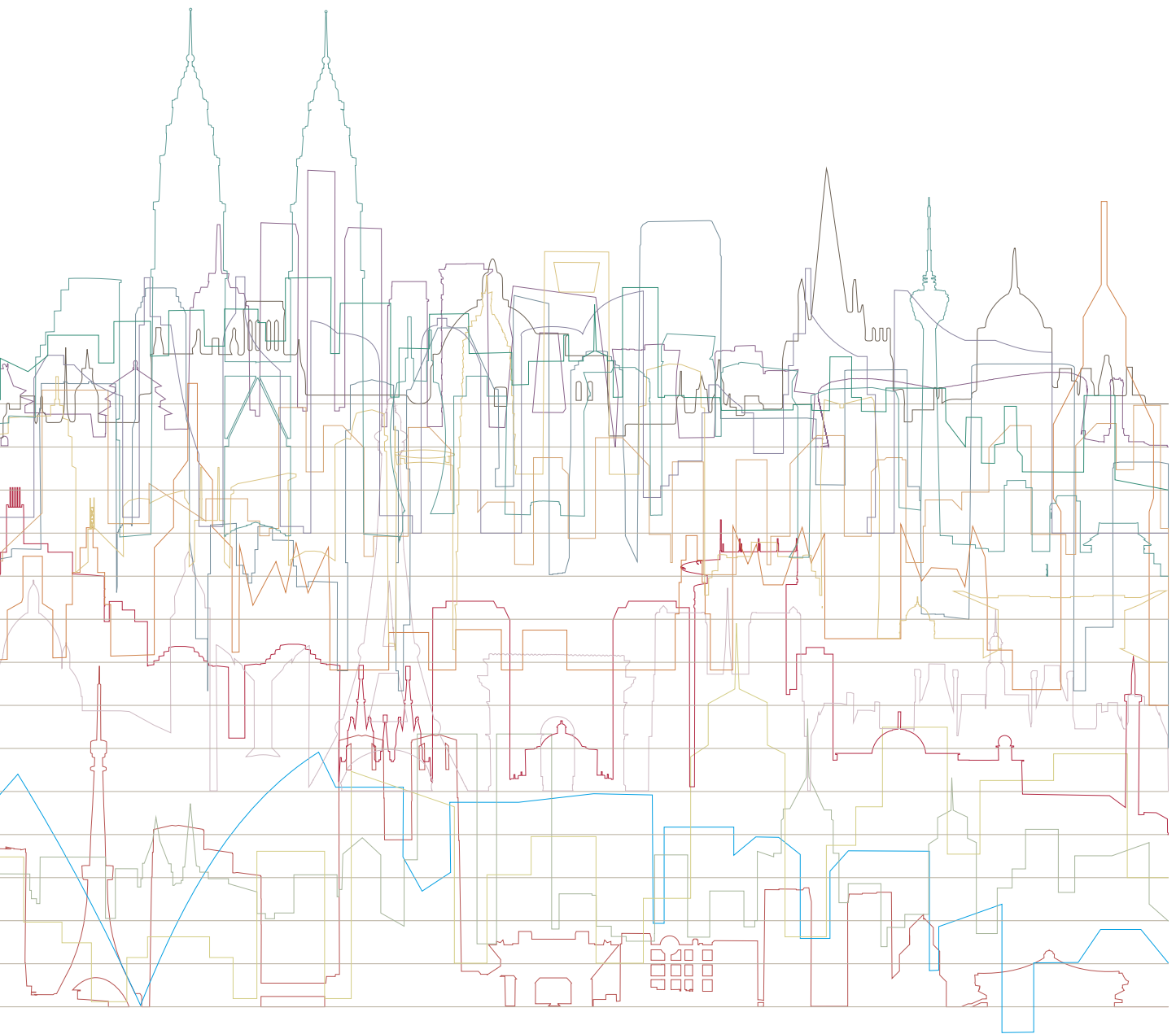




THE OXFORD METRICA REVIEW

GLOBAL 100: A SEISMIC SHIFT TO US NEW-ERA DIGITAL



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We are delighted to present the latest issue of *The Oxford Metrica Review*, which focuses on the seismic shift in the composition of the Global 100 over the last five years. Since 2012 we have been tracking these trends on a five-year cycle. The striking feature of the most recent five-year interval since 2017 is the ascendancy of new-era digital, particularly in the United States.

