 2017, from Dec. 31, 1970 to Oct. 31, 2017.

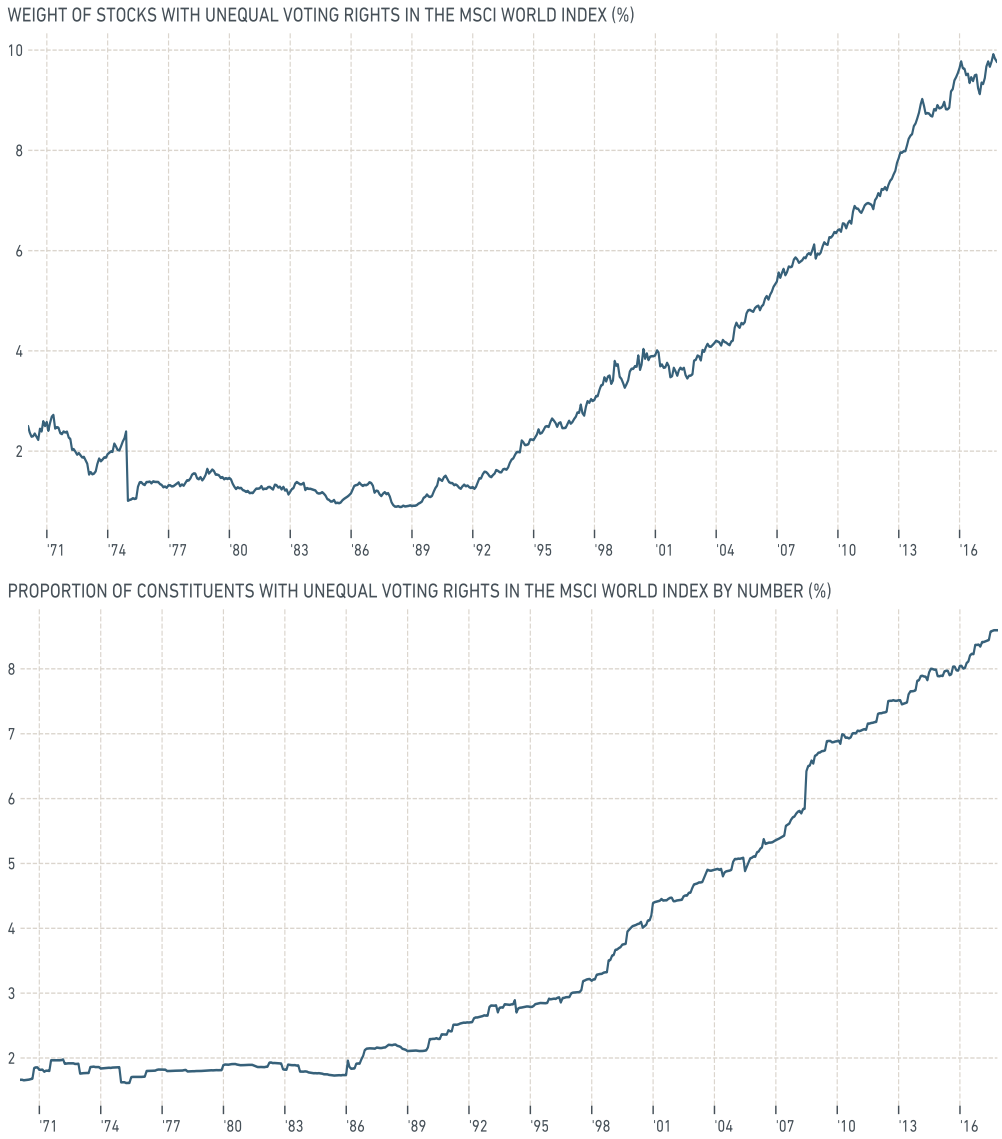


Exhibit 10
Step-by-step Calculation of Voting Power for Alphabet Inc., Indicative Data as of Sept. 1, 2017

Share Classes	Security Free Float	Total Number of shares	Free Float Number of Shares	Company Free Float	Votes per share	Total Number of Votes	Free Float Number of Votes	Company Voting Power	Vote Adjusted Security Free Float
	A	B	C = A*B	D = C/B	E	F = B*E	G = C*E	H = G/F	I = A*(H/D)
Alphabet - A	100%	297,628,801	297,628,801		1	297,628,801	297,628,801		43.9%
Alphabet - B	0%	47,152,692	-		10	471,526,920	-		0.0%
Alphabet - C	90%	346,967,110	312,270,399		0	-	-		39.5%
Alphabet - All		691,748,603	609,899,200	88.2%		769,155,721	297,628,801	38.7%	

