

CONSULTATION ON THE TREATMENT OF UNEQUAL VOTING STRUCTURES IN THE MSCI EQUITY INDEXES

January 2018 (Updated June 2018)

This consultation may or may not lead to the implementation of any or all of the proposed changes in MSCI's indexes. Consultation feedback will remain confidential. MSCI may publicly disclose feedback if specifically requested by specific market participants. In that case, the relevant feedback would be published together with the final results of the consultation.

SUMMARY

- Following a consultation on the treatment of non-voting shares, MSCI announced on November 2, 2017 its intention to broaden the consultation to include a discussion on the treatment of all types of unequal voting structures.
- On January 31, 2018, MSCI launched a public consultation on the treatment of unequal voting structures in the MSCI Equity Indexes and released a [discussion paper](#) which aims to serve as the basis of the consultation and facilitate debate among market participants.
- Under the revised proposal that is put forward in the discussion paper, MSCI would continue to include stocks with unequal voting rights in the MSCI Equity Indexes, but would adjust the weights of these stocks to reflect both their free float and their company level listed voting power.
- This consultation document provides details on the proposal, the potential implementation and the simulated impact.
- Under the proposal, the weight adjustment would be calculated the same way for current and new index constituents. However, changes to the weights of current index constituents would be subject to a three-year grace period.

MSCI invites feedback from market participants on or before September 28, 2018 and will announce the results of the consultation on or before October 31, 2018

BACKGROUND

PREVIOUS PROPOSAL (2017 CONSULTATION)

2017 proposal: Exclude non-voting shares from certain MSCI Equity Indexes in cases where the company level voting power is less than 25%

IN FAVOR:

majority of market participants

- in addition to supporting the proposal on non-voting shares, many international institutional investors highlighted that the "one share, one vote" principle was of fundamental importance, and not just a specific governance consideration

AGAINST:

minority of market participants

- equity benchmarks would less clearly represent the overall opportunity set
- it should be the role of regulators or stock exchanges rather than index providers to address the issue of unequal voting structures, including non-voting shares

- *Note: the 2017 consultation was on the treatment of non-voting shares only, while the current consultation is on the treatment of all types of unequal voting structures.*

APPROACHES TO VOTING RIGHTS

There are theoretical arguments for and against unequal voting rights

The Case for One Share One Vote

- Shareholders have the incentive to maximize firm value and should be able to participate in all important decisions in proportion to their ownership of equity capital
- Unequal voting rights protect insiders from outside control and accountability, leading to potential entrenchment and agency issues
- Unequal voting rights may result in higher cost of capital for the firm due to potential lower valuation, as well as agency costs

The Case for Unequal Voting Rights

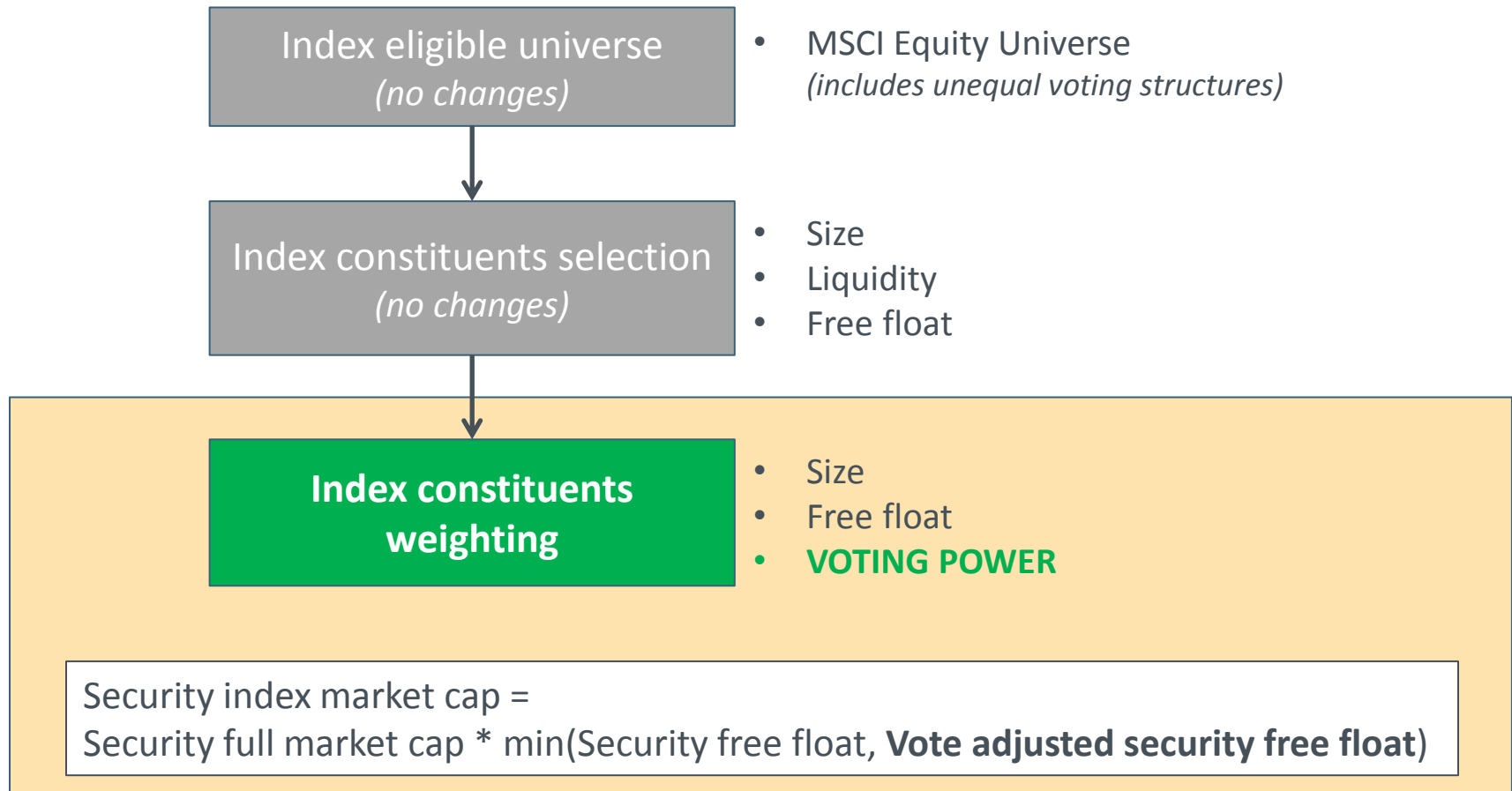
- Unequal voting structures may represent an attractive opportunity for certain investors that would be ready to exchange lower or no voting rights for liquidity or dividend advantages
- Unequal voting rights may allow companies to retain control and invest for long term results without being exposed to outside investor pressure to maximize short term profit
- Unequal voting structures are the result of voluntary decisions by informed agents in a free market, and hence will be priced efficiently