Highlights

1. Six of the top ten companies are now new-era digital companies, with a combined value of \$8.4 trillion. New-era digital companies now constitute 44% of the total value of the Global 100, up from less than 25% in 2017.
2. Digital companies in the Global 100 increased in value over the last five-years by an average of 200% in contrast to the 60% average increase for other companies.
3. The switch to digital is almost entirely a United States phenomenon. 49% of the value of the US 100 firms is contributed by new-era digital firms, compared to only 7% in the case of the European 100.
4. The five-year period witnessed the breaking of the trillion dollar barrier for the first time by no fewer than six companies - five of which are digital, the other being Saudi Aramco which is a new entrant to the Global 100. Tesla's value has pulled back slightly after breaching the trillion mark. Apple holds on to its top position with a value of more than \$2.5 trillion.
5. Thirty-five of the 2017 Global 100 companies have exited. The leavers are mainly financial services firms. This represents a generational change in the global league of corporations. Notable leavers include old-era heavyweights GE and Citigroup, both dropping more than 120 places. Notable digital entrants are Tesla (6th), ASML (47th) and Salesforce (64th).

Digital now dominates

Tracking the ebb and flow of companies in and out of the Global 100 throws striking light on deeper changes in the world economy and carries significant implications for investors. Clearly there has been a sea change and a definitive switch to digital growth firms. On average, digital firms have increased in value by nearly 200%, compared to an increase of only 60% experienced by the rest of the field.

GLOBAL 100 NOW VALUED AT \$29.9 TRILLION WITH 44% BEING NEW ERA DIGITAL

Digital companies now dominate the global value league table, contributing 44% of the \$29.9 trillion value of the Global 100 overall. Digital firms also dominate the new entries in the Global 100 while financial services crowd the exit. Former top ten candidates GE, Citigroup and IBM were all edged out, with the first two falling more than 120 places. Figure 2 reports the changes by sector.

Turning to rank changes, there has been unprecedented churn in the Global 100 involving thirty-five new entrants. Six of the top ten are new-era digital firms, with a total value of \$8.4 trillion - roughly equivalent to the combined GDP of Japan and Germany, the two countries which rank 3rd and 4th in the world by GDP. Apple continues to hold the top slot with a market capitalization of over \$2.5 trillion - roughly equivalent to the total GDP of France!

The Global 100 by market capitalization (as of 7 September, 2022) are presented in Table 1, new entrants in bold. The table also reports the change in value and rank over the last five years for each company.

US Leads, Europe Lags

Figure 1 provides a country breakdown. The US dominates with 63 firms - a marked rise from 55 in 2017 and well ahead of China with 11. The largest loser is the UK which lost three big names (BP, BAT, & Unilever) and drops from 3rd to joint 4th with Switzerland behind France. Table 2 and figure 3 provide deeper analyses by region. The digital value effect is most striking in the US. The value penetration in the US 100 by digital companies is now 49% while in the Europe 100 it is only a mere 7%. By contrast, the rest of the world apart from the US and Europe has 17% in digital company value in the equivalent top 100.

EUROPE IS NOW A VALUE PLAY WITHOUT THE SIZZLE OF GROWTH ALONGSIDE EURO WEAKNESS

Clearly the strength of the dollar over the last five years has played a part in this phenomenon but the underlying causes run far deeper and carry profound implications for investors. Innovation in Europe in new-era technology is lagging significantly. European stock markets have lacked a growth vector for some time. Over the period portfolio diversification into Europe has acted as a two-edged sword, being largely a value play without any underlying growth alpha. At the same time the weakening of the euro has also given outside investors an unhelpful haircut. A cursory analysis reveals that the MSCI Europe Index and the Russell Value Index have become highly correlated and are now reasonable proxies for one another. *Plus ça change!*

FIGURE 1. Global 100 by country

SOURCE: Oxford Metrica.