Exhibit 11
Distribution of Voting Power of Unequal Voting Rights Stocks, Indicative Data as of Sept.1, 2017

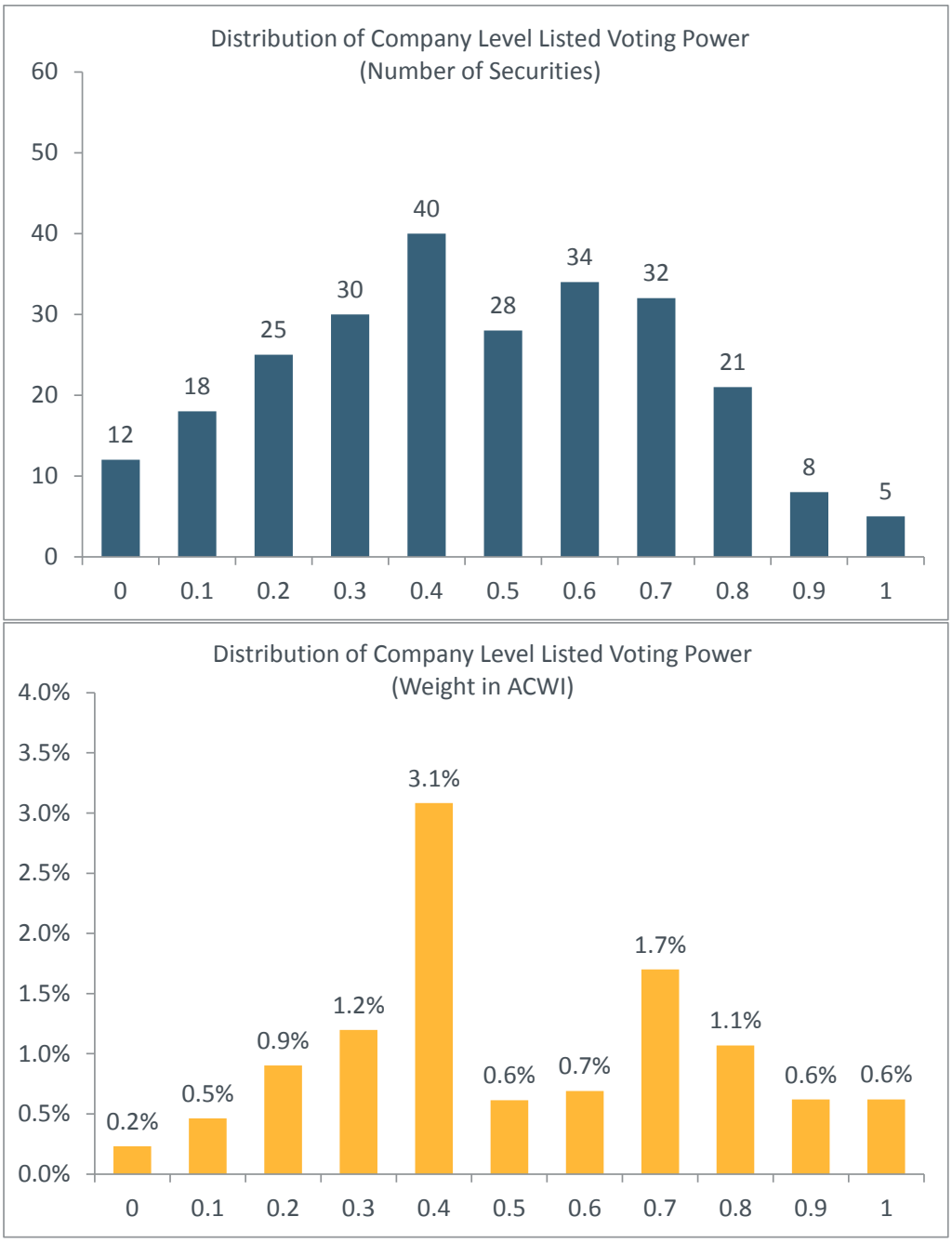
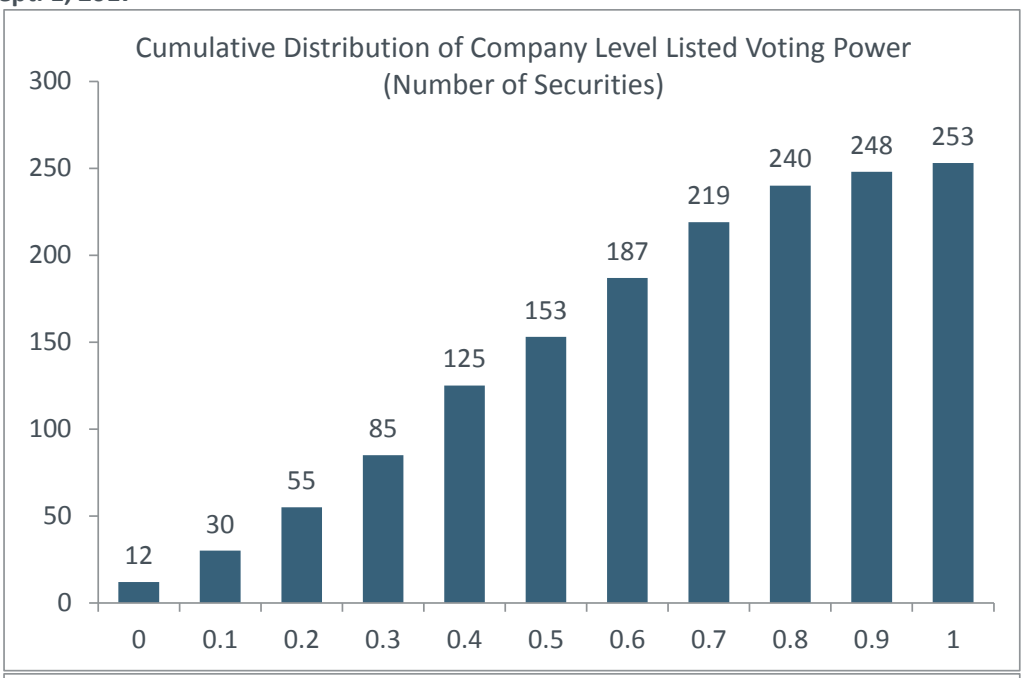