Source: MSCI's discussion paper, available at: <https://www.msci.com/index-consultations>

REVISED PROPOSAL

PROPOSAL: ADJUST SECURITY INDEX WEIGHTS

- **Proposal:** Continue to include unequal voting stocks in equity indexes but adjust their weights to reflect unequal voting power



NEW PROPOSAL: A BALANCED APPROACH

- By considering unequal voting shares as eligible for index inclusion, the MSCI Equity Indexes would **continue to offer extensive coverage** of the entire investable equity opportunity set
 - In its discussion paper¹, MSCI proposes that listed unequal voting shares should be eligible for index inclusion 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
 - Under the current proposal, securities with zero company voting power would be deleted from the MSCI Equity Indexes (see also page 12)
- At the same time, **adjusting security weights for voting power** would recognize the importance of voting rights to many investors
 - Voting may be particularly important for passive investors and large asset owners which cannot sell the stock of companies if insiders misuse their superior control rights
- Also, the proposal avoids the use of arbitrary voting power thresholds for index inclusion (e.g., 25%, 50%)

¹ Available at: <https://www.msci.com/index-consultations>

PROPOSED DEFINITIONS

- **Company voting power:** proportion of the company's total votes held by non-strategic shareholders of listed securities

$$\frac{\sum \text{number of shares} * \text{votes per share} * \text{security free float}}{\sum \text{number of shares} * \text{votes per share}}$$

– The summation applies over all share classes (listed and unlisted) of each company

- **Vote adjusted security free float (VAF):** product of the security free float and the ratio of the company voting power to the free float of the company

$$\text{Security free float} * \frac{\text{Company voting power}}{\text{Company free float}}$$

– Unequal voting structures usually result in the company free float voting power being lower than the company free float (hence, VAF < security free float)

Calculation examples are provided in the Appendix

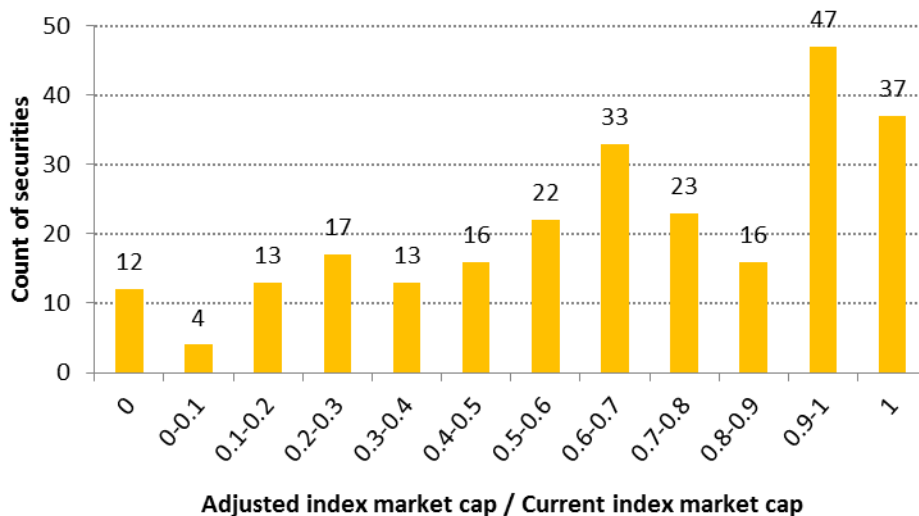
CALCULATION DETAILS

- MSCI proposes to consider the **votes per share** as zero in the following cases:
 - A share class for which shareholders cannot vote on the same items on agenda as another share class
 - A share class for which certain types of shareholders cannot vote on the same items on agenda as other types of shareholders
 - A share class for which the voting rights are conditional (e.g., shareholders can vote only in years when no dividend is paid to them)
- MSCI proposes to apply the following exceptions:
 - The votes per share would not be adjusted to zero in cases where a share class imposes partial restrictions on the election of Directors (see Appendix for more details)
 - Special purpose non-voting instruments, such as NVDRs in Thailand or CPOs in Mexico would not be subject to voting power adjustment
 - The existence of limits on the aggregated voting rights that can be held by foreign investors would not be considered in the voting power calculation, unless the limit is zero (i.e., foreign investors are fully restricted from voting)
 - The existence of "loyalty shares", which reward additional voting rights to investors who hold their shares beyond a given period of time, would not be considered in the voting power calculation

OVERVIEW OF SIMULATED IMPACT

	Current Index		#Securities Impacted		One-Way Index Turnover
	# Constituents	# Unequal Voting Stocks	Deletions	Weight Decreases	
MSCI ACWI Index	2,493	253	12	204	4.20%
World	1,652	141	7	118	3.95%
EM	841	112	5	86	6.05%

Simulated adjustment for unequal voting securities(253) in the MSCI ACWI Index



MSCI ACWI Index:

- 12 constituents would be deleted
- 204 constituents would have their index market cap reduced (47 of which by less than 10%)
- 37 constituents would not be impacted

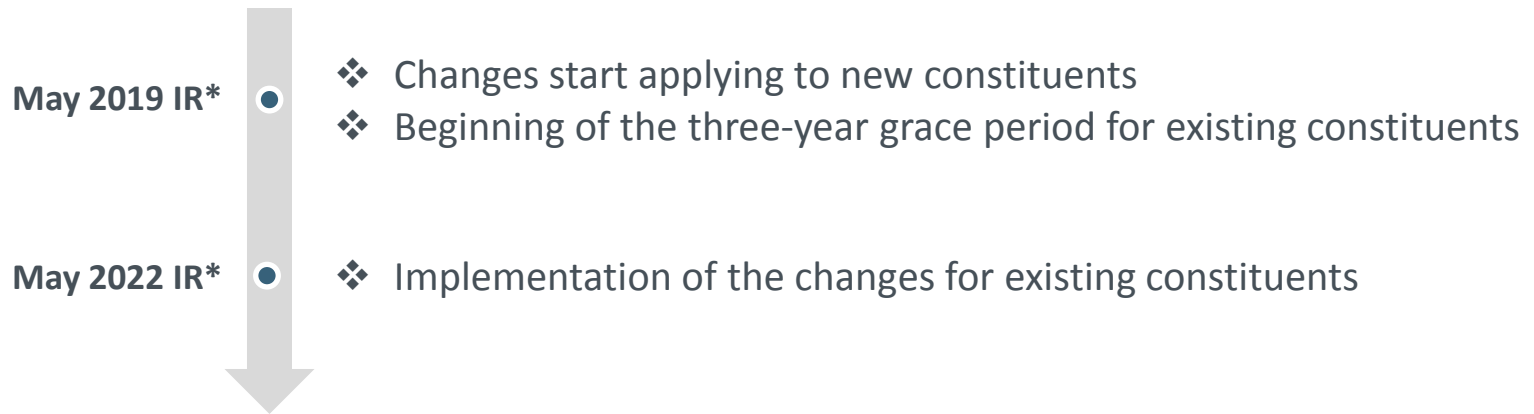
DISCUSSION POINTS: REVISED PROPOSAL

- Treatment of unequal voting structures
 - Do you agree that unequal voting shares should remain eligible for index inclusion?
 - Do you agree that the index weight of securities with unequal voting structures should be linked to voting power?
 - Is it appropriate to delete securities with zero company voting power from the MSCI Equity Indexes?
 - An alternative could be to maintain such securities in the indexes at very reduced weights (e.g., using 10% of the securities' free float)
- Voting power adjustment
 - Is the application of a voting power adjustment an appropriate way to reflect misalignment between voting power and economic interest?
 - Is the method for calculating the adjustment adequate?
 - Do you agree that the votes per share should be zero in cases where voting rights are restricted? (page 10)
 - Do you agree with the proposed exceptions? (page 10)

