

Sectoral shift - CG Watch by CLSA

- CLSA recently conducted a bottom-up corporate governance (CG) survey with 1,162 companies in 13 sector groups in Asia.
- A 7.2% increase in CG Watch scores vs 2018 with 12/13 sectors improving their scores.
- Technology ranks no.1, followed by materials/industrials, healthcare and autos. Hotels/leisure, power/utilities and conglomerates rank the lowest.
- Finance/insurance has improved the most, followed by power/utilities and materials/industrials. Conglos has seen declining scores, but only by 1.6%.
- “Fairness” and “transparency” are the strong pillars, while “independence” continues to be the weakest link, although it is also the pillar that has improved the most.
- 2020 has been an extraordinary year with record inflow of SRI/ESG funds into Asia.
- We see supporting data that connects good ESG with long-term share-price performance.
- Looking at the top 10 scoring companies and improvers in each sectors, the top 10 scorers have on average outperformed the improvers on a five-year basis, but improvers have outperformed on a one-year basis.

13 sector groups/1,162 companies/27 questions

Sector groups and stock composition

	Sectors	Number of companies	Market cap (US\$bn)	% of total number of companies	% of total market cap	Number of countries (out of 13)
1	Autos	43	598.8	3.7	3.7	8
2	Consumer	217	2,442.4	18.6	15.0	13
3	Healthcare and Pharma	77	937.9	6.6	5.8	11
4	Energy	44	896.1	3.8	5.5	12
5	Power and Utilities	51	382.8	4.4	2.3	9
6	Property	144	889.1	12.4	5.5	13
7	Technology	139	2,290.1	12.0	14.0	12
8	Financial Services and Insurance	110	2,749.0	9.5	16.9	12
9	Hotels & Leisure	38	288.2	3.4	1.8	9
10	Materials and Capital Goods	121	845.8	10.4	5.2	9
11	Transport and Infrastructure	39	190.2	3.4	1.2	10
12	Internet, Media and Telecoms	106	3,516.4	9.1	21.6	11
13	Conglomerates	33	281.3	2.8	1.7	10
	Total / Average	1,162	16,308.1	100.0	100.0	