Exhibit 12
Cumulative Distribution of Voting Power of Unequal Voting Stocks, Indicative Data as of Sept. 1, 2017



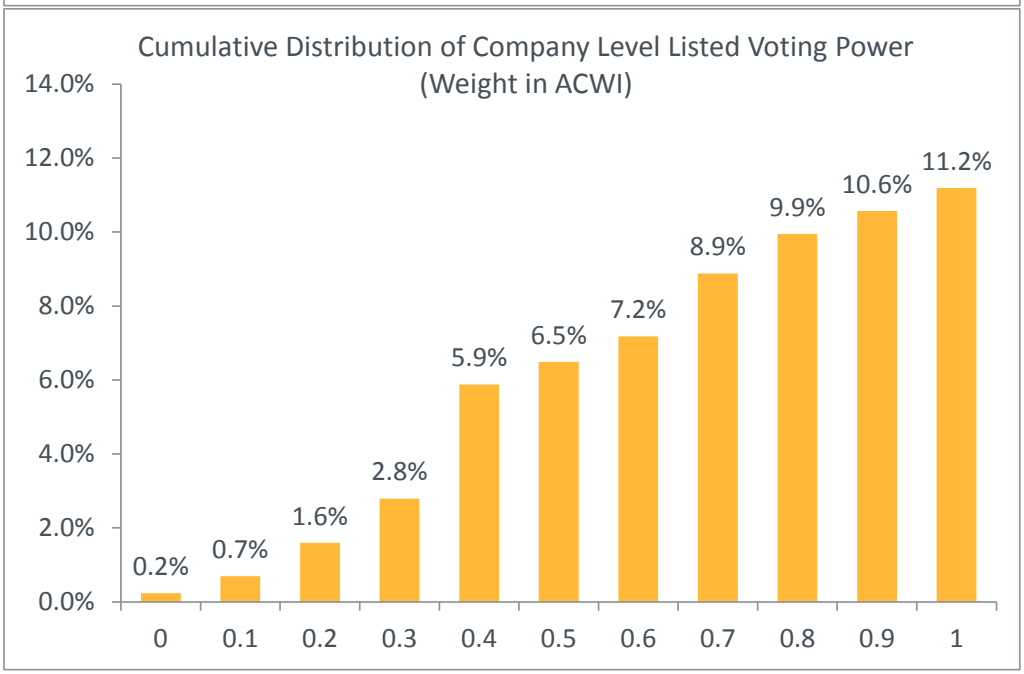


Exhibit 13
List of MSCI ACWI Index Constituents with Zero Voting Power, Indicative Data as of Sept. 1, 2017