IMPLEMENTATION ASPECTS

GRACE PERIOD AND IMPLEMENTATION TIMELINE

- MSCI proposes that the current index constituents be subject to a three-year grace period to provide an opportunity for the companies to potentially adjust their voting structure
- Under this proposal, these could be possible timelines:



- The timeline of implementation of the changes, if any, will be announced on or before October 31, 2018 (together with the release of the consultation results)

* Index Review

TYPES OF INDEXES IMPACTED

- MSCI proposes to apply the changes to the following market capitalization weighted indexes:
 - MSCI Global Investable Market Indexes (GIMI)
 - *Exception: the changes would not apply to the MSCI Frontier Markets Indexes*
 - MSCI US Equity Indexes
 - MSCI China All Shares Indexes
 - MSCI Domestic Indexes (China A, India, Qatar, UAE)
 - MSCI All Market Indexes (*except for Frontier Market countries*)
- The MSCI Factor, Thematic, ESG or Capped Indexes ("Derived Indexes") that are based on the MSCI GIMI or on any of the above mentioned indexes would also be impacted as a result of potential changes to the relevant parent indexes
 - Should there be any changes to any of the Derived Indexes methodologies, this would be subject to prior public consultation

PROPOSED INDEX MAINTENANCE RULES: KEY POINTS

- **Index Reviews:**

- MSCI would review the Vote adjusted security free float (VAF) for all securities in the MSCI Equity Universe on an annual basis at the May Index Reviews
- MSCI would also review the VAF for securities added to the MSCI Equity Indexes as part of the regular Semi-Annual and Quarterly Index Reviews
 - Note: this would not apply to migrations of securities between size-segments (Large Cap, Mid Cap, Small Cap)

- **Corporate events:** MSCI would review the VAF and reflect it in the MSCI Indexes simultaneously with the implementation of the corporate event in the following cases:

- Corporate events resulting in the addition of a new entity (i.e., IPOs, spin-offs and mergers)
- Corporate events resulting in the delisting of an existing share class or in the listing of a new share class for current constituent companies

DISCUSSION POINTS: IMPLEMENTATION

- Is it appropriate to grant a grace period for current constituents?
- Is a three-year grace period sufficient or should more time be given?
- Are the proposed index maintenance rules for the Vote Adjusted Security Free Float appropriate?
- Should MSCI implement the changes for current index constituents in one step or would a multiple step transition be appropriate?
 - Please refer to the next section for the simulated impact

SIMULATED IMPACT – MSCI ACWI INDEX

SIMULATED IMPACT LIST - MSCI ACWI INDEX (TOP 50)

- 50 largest MSCI ACWI index constituents with unequal voting structure, ranked by company full market capitalization
 - *The full list of 253 securities is available upon request through MSCI's Client Service*

No	Country	Security Name	Company Mkt Cap	Security Mkt Cap	ACWI Weight	Country Weight	Company Voting Power	Company Free Float	FIF (Current)	FIF (New)	Mkt Cap Impact
1	US	Alphabet C	653,455	325,226	0.68%	1.32%	38.7%	88.2%	0.90	0.40	-162,613
2	US	Alphabet A	653,455	283,340	0.66%	1.28%	38.7%	88.2%	1.00	0.44	-158,670
3	US	Facebook A	498,544	406,790	0.95%	1.83%	30.7%	81.6%	1.00	0.38	-252,210
4	US	Berkshire Hathaway B	445,811	237,389	0.53%	1.02%	65.1%	78.6%	0.95	0.79	-37,982
5	KR	Samsung Electronics Co	302,093	270,461	0.47%	27.49%	75.0%	77.5%	0.75	0.73	-5,409
6	KR	Samsung Electronics Pref	302,093	31,632	0.07%	4.07%	75.0%	77.5%	0.95	0.92	-949
7	US	Visa A	239,559	191,825	0.45%	0.86%	100.0%	80.1%	1.00	1.00	0
8	CH	Roche Holding Genuss	219,276	178,222	0.42%	15.31%	20.0%	85.2%	1.00	0.23	-137,231
9	US	Comcast Corp A (New)	194,746	194,358	0.45%	0.88%	66.7%	99.8%	1.00	0.67	-64,138
10	US	Mastercard A	142,817	140,425	0.30%	0.57%	90.0%	88.5%	0.90	0.90	0
11	DK	Novo Nordisk B	119,149	93,535	0.21%	32.96%	25.4%	74.6%	0.95	0.32	-58,927
12	NL	Unilever Nv (NI) Cert	101,968	101,968	0.23%	18.68%	77.2%	89.9%	0.95	0.82	-13,256
13	ZA	Naspers N	99,616	99,616	0.23%	28.90%	38.1%	99.8%	1.00	0.38	-61,762
14	US	United Parcel Service B	99,263	78,788	0.18%	0.35%	27.8%	79.4%	1.00	0.35	-51,212
15	BR	Itau Unibanco Pn	81,374	42,519	0.10%	11.46%	10.0%	54.2%	1.00	0.18	-34,866
16	CN	Baidu Adr	80,697	63,711	0.15%	4.34%	27.3%	79.0%	1.00	0.35	-41,412
17	DE	Volkswagen Stamm	76,924	45,938	0.01%	0.38%	11.0%	43.5%	0.11	0.03	-3,675
18	DE	Volkswagen Vorzug	76,924	30,986	0.07%	2.08%	11.0%	43.5%	0.90	0.23	-20,761
19	RU	Sberbank Russia Com(Rub)	71,669	68,924	0.08%	20.89%	50.0%	52.2%	0.50	0.48	-1,378
20	BR	Banco Bradesco Pn	65,574	33,466	0.08%	9.02%	30.0%	65.0%	1.00	0.46	-18,071
21	BR	Banco Bradesco On	65,574	32,109	0.02%	2.60%	30.0%	65.0%	0.30	0.14	-5,137
22	DE	Bmw Stamm	61,026	56,494	0.07%	2.32%	55.0%	58.8%	0.55	0.52	-1,695
23	DE	Bmw Vorzug	61,026	4,532	0.01%	0.34%	55.0%	58.8%	1.00	0.94	-272
24	MX	America Movil L	61,012	41,328	0.07%	17.23%	2.7%	51.7%	0.75	0.04	-29,343
25	BR	Vale On	60,221	56,975	0.07%	8.44%	57.6%	57.6%	0.55	0.55	0