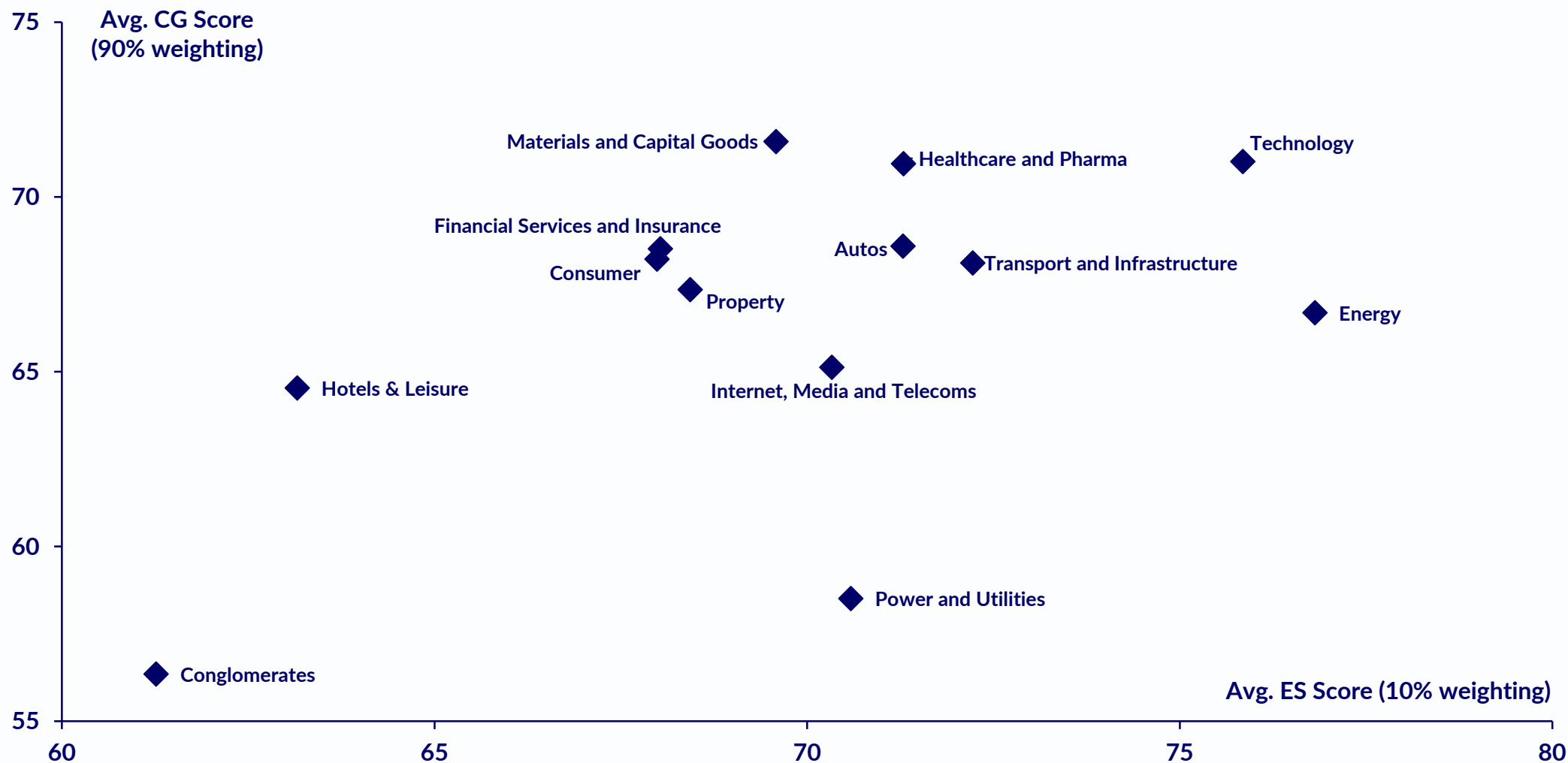
Corporate governance questionnaire

Sections	Weighting (%)	Number of questions	Core issues addressed
Discipline	18	6	Management sticks to clearly defined core businesses with discipline not harm the interests of shareholders and is free from government interference
Transparency	18	5	Management provides timely disclosures without controversial accounting and provides good access to senior management
Independence	18	6	Board acts in independent way, with proper checks and balance mechanisms through independent audit committees including board diversity measures
Responsibility	18	3	Management's interests is aligned with listed company and there has been no misconducts by management or related party transactions which harmed the interests of minority shareholders
Fairness	18	4	There has been no conflict of interests between board and senior members and the company does not have weighted vote structure with fair compensation
Environment/Social	10	3-4	Whether the company in question strives to promote environment protection and ethical business practices that are specifically relevant to its sector
Total	100	27-28	