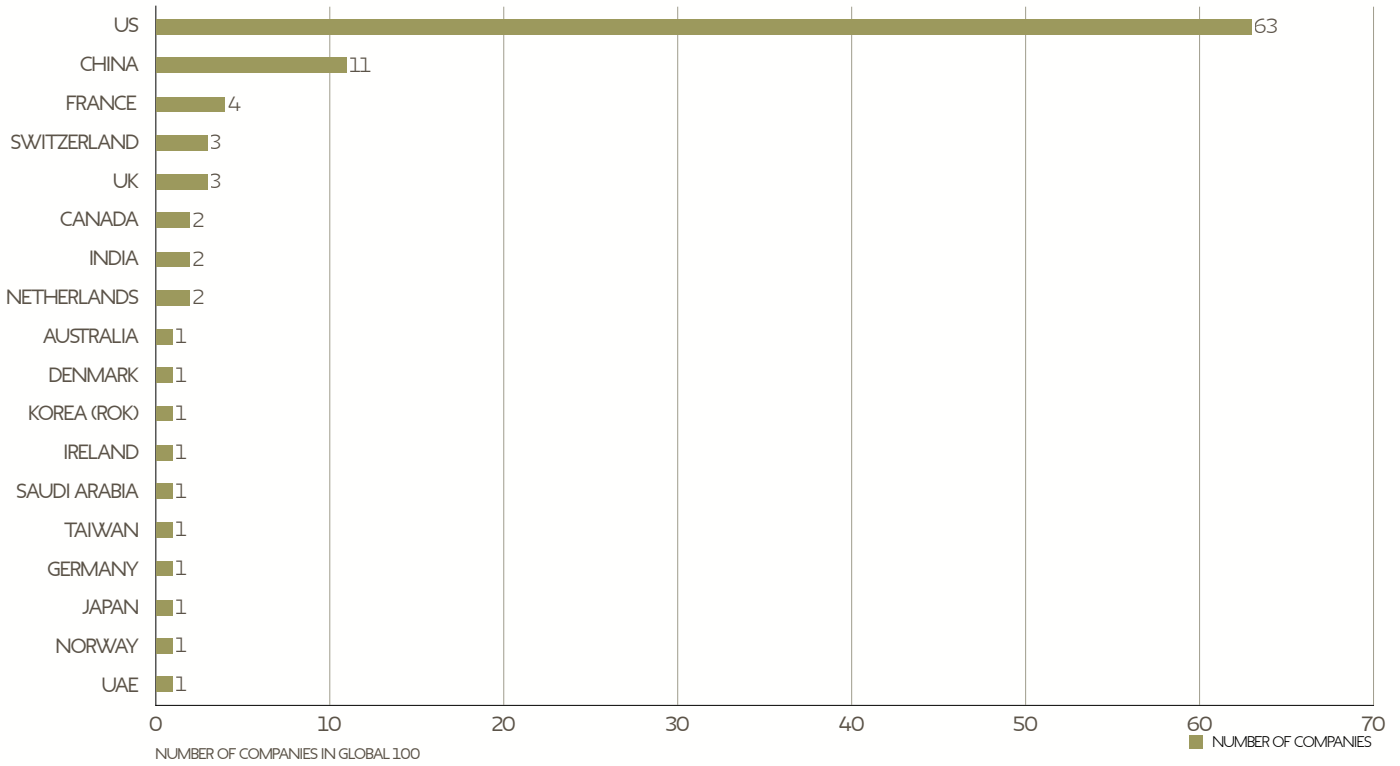


FIGURE 2. Changes in Global 100 since 2017

SOURCE: Oxford Metrica.