SIMULATED IMPACT LIST - MSCI ACWI INDEX (TOP 50)

- 50 largest MSCI ACWI index constituents with unequal voting structure, ranked by company full market capitalization
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No	Country	Security Name	Company Mkt Cap	Security Mkt Cap	ACWI Weight	Country Weight	Company Voting Power	Company Free Float	FIF (Current)	FIF (New)	Mkt Cap Impact
26	BR	Vale Pn A	60,221	3,246	0.01%	0.87%	57.6%	57.6%	1.00	1.00	0
27	CN	Jd.Com Adr	59,977	50,101	0.06%	1.88%	11.1%	45.9%	0.55	0.13	-21,042
28	BR	Petrobras On	59,831	34,729	0.03%	3.74%	40.0%	52.9%	0.40	0.30	-3,473
29	BR	Petrobras Pn	59,831	25,102	0.04%	4.74%	40.0%	52.9%	0.70	0.53	-4,267
30	US	Dell Technologies	57,821	15,290	0.04%	0.07%	3.6%	26.4%	1.00	0.14	-13,150
31	IT	Intesa Sanpaolo	56,487	53,543	0.10%	12.37%	80.0%	81.1%	0.80	0.79	-535
32	IT	Intesa Sanpaolo Rnc	56,487	2,944	0.01%	0.85%	80.0%	81.1%	1.00	0.99	-29
33	DE	Henkel Stamm	55,503	31,525	0.03%	0.94%	40.0%	64.4%	0.40	0.25	-4,729
34	DE	Henkel Vorzug	55,503	23,979	0.06%	1.79%	40.0%	64.4%	1.00	0.62	-9,112
35	US	Regeneron Pharmaceutical	53,570	52,607	0.09%	0.18%	63.4%	73.7%	0.75	0.65	-5,261
36	CH	Fin Richemont Namen A	51,387	46,715	0.11%	4.01%	50.0%	90.9%	1.00	0.55	-21,022
37	US	21St Century Fox A	50,473	28,929	0.07%	0.13%	55.0%	80.6%	1.00	0.68	-9,257
38	US	21St Century Fox B	50,473	21,544	0.03%	0.05%	55.0%	80.6%	0.55	0.37	-3,878
39	US	Simon Property Group	49,387	49,386	0.12%	0.22%	100.0%	100.0%	1.00	1.00	0
40	DE	Merck Kgaa Stamm	47,583	14,144	0.03%	1.06%	100.0%	29.7%	1.00	1.00	0
41	SE	Atlas Copco A	46,945	33,022	0.06%	6.42%	80.9%	86.3%	0.80	0.75	-1,651
42	SE	Atlas Copco B	46,945	13,924	0.03%	3.38%	80.9%	86.3%	1.00	0.94	-835
43	IT	Unicredit	45,759	45,739	0.10%	11.88%	90.0%	90.0%	0.90	0.90	0
44	US	Ford Motor Co	45,196	44,391	0.10%	0.19%	57.0%	93.3%	0.95	0.58	-16,425
45	US	Vmware A	43,896	11,652	0.02%	0.03%	2.3%	17.3%	0.65	0.08	-6,642
46	US	Cme Group	42,899	42,898	0.10%	0.19%	0.0%	100.0%	1.00	0.00	-42,898
47	AE	Emirates Telecom Corp	42,618	42,618	0.02%	23.28%	0.0%	40.0%	0.20	0.00	-8,524
48	SE	Hennes & Mauritz B	41,617	36,728	0.06%	5.80%	27.9%	57.4%	0.65	0.32	-12,120
49	DK	Ap Moller Maersk A	40,963	20,685	0.02%	2.68%	35.0%	49.5%	0.35	0.25	-2,068
50	DK	Ap Moller Maersk B	40,963	20,278	0.03%	4.89%	35.0%	49.5%	0.65	0.46	-3,853

SIMULATED IMPACT LIST - MSCI ACWI INDEX (DELETIONS)

- MSCI ACWI index constituents with unequal voting structure that would be subject to potential deletion following a three-year grace period, ranked by company full market capitalization
 - Alternatively, as mentioned on page 12, such securities could be maintained in the index at a reduced weight (e.g., 10% of the free float)

No	Country	Security Name	Company Mkt Cap	Security Mkt Cap	ACWI Weight	Country Weight	Company Voting Power	Company Free Float	FIF (Current)	FIF (New)	Mkt Cap Impact
1	US	Cme Group	42,899	42,898	0.10%	0.19%	0.0%	100.0%	1.00	0.00	-42,898
2	AE	Emirates Telecom Corp	42,618	42,618	0.02%	23.28%	0.0%	40.0%	0.20	0.00	-8,524
3	RU	Transneft Pref (Rub)	21,433	4,693	0.00%	0.85%	0.0%	6.6%	0.30	0.00	-1,408
4	DE	Porsche Automobil Vzg	17,548	8,774	0.02%	0.66%	0.0%	50.0%	1.00	0.00	-8,774
5	MX	Coca-Cola Femsa L	17,232	4,308	0.01%	2.27%	0.0%	23.7%	0.95	0.00	-4,093
6	US	Scripps Networks Inter A	11,114	8,214	0.02%	0.03%	0.0%	66.5%	0.90	0.00	-7,393
7	CA	Shaw Communications B	11,099	10,594	0.02%	0.70%	0.0%	85.9%	0.90	0.00	-9,534
8	DE	Schaeffler	9,498	2,367	0.01%	0.18%	0.0%	24.9%	1.00	0.00	-2,367
9	BR	Pao De Acucar Pn	6,544	3,837	0.01%	0.98%	0.0%	59.4%	0.95	0.00	-3,645
10	BR	Suzano Papel E Celu Pn A	6,270	4,165	0.01%	0.62%	0.0%	36.5%	0.55	0.00	-2,291
11	US	Eaton Vance Corp Nv	5,473	5,452	0.01%	0.02%	0.0%	99.6%	1.00	0.00	-5,452
12	CA	Empire Co A	4,391	2,805	0.01%	0.21%	0.0%	63.9%	1.00	0.00	-2,805