No	Security Name	Country	Sector	Company Mkt Cap	ACWI Weight	Country Weight
1	CME GROUP	USA	Financials	42,899	0.10%	0.19%
2	EMIRATES TELECOM CORP	United Arab Emirates	Telecommunication Services	42,618	0.02%	23.28%
3	TRANSNEFT PREF (RUB)	Russia	Energy	21,433	0.00%	0.85%
4	PORSCHE AUTOMOBIL VZG	Germany	Consumer Discretionary	17,548	0.02%	0.66%
5	COCA-COLA FEMSA L	Mexico	Consumer Staples	17,232	0.01%	2.27%
6	SCRIPPS NETWORKS INTER A	USA	Consumer Discretionary	11,114	0.02%	0.03%
7	SHAW COMMUNICATIONS B	Canada	Consumer Discretionary	11,099	0.02%	0.70%
8	SCHAEFFLER	Germany	Consumer Discretionary	9,498	0.01%	0.18%
9	PAO DE ACUCAR PN	Brazil	Consumer Staples	6,544	0.01%	0.98%
10	SUZANO PAPEL E CELU PN A	Brazil	Materials	6,270	0.01%	0.62%
11	EATON VANCE CORP NV	USA	Financials	5,473	0.01%	0.02%
12	EMPIRE CO A	Canada	Consumer Staples	4,391	0.01%	0.21%

Exhibit 14
Relationship between the Adjusted Index Weights and Ratio of Free Float over Adjusted Free Float

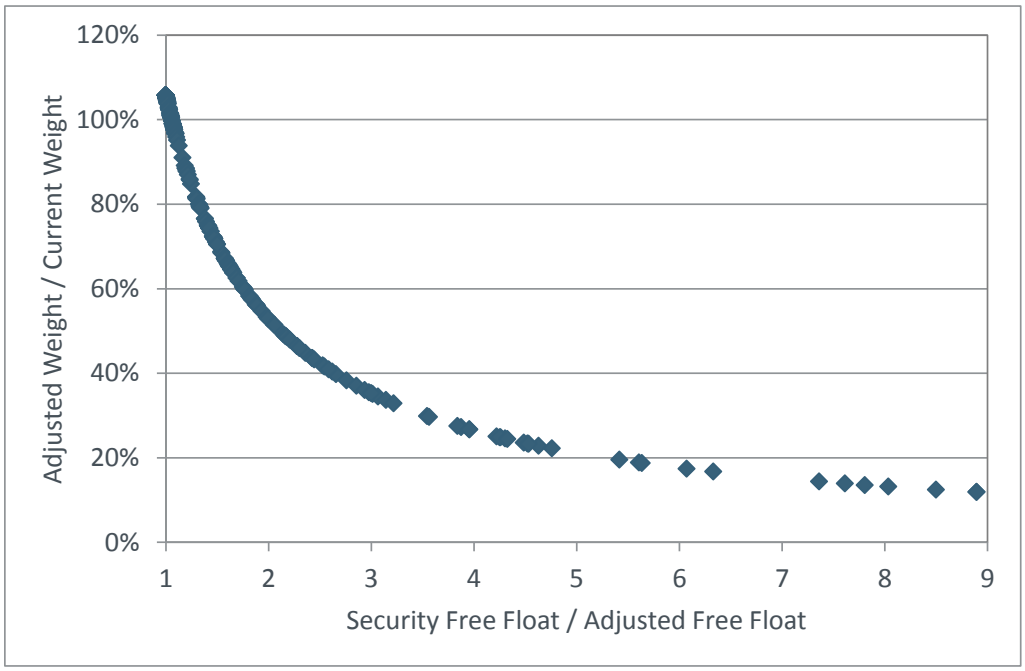


Exhibit 15
Relationship between Adjusted Index Weights and the Gap between Free Float and Adjusted Free Float