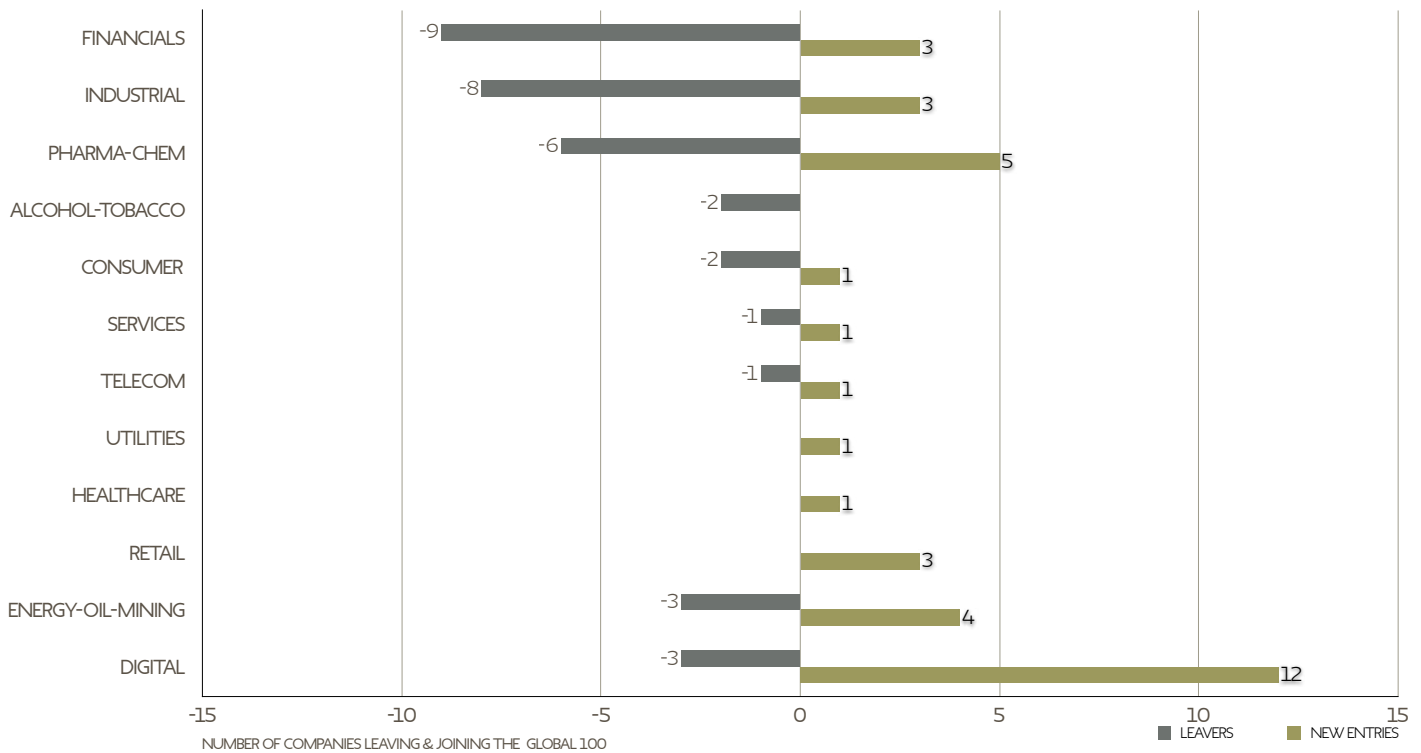


TABLE 1. Global 100

SOURCE: Oxford Metrica. Market values (\$ MM) at 7 September 2022.

Rank	Name	Rank Change on 2017	Market Capitalization	Change on 2017 (%)	Country	Sector
1	Apple	0	2,504,000	195%	US	Digital
2	Saudi Aramco¹	n/a	2,175,000	new listing	Saudi Arabia	Energy, Oil & Mining
3	Microsoft	0	1,910,000	236%	US	Digital
4	Alphabet	-2	1,412,000	115%	US	Digital
5	Amazon	0	1,299,000	176%	US	Digital
6	Tesla	157	847,000	1,323%	US	Digital
7	Berkshire Hathaway	-1	612,000	37%	US	Financial
8	UnitedHealth Group	28	483,000	151%	US	Healthcare
9	Meta	-5	431,000	-14%	US	Digital
10	Johnson & Johnson	-1	428,000	22%	US	Healthcare
11	Visa	7	422,000	78%	US	Digital
12	TSMC	26	412,000	121%	Taiwan	Digital
13	Exxon Mobil	-3	398,000	22%	US	Energy, Oil & Mining
14	Tencent	-6	385,000	-3%	China	Digital
15	Wal-Mart	5	361,000	54%	US	Retail
16	NVIDIA	65	340,000	231%	US	Digital
17	Kweichow Moutai	69	333,000	237%	US	Alcohol & Tobacco
18	JPMorgan Chase	-7	333,000	3%	US	Financial
19	Procter & Gamble	0	328,000	39%	US	Consumer
20	LVMH	34	318,000	137%	France	Consumer
21	Nestle	-7	317,000	21%	Switzerland	Food
22	Mastercard	30	312,000	120%	US	Digital
23	Chevron	7	309,000	50%	US	Auto
24	Home Depot	18	299,000	68%	US	Retail
25	Eli Lilly	74	286,000	221%	US	Pharma & Chem
26	Roche Holding	-1	273,000	25%	Switzerland	Pharma & Chem
27	Bank of America	-11	269,000	6%	US	Financial
28	Coca-Cola	6	264,000	36%	US	Consumer
29	Pfizer	2	256,000	27%	US	Pharma
30	Samsung	-17	247,000	-8%	Korea	Digital
31	Alibaba	-24	243,000	-45%	China	Digital
32	AbbVie	30	241,000	100%	US	Pharma & Chem
33	Novo Nordisk	31	236,000	98%	Denmark	Pharma & Chem
34	PepsiCo	12	236,000	43%	US	Food
35	Toyota	4	235,000	28%	Japan	Auto
36	Costco	98	230,000	231%	US	Retail
37	Reliance Industries	98	220,000	217%	India	Industrial
38	Merck	6	218,000	25%	US	Pharma & Chem
39	Thermo Fisher	88	213,000	186%	US	Industrial
40	I & C Bank of China	-28	212,000	-30%	China	Financial
41	Walt Disney	7	203,000	29%	US	Consumer
42	Broadcom	38	202,000	95%	US	Digital
43	Oracle	-14	199,000	-5%	US	Digital
44	Danaher	123	196,000	240%	US	Pharma & Chem
45	Novartis	-22	194,000	-12%	Switzerland	Pharma & Chem
46	Royal Dutch Shell	-24	193,000	-16%	UK	Energy, Oil & Mining
47	ASML	95	192,000	184%	Netherlands	Digital
48	Accenture	63	189,000	125%	Ireland	Digital
49	AstraZeneca	77	188,000	150%	UK	Pharma & Chem
50	McDonald's	7	187,000	44%	US	Consumer