SIMULATED COUNTRY IMPACT – MSCI WORLD INDEX

	Current Standard Index			Simulated Standard Index			Deletions		Weight Decreases		One-Way Index Turnover
	Index Mkt Cap	Weight	#Secs	Index Mkt Cap	Weight	#Secs	#Secs	FIF Mcap Impact	#Secs	FIF Mcap Impact	
World	37,672,843	100.00%	1,652	36,115,461	100.00%	1,645	7	79,224	118	1,478,159	3.95%
North America											
USA	22,203,194	58.94%	633	21,162,776	58.60%	630	3	55,744	45	984,675	4.47%
Canada	1,359,407	3.61%	94	1,260,684	3.49%	92	2	12,339	14	86,384	7.01%
Europe + Middle East											
United Kingdom	2,490,853	6.61%	107	2,489,310	6.89%	107	-	-	2	1,543	0.06%
France	1,493,365	3.96%	75	1,493,365	4.13%	75	-	-	-	-	-
Germany	1,337,806	3.55%	59	1,284,826	3.56%	57	2	11,141	9	41,839	3.73%
Switzerland	1,164,333	3.09%	36	985,961	2.73%	36	-	-	10	178,372	13.68%
Netherlands	518,630	1.38%	24	505,374	1.40%	24	-	-	1	13,256	2.13%
Spain	495,095	1.31%	24	495,095	1.37%	24	-	-	-	-	-
Sweden	411,706	1.09%	31	342,065	0.95%	31	-	-	19	69,641	9.81%
Italy	346,403	0.92%	24	344,419	0.95%	24	-	-	4	1,983	0.47%
Denmark	269,635	0.72%	18	185,566	0.51%	18	-	-	6	84,069	21.53%
Belgium	166,846	0.44%	10	166,846	0.46%	10	-	-	-	-	-
Finland	143,074	0.38%	12	128,856	0.36%	12	-	-	4	14,219	8.46%
Israel	66,229	0.18%	12	66,229	0.18%	12	-	-	-	-	-
Norway	97,365	0.26%	10	97,257	0.27%	10	-	-	2	108	0.11%
Ireland	62,832	0.17%	5	62,832	0.17%	5	-	-	-	-	-
Austria	36,160	0.10%	5	36,160	0.10%	5	-	-	-	-	-
Portugal	22,572	0.06%	3	22,572	0.06%	3	-	-	-	-	-
Pacific											
Japan	3,270,725	8.68%	321	3,269,765	9.05%	321	-	-	1	961	0.03%
Australia	1,005,717	2.67%	70	1,005,717	2.78%	70	-	-	-	-	-
Hong Kong	502,496	1.33%	45	501,386	1.39%	45	-	-	1	1,110	0.22%
Singapore	184,743	0.49%	27	184,743	0.51%	27	-	-	-	-	-
New Zealand	23,657	0.06%	7	23,657	0.07%	7	-	-	-	-	-

SIMULATED COUNTRY IMPACT – MSCI EM INDEX

	Current Standard Index			Simulated Standard Index			Deletions		Weight Decreases		One-Way Index Turnover
	Index Mkt Cap	Weight	#Secs	Index Mkt Cap	Weight	#Secs	#Secs	FIF Mcap Impact	#Secs	FIF Mcap Impact	
EM	5,057,778	100.00%	841	4,723,494	100.00%	836	5	19,960	86	314,324	6.05%
EM Asia											
China	1,466,898	29.00%	149	1,386,545	29.35%	149	-	-	8	80,353	5.31%
Korea	738,016	14.59%	111	725,516	15.36%	111	-	-	28	12,500	0.88%
Taiwan	599,882	11.86%	89	599,882	12.70%	89	-	-	-	-	-
India	441,408	8.73%	78	441,408	9.34%	78	-	-	-	-	-
Indonesia	114,527	2.26%	31	114,527	2.42%	31	-	-	-	-	-
Malaysia	113,142	2.24%	41	113,142	2.40%	41	-	-	-	-	-
Thailand	108,518	2.15%	36	108,518	2.30%	36	-	-	-	-	-
Philippines	55,550	1.10%	23	48,277	1.02%	23	-	-	8	7,273	9.64%
Pakistan	4,924	0.10%	6	4,924	0.10%	6	-	-	-	-	-
EM EMEA											
South Africa	344,704	6.82%	53	278,369	5.89%	53	-	-	4	66,335	16.06%
Russia	164,982	3.26%	22	159,160	3.37%	21	1	1,408	5	4,414	2.50%
Poland	68,531	1.35%	22	67,228	1.42%	22	-	-	3	1,304	1.75%
Turkey	61,997	1.23%	25	61,195	1.30%	25	-	-	1	802	1.23%
U.A.E.	36,608	0.72%	10	28,084	0.59%	9	1	8,524	-	-	23.28%
Qatar	30,660	0.61%	12	30,660	0.65%	12	-	-	-	-	-
Greece	18,467	0.37%	9	18,467	0.39%	9	-	-	-	-	-
Hungary	17,350	0.34%	3	17,350	0.37%	3	-	-	-	-	-
Czech Republic	8,852	0.18%	4	8,852	0.19%	4	-	-	-	-	-
Egypt	6,418	0.13%	3	6,418	0.14%	3	-	-	-	-	-
EM Latin America											
Brazil	371,067	7.34%	57	270,832	5.73%	55	2	5,936	18	94,299	20.77%
Mexico	179,924	3.56%	26	134,545	2.85%	25	1	4,093	3	41,286	23.19%
Chile	63,019	1.25%	19	62,904	1.33%	19	-	-	1	114	0.18%
Colombia	22,428	0.44%	9	16,784	0.36%	9	-	-	7	5,644	9.71%
Peru	19,906	0.39%	3	19,906	0.42%	3	-	-	-	-	-

APPENDIX

RESTRICTIONS ON ELECTION OF DIRECTORS

- In some companies, certain share classes have the right to vote on the election of certain Directors only
- Simulated list of companies with such restrictions (MSCI ACWI Index):

Type 1: Both classes can vote on specific directors

NIKE B (US)	Right to elect 25% of Directors (Class A shares elect the other 75%)
BROOKFIELD ASSET MANAGEMENT A (CA)	Right to elect 50% of Directors (Class B shares elect the other 50%)
SOQUIMICH PREF B (CL)	Right to elect 12.5% of Directors (Class A shares elect the other 87.5%)
UNITED CONTINENTAL HLDGS (US)	Right to elect 87% of Directors (Preferred shares elect the other 13%)

Type 2: Only one class can vote on specific directors

CME GROUP A (US)	Right to vote on 16 out of 22 Directors (Class B shares vote on all directors)
SIMON PROPERTY GROUP A (US)	Right to vote on 7 out of 11 Directors (Class B shares vote on all directors)
VALE PN A (BR)	Right to vote on 1 out of 7 Directors (Common shares vote on all directors)
MOLSON COORS BREWING B (US)	Right to vote on 3 out of 14 Directors (Class A shares vote on all directors)

Note: Data as of September 1, 2017

- MSCI proposes to ignore such partial restrictions on election of Directors
 - Alternative: consider the votes per share as zero (this would result in the deletion of the above securities)

EQUAL VOTING STRUCTURES: DEFINITION

PROPOSED DEFINITION OF EQUAL VOTING STRUCTURE

(often referred to as «one share, one vote»)