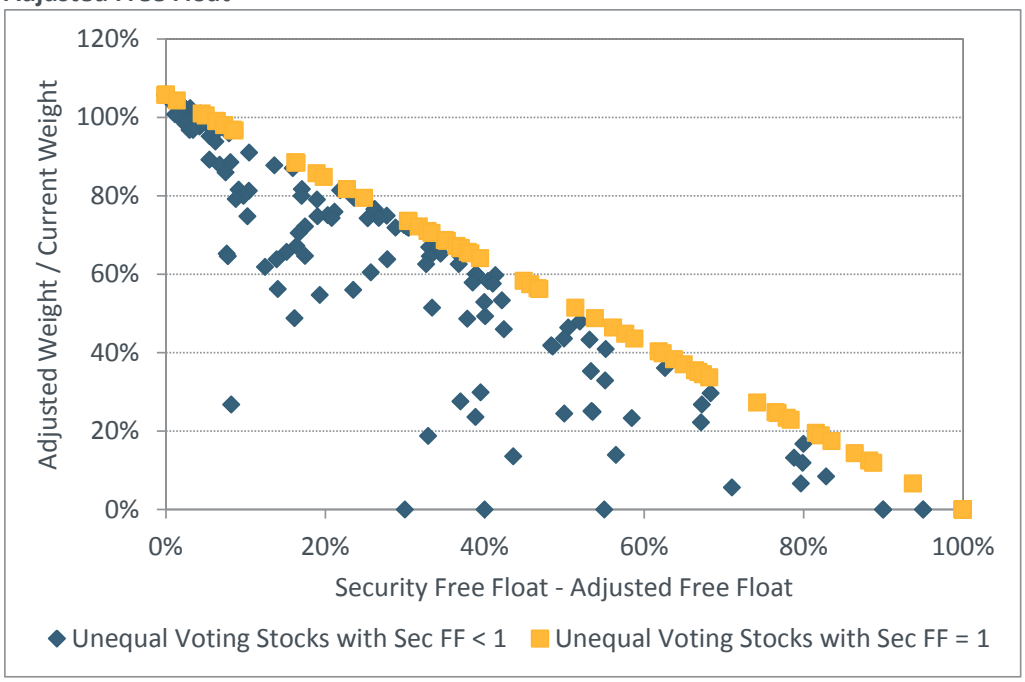
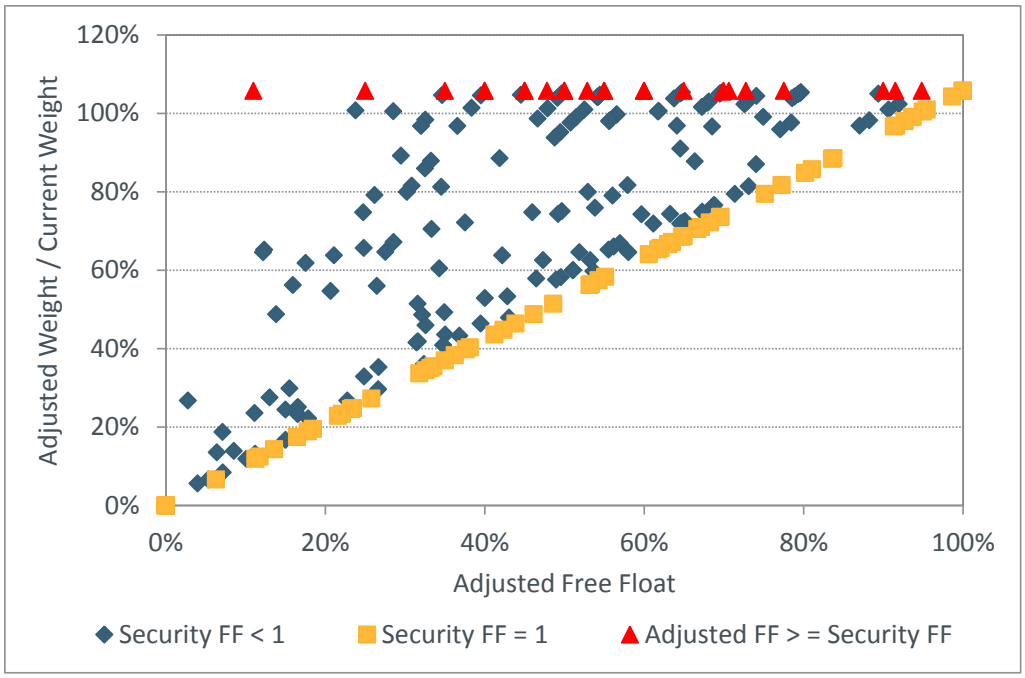


Exhibit 16
Relationship between the Adjusted Index Weights and the Vote-adjusted Security Free Float



CONTACT US

clientservice@msci.com

AMERICAS

Americas	1 888 588 4567 *
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