Source: CLSA

Technology sector scored the highest in 2020

Sector score distribution by corporate governance and environmental/social score

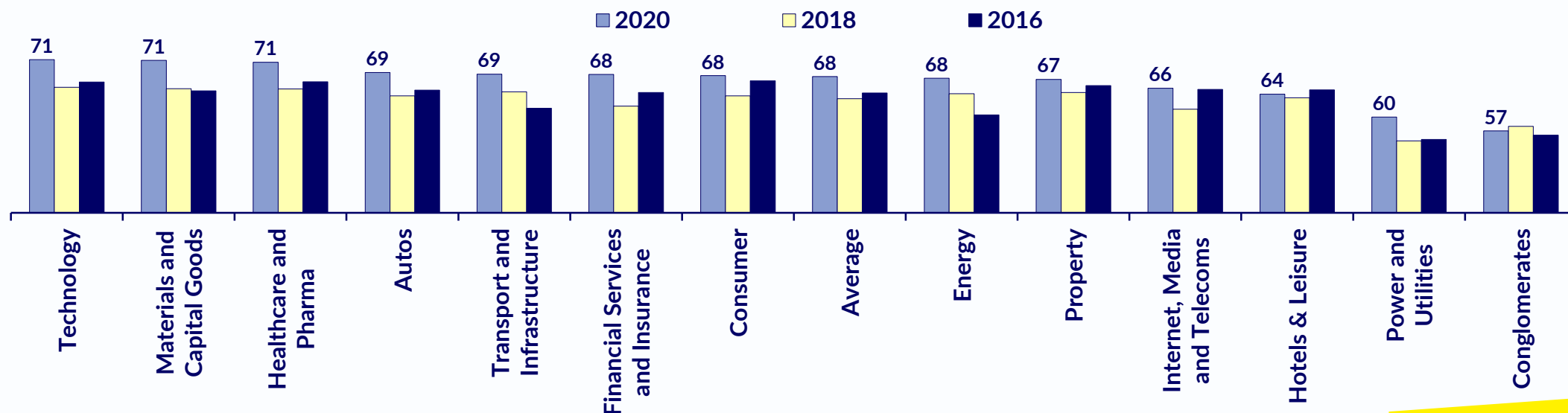


Source: CLSA

Notable changes are in the middle

Sector score ranking table and trends

Rank	2020	2018	2016
Technology	1	1	2
Materials and Capital Goods	2	2	7
Healthcare and Pharma	3	3	3
Autos	4	8	6
Transport and Infrastructure	5	4	10
Financial Services and Insurance	6	10	9
Consumer	7	7	1
Energy	8	6	11
Property	9	5	4
Internet, Media and Telecoms	10	11	5
Hotels & Leisure	11	9	8
Power and Utilities	12	13	13
Conglomerates	13	12	12



General improvement across the sectors and pillars

Score change by sectors...and by individual sections

	Change vs 2018 (%)	Responsibility	Transparency	Discipline	Fairness	Independence	CG (90%)	ES +(10%)	2020 =ESG	
Finance and insurance	10.51	Finance & Insurance	1.0	9.7	8.9	12.4	25.4	10.9	6.8	10.5
Power & Utilities	9.01	Power & Util.	27.9	7.7	(3.2)	4.4	12.6	8.0	(0.9)	9.0
Materials & industrials	8.92	Materials & Industrials	16.1	5.5	7.3	13.1	18.5	11.5	0.2	8.9
Technology	8.65	Technology	1.0	15.5	0.3	5.9	25.5	7.6	2.4	8.7
Healthcare & Pharma	8.39	Healthcare & Pharma	(3.2)	5.2	4.8	2.4	8.5	2.9	4.6	8.4
Autos	7.53	Autos	27.6	11.2	3.6	2.8	(0.8)	9.0	0.7	7.5
Average	7.17	Average	9.7	6.9	4.0	5.5	13.0	7.4	3.0	7.2
Internet, Media & Telcos	7.05	Internet/Media/Telcos	8.3	8.9	13.8	5.1	4.7	8.0	3.0	7.0
Consumer	6.50	Consumer	10.3	6.0	1.1	6.6	20.0	7.9	(0.2)	6.5
Transport & Infra	5.61	Transport & Infra	16.2	8.6	5.1	4.8	9.9	8.7	8.2	5.6
Energy	4.94	Energy	9.9	0.2	17.2	1.9	3.6	5.5	(1.7)	4.9
Property	4.17	Property	30.6	(2.2)	(0.8)	(2.9)	(3.5)	2.2	13.8	4.2
Hotels & Leisure	1.17	Hotels & Leisure	19.3	4.6	2.4	(4.7)	4.0	4.0	3.8	1.2
Conglomerates (1.63)	(%)	Conglomerates	(3.5)	7.4	5.8	(7.9)	(6.2)	(1.2)	(1.6)	(1.6)

Source: CLSA

Independence remains the weakest link . . .