Company structure whereby the voting rights are not differentiated across share classes or types of investors

- All share classes / types of investors can vote in proportion of their economic interest*
- All share classes / types of investors can vote on the same items on agenda
- The voting rights are unconditional

*In general, this condition is met when all share classes / types of investors are entitled to one vote per share. However, this is not always the case (e.g., the economic interest may be a function of the par value and the share classes may have same number of votes per share but different par values)

- Equal voting structures would not be impacted by the proposal as their company voting power is equal to the company free float

COMPANY FREE FLOAT: DEFINITION

- **Company free float:** proportion of the company's equity capital held by non-strategic shareholders of listed securities:

$$\frac{\sum \text{number of shares} * \text{economic interest per share} * \text{free float (listed securities)}}{\sum \text{number of shares} * \text{economic interest per share (all securities)}}$$

➤ Economic interest per share:

- Generally the same across share classes
- However, in some companies of certain markets, different share classes may have different economic interest per share
- For example, the economic interest may be related to the par value of the shares and the share classes may have different par value

CALCULATION EXAMPLE: ALPHABET (US)

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	FIF
	A	B	C = A*B	D = C/B	E	F = B*E	G = C*E	H = G/F	I = A*(H/D)	J = min(A,I)
Alphabet - A	100%	297,628,801	297,628,801		1	297,628,801	297,628,801		43.9%	0.44
Alphabet - B	0%	47,152,692	-		10	471,526,920	-		0.0%	0.00
Alphabet - C	90%	346,967,110	312,270,399		0	-	-		39.5%	0.40
Alphabet - All		691,748,603	609,899,200	88.2%		769,155,721	297,628,801	38.7%		

- The company voting power is lower than the company free float, hence the weights of the company's securities are adjusted accordingly.

CALCULATION EXAMPLE: VISA (US)

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	FIF
	A	B	C = A*B	D = C/B	E	F = B*E	G = C*E	H = G/F	I = A*(H/D)	J = min(A,I)
Visa - A	100%	1,846,250,328	1,846,250,328		1	1,846,250,328	1,846,250,328		114.0%	1.00
Visa - B	0%	245,513,385	-		0	-	-		0.0%	0.00
Visa - C	0%	13,684,312	-		0	-	-		0.0%	0.00
Visa - All		<u>2,105,448,025</u>	<u>1,846,250,328</u>	87.7%		<u>1,846,250,328</u>	<u>1,846,250,328</u>	100.0%		

- The company voting power is higher than the company free float, hence no adjustment to the weights of the securities is required.

CALCULATION EXAMPLE: FIN RICHEMONT (CH)

Share Classes	Security Free Float	Economic Interest per Share	Total Number of shares	Adjusted 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	FIF
	A	AA	B	BB=AA*B	C = A*AA*B	D = C/BB	E	F = B*E	G = A*B*E	H = G/F	I = A*(H/D)	J = min(A,I)
Fin Richemont - A	100%	1	522,000,000	522,000,000	522,000,000		1	522,000,000	522,000,000		55.0%	0.55
Fin Richemont - B	0%	0.1	522,000,000	52,200,000	-		1	522,000,000	-		0.0%	0.00
Fin Richemont - All			1,044,000,000	574,200,000	522,000,000	90.9%		1,044,000,000	522,000,000	50.0%		

- Although both share classes carry one vote per share, they have different par values (= economic interest per share), resulting in unequal voting structure
- The economic interest per share is a parameter in the calculation of the company free float

EXHIBITS FROM DISCUSSION PAPER

- Country distribution of securities with unequal voting rights, indicative data as of 1 September 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%

EXHIBITS FROM DISCUSSION PAPER (CONT.)

- Sector distribution of securities with unequal voting rights, indicative data as of 1 September 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%

EXHIBITS FROM DISCUSSION PAPER (CONT.)

- Country weights of basket of unequal voting rights securities, indicative data as of 1 September 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%
Emerging Markets			
EM Asia	11.8%	21.8%	10.0%
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%

EXHIBITS FROM DISCUSSION PAPER (CONT.)

- Sector weights of basket of unequal voting rights securities, indicative data as of 1 September 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%

EXHIBITS FROM DISCUSSION PAPER (CONT.)

- GEMLT factor exposures of unequal voting rights securities, indicative data as of 1 September 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

EXHIBITS FROM DISCUSSION PAPER (CONT.)

- Valuations and profitability of unequal voting rights stocks, indicative data as of 1 September 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

- GEMLT forecast risk analysis of unequal voting rights stocks, indicative data as of 1 September 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%

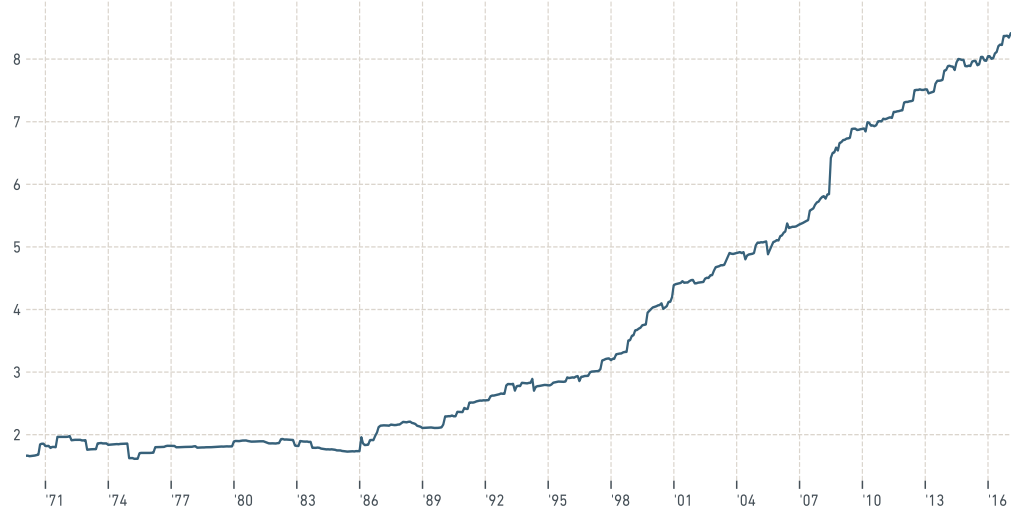
EXHIBITS FROM DISCUSSION PAPER (CONT.)