¹ New entries in bold text.

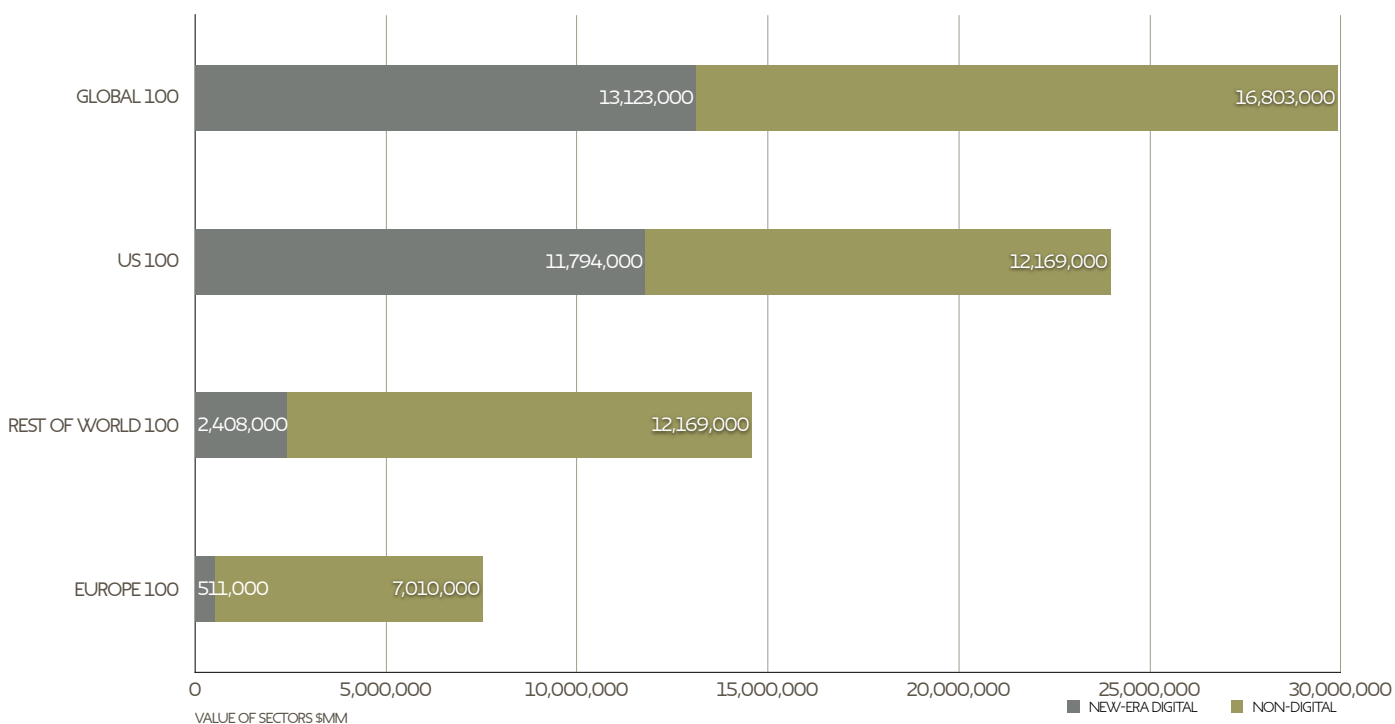
Rank	Name	Rank Change on 2017	Market Capitalization	Change on 2017 (%)	Country	Sector
51	Cisco	-4	185,000	15%	US	Digital
52	L'Oreal	13	182,000	53%	France	Consumer
53	Abbott Laboratories	48	180,000	103%	US	Pharma & Chem
54	T-Mobile	129	178,000	232%	US	Telecom
55	Verizon	-22	173,000	-11%	US	Telecom
56	Adobe	66	172,000	124%	US	Digital
57	UPS	28	170,000	71%	US	Service
58	International Holdings	n/a	169,000	n/a	UAE	Energy, Oil & Mining
59	NextEra Energy Inc	73	167,000	137%	US	Utility
60	NIKE	43	166,000	90%	US	Retail
61	Wells Fargo	-46	165,000	-35%	US	Financial
62	Contemporary Amp	n/a	160,000	new listing	China	Energy, Oil & Mining
63	Comcast	-28	158,000	-18%	US	Telecom
64	Salesforce	76	154,000	125%	US	Digital
65	China Const.Bank	-41	153,000	-30%	China	Financial
66	Texas Instruments	46	149,000	82%	US	Digital
67	Morgan Stanley	40	148,000	74%	US	Financial
68	Philip Morris	-28	147,000	-19%	US	Tobacco
69	Bristol-Myers Squibb	18	146,000	49%	US	Pharma & Chem
70	Qualcomm	50	144,000	87%	US	Digital
71	Tata	348	143,000	637%	India	Digital
72	PetroChina	-44	141,000	-34%	China	Energy, Oil & Mining
73	Union Pacific	35	140,000	65%	US	Service
74	ConocoPhillips	105	140,000	159%	US	Energy, Oil & Mining
75	Ag. Bank of China	-50	140,000	-36%	China	Financial
76	Linde	206	138,000	288%	Germany	Pharma & Chem
77	China Mobile	-50	138,000	-36%	China	Telecom
78	Meituan	n/a	137,000	new listing	China	Digital
79	Total	-24	136,000	4%	France	Energy, Oil & Mining
80	Hermes	67	133,000	102%	France	Consumer
81	Charles Schwab	100	133,000	147%	US	Financial
82	Royal Bank of Canada	-10	132,000	21%	Canada	Financial
83	CVS Health	34	131,000	66%	US	Healthcare
84	Amgen	-28	130,000	0%	US	Pharma & Chem
85	AMD	437	130,000	929%	US	Digital
86	Raytheon	99	129,000	144%	US	Industrial
87	BHP Billiton	-17	128,000	15%	Australia	Energy, Oil & Mining
88	Intel	-43	128,000	-23%	US	Digital
89	Honeywell	-12	126,000	20%	US	Industrial
90	HSBC Holdings	-58	124,000	-37%	UK	Financial
91	Bank of China	-51	122,000	-32%	China	Financial
92	China Merchants Bank	-9	122,000	20%	China	Financial
93	AT&T	-72	122,000	-47%	US	Telecom
94	Lowe's	57	121,000	93%	US	Retail
95	Equinor ASA	74	120,000	111%	Norway	Pharma & Chem
96	Goldman Sachs	-2	118,000	29%	US	Financial
97	Intuit	177	118,000	225%	US	Digital
98	Prosus	n/a	117,000	new listing	Netherlands	Digital
99	American Tower	53	117,000	87%	US	Financial
100	TDB	-17	116,000	15%	Canada	Financial
Total			29,926,000			