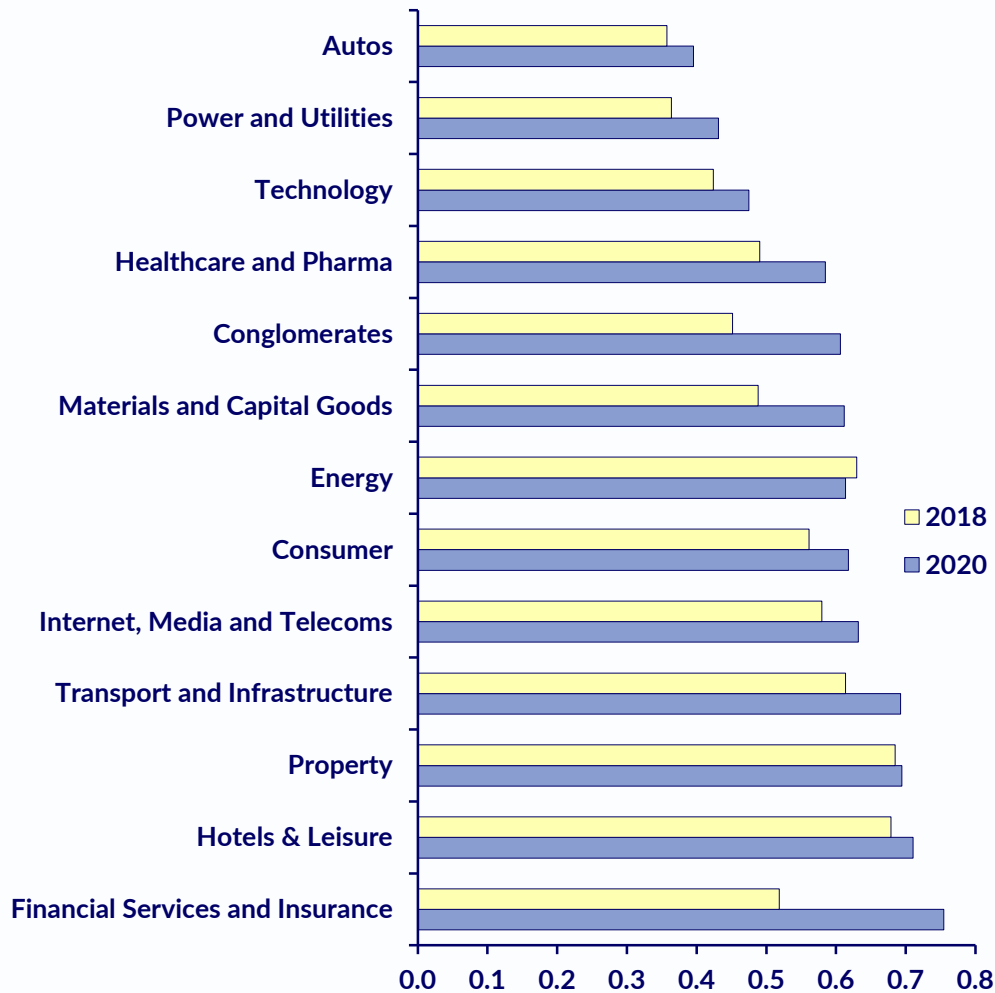
2020 CG Watch score breakdown by sectors