- Weight and number of unequal voting rights for MSCI World Index constituents

WEIGHT OF STOCKS WITH UNEQUAL VOTING RIGHTS IN THE MSCI WORLD INDEX (%)



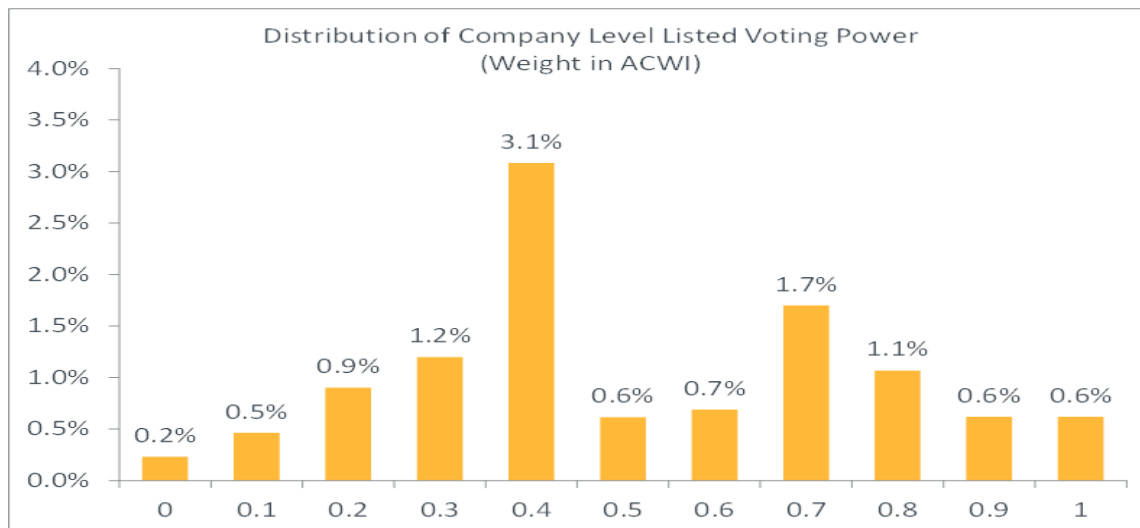
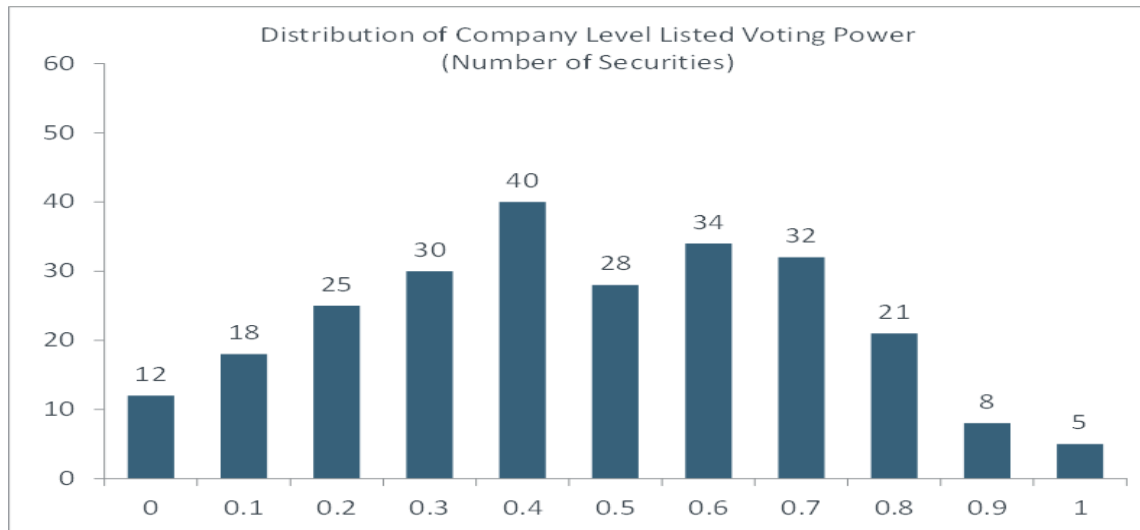
PROPORTION OF CONSTITUENTS WITH UNEQUAL VOTING RIGHTS IN THE MSCI WORLD INDEX BY NUMBER (%)



Index constituent data as of 1 September 2017, during the period from 31 December 1970 to 31 October 2017.

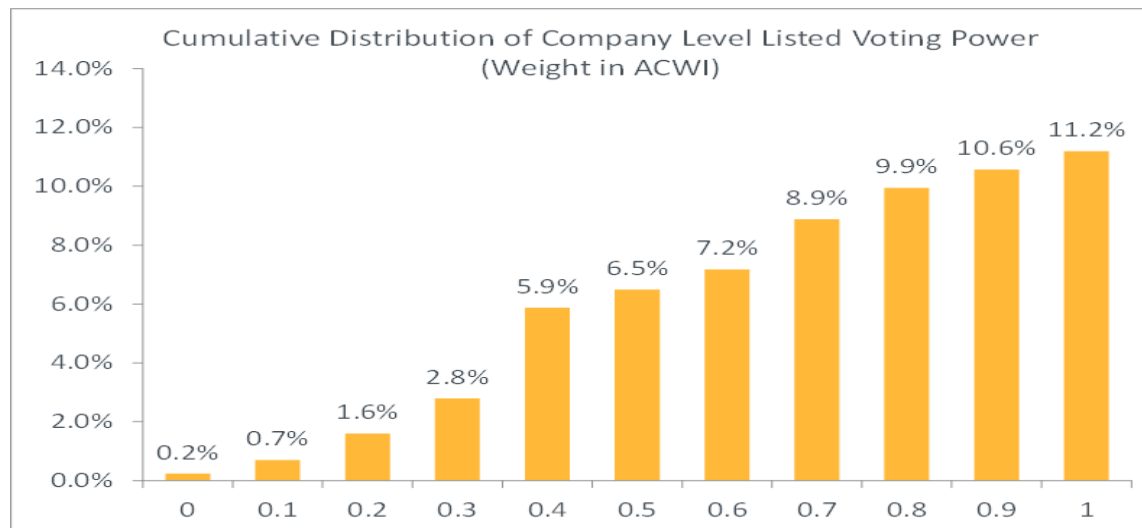
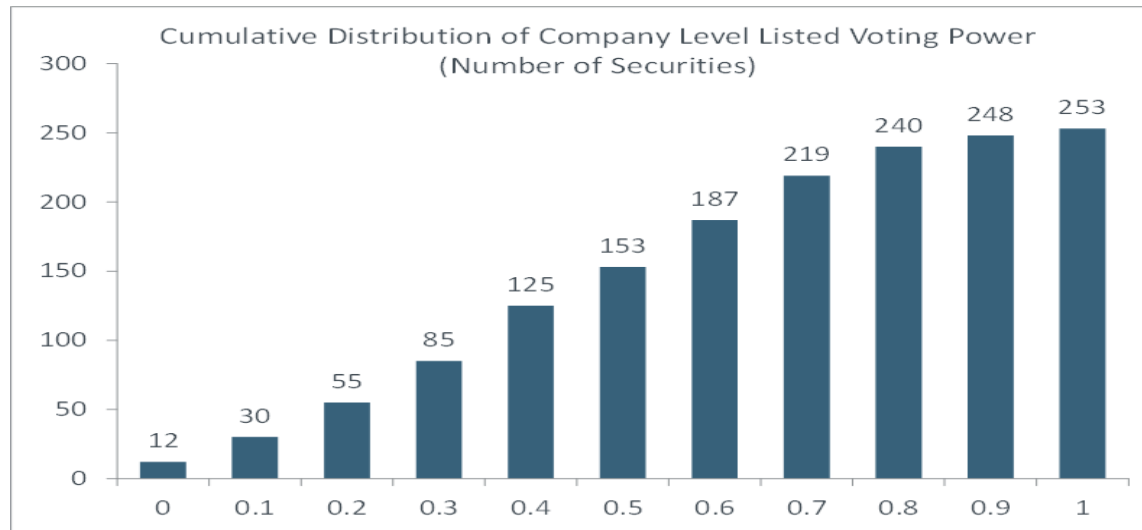
EXHIBITS FROM DISCUSSION PAPER (CONT.)