TABLE 2. Regional analysis

SOURCE: Oxford Metrica. Market values (\$ MM) at 7 September 2022.

	New-era digital	Non-digital	Total
Global 100			
Value (\$)	13,123,000	16,803,000	29,926,000
Value(%)	44%	56%	100%
No. Firms	28	72	100
Average	469,000	233,000	299,000
US 100			
Value (\$)	11,794,000	12,169,000	23,963,000
Value(%)	49%	51%	100%
No. Firms	27	73	100
Average	437,000	167,000	240,000
Rest of world 100 (World ex Europe & US)			
Value (\$)	2,408,000	12,169,000	14,577,000
Value(%)	17%	83%	100%
No. Firms	19	81	100
Average	126,736	150,234	145,770
Europe 100			
Value (\$)	511,000	7,010,000	7,521,000
Value(%)	7%	93%	100%
No. Firms	7	93	100
Average	73,000	75,376	75,210

FIGURE 3. Contribution to value of top 100 by new-era digital by geography top 100 (US\$ MM)



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Dr Rory Knight, is Chairman of Oxford Metrica and the investment committee at the John Templeton Foundation. He was formerly Dean of Templeton, Oxford University's business college. Prior to that Dr Knight was the vize-direktor at the Schweizerische Nationalbank (SNB) the Swiss central bank.

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