2020	Responsibility	Transparency	Discipline	Fairness	Independence	CG (90%)	ES + (10%)	2020 = ESG
Technology	77.6	70.0	70.2	89.1	48.1	71.0	75.8	71.5
Materials & Industrials	67.9	77.6	68.3	89.2	54.9	71.6	69.6	71.4
Healthcare & Pharma	79.7	75.3	60.4	85.6	53.7	70.9	71.3	71.0
Autos	74.1	77.7	69.4	84.0	37.8	68.6	71.3	68.9
Transport & Infra	70.8	80.0	56.8	80.6	52.3	68.1	72.2	68.5
Finance & Insurance	59.4	79.6	56.9	88.7	58.0	68.5	68.0	68.5
Consumer	72.1	69.7	64.5	84.2	50.5	68.2	68.0	68.2
Energy	59.7	74.2	57.7	91.5	50.3	66.7	76.8	67.7
Property	59.8	78.7	57.1	85.8	55.4	67.3	68.4	67.5
Internet/Media/Telcos	67.9	77.0	55.9	78.6	46.1	65.1	70.3	65.6
Hotels & Leisure	60.5	74.7	54.5	79.5	53.5	64.5	63.2	64.4
Power & Utilities	43.8	73.0	51.1	76.1	48.5	58.5	70.6	59.7
Conglomerates	52.5	70.2	44.9	69.7	44.4	56.4	61.3	56.8
Average	67.1	74.8	61.1	84.7	51.2	67.8	69.9	68.0

Source: CLSA

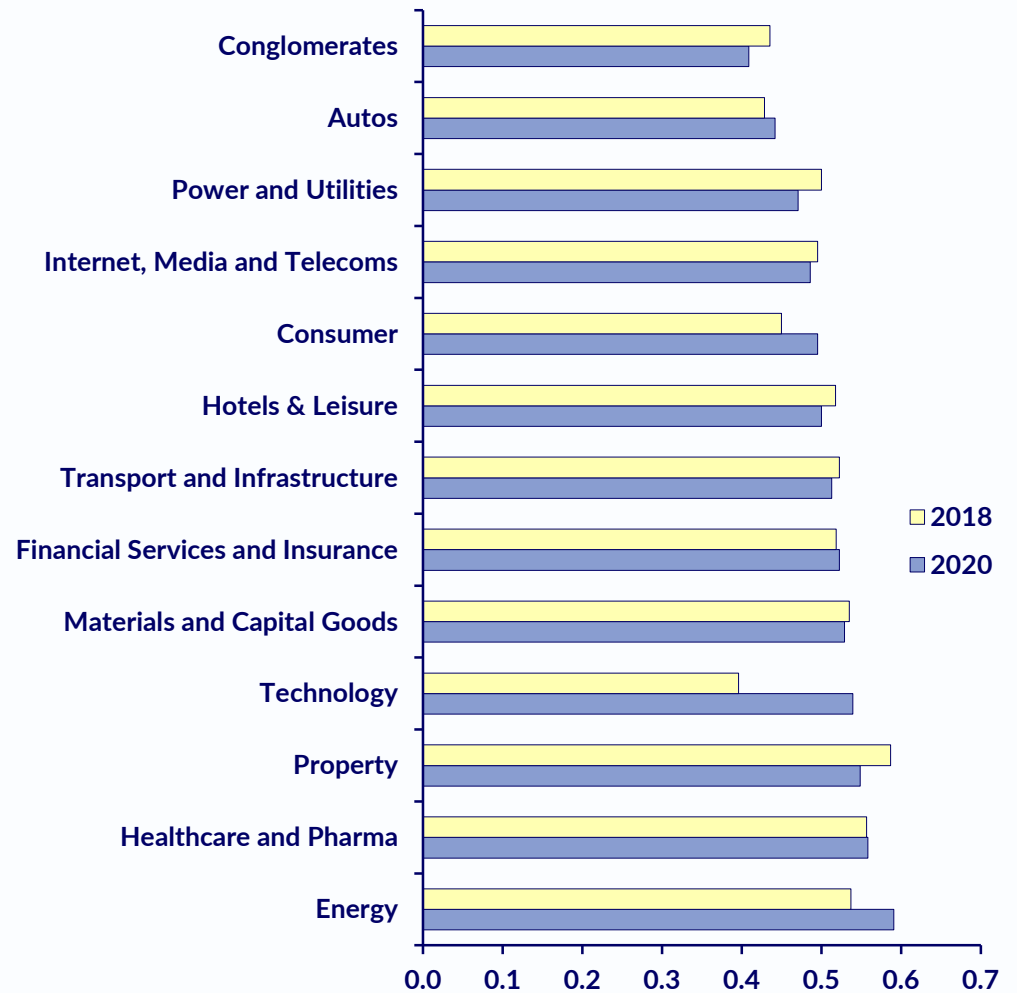
... as analysts remain sceptical on true independence of the board