- Distribution of voting power of unequal voting rights stocks, indicative data as of 1 September 2017



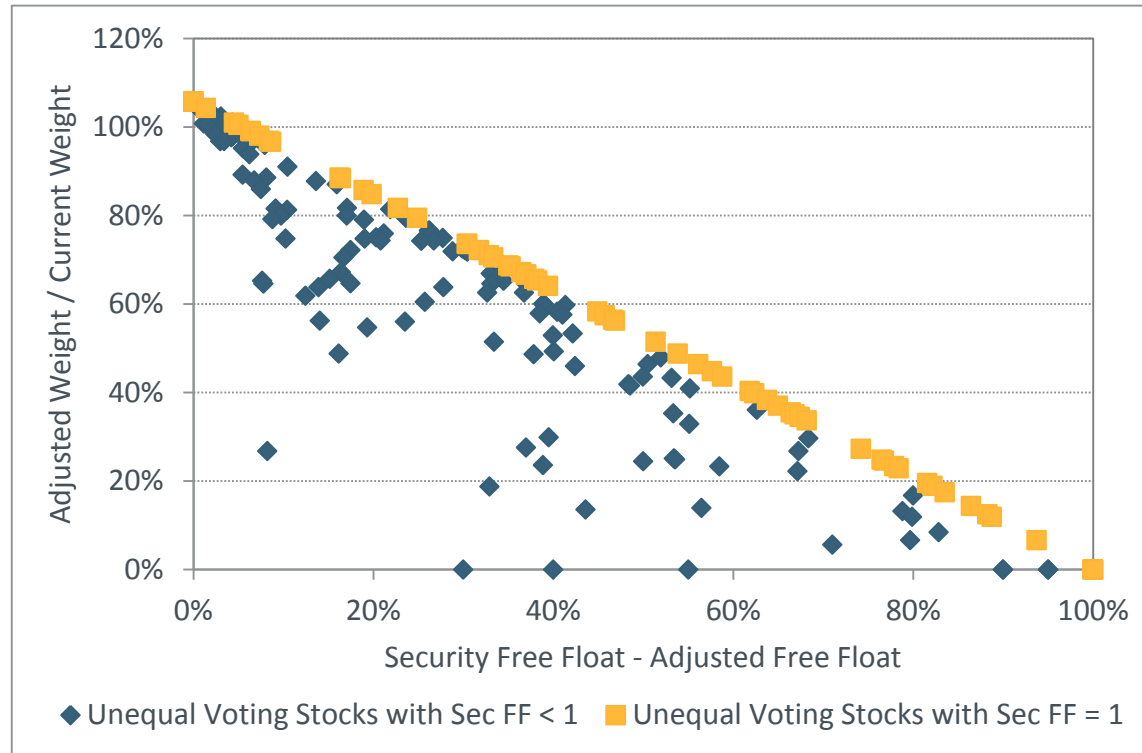
EXHIBITS FROM DISCUSSION PAPER (CONT.)

- Cumulative distribution of voting power of unequal voting stocks, indicative data as of 1 Sep 2017



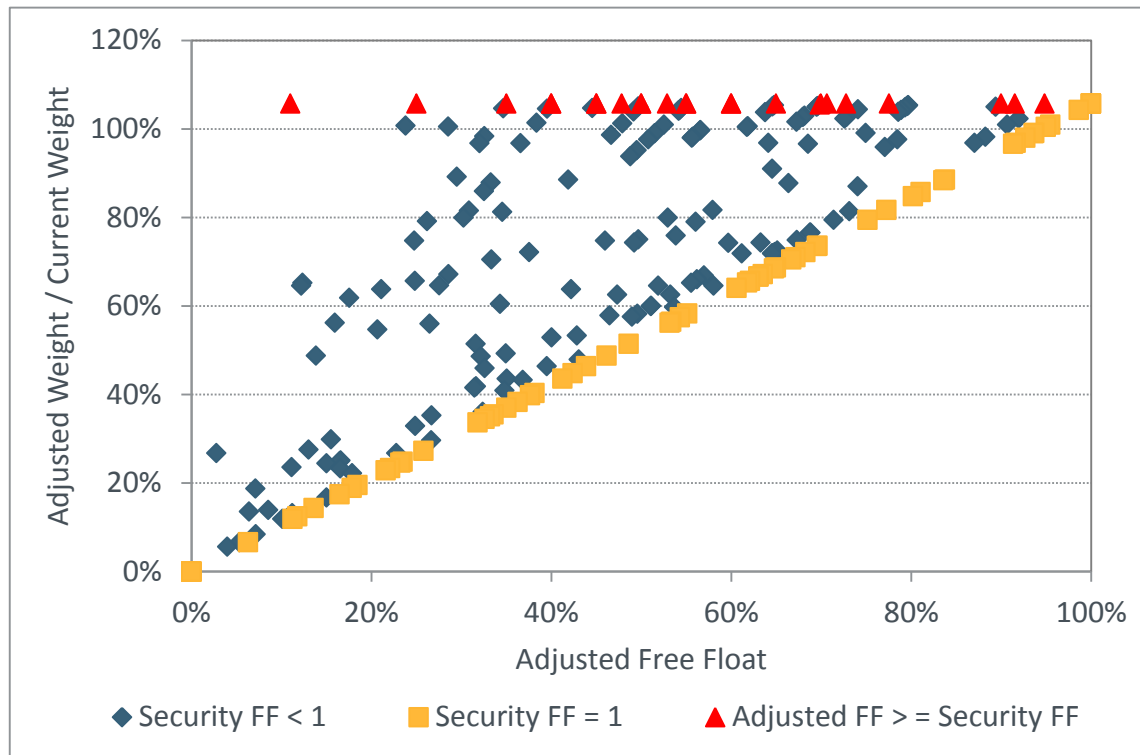
EXHIBITS FROM DISCUSSION PAPER (CONT.)

- Relationship between adjusted index weights and the gap between free float and adjusted free float



EXHIBITS FROM DISCUSSION PAPER (CONT.)

- Relationship between the adjusted index weights and the vote adjusted security free float



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