Does the company have a diverse board?
2020 vs 2018 - by sectors



Q17: Does the board composition reflect an attempt to bring diverse talent and backgrounds to the board? Source: CLSA

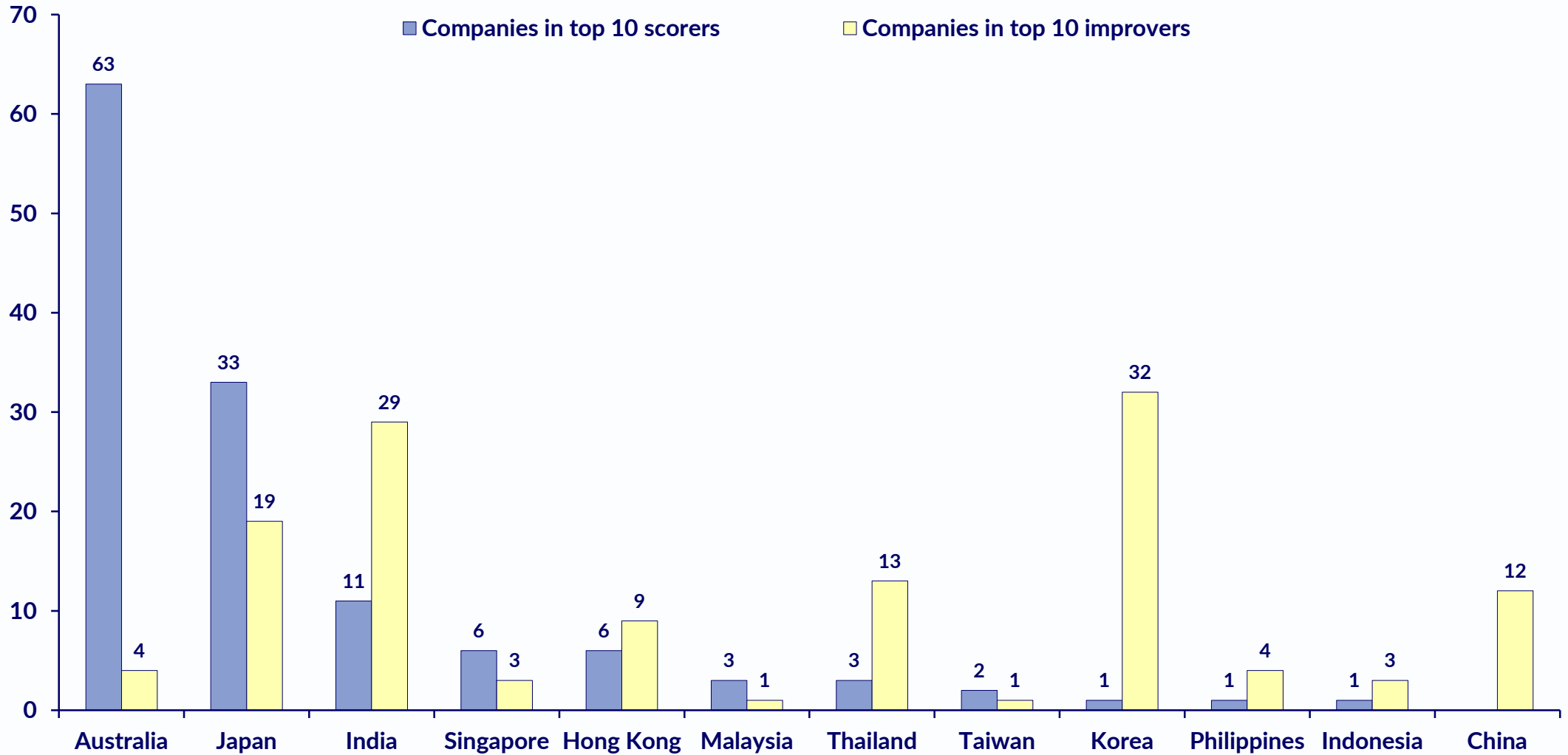
Is the company's board truly independent (Q15)?
2020 vs 2018 - by sectors



Q15: Do the independent nonexecutive directors on the board act in a genuinely independent way? Source: CLSA

Australians and Koreans are winners in top 10 league

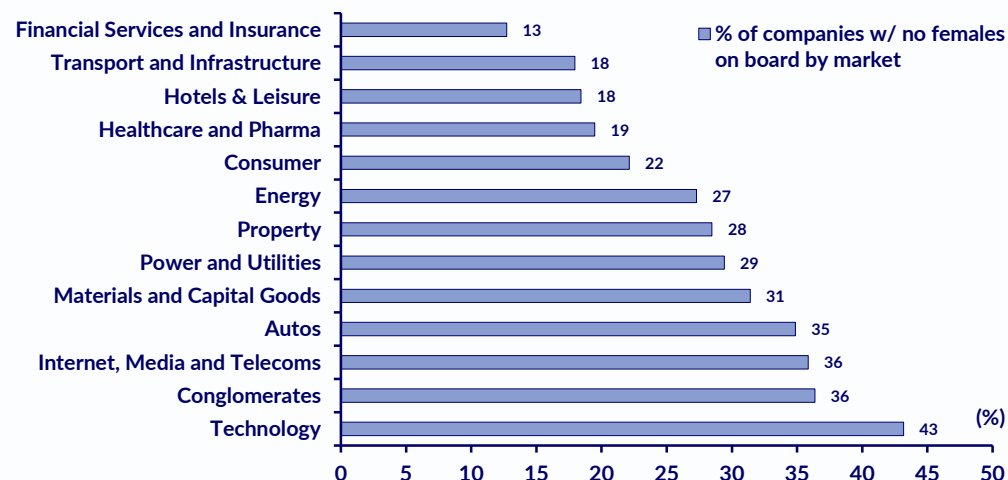
Number of companies in top 10 scorers and improvers - by countries



Source: CLSA

The top: Tech

Gender diversity is the weak link here



Source: CLSA, Factset

Top10 scorers

Ticker	Name	Country	2020 ESG score	2-yr share price %
IFM AU	Infomedia	Australia	98.6	54.35
6028 JP	TechnoPro	Japan	95.6	40.75
EML AU	EML	Australia	95.6	139.84
CDA AU	Codan	Australia	91.9	262.90
2330 TT	TSMC	Taiwan	89.1	109.52
2301 TT	Lite-On Tech	Taiwan	88.8	23.00
6134 JP	Fuji Corp	Japan	88.1	62.64
INFO IB	Infosys	India	88.1	73.46
9719 JP	SCSK	Japan	88.0	34.67
TCS IB	Tata Consultancy	India	87.4	44.85
	Average		91.1	84.6

Source: CLSA

Scorecard

Sector name	Number of companies	Total market cap	% of number of companies	% of market cap	# of countries spread (total 13)
Technology	139	2,290.1	12.0	14.0	11
Scores	2020	2018	% Improvement vs 2018	# of companies improved	# of companies declined
Responsibility	77.6	76.8	1.0	10	6
Transparency	70.0	60.6	15.5	34	17
Discipline	70.2	69.9	0.3	14	16
Fairness	89.1	84.2	5.9	17	4
Independence	48.1	38.4	25.5	30	14
Corporate governance	71.0	66.0	7.6	59	26
Environment social	75.8	74.1	2.4	24	25
CG Watch ESG score	71.5	65.8	8.7	55	24
Overall rank	1	1	0		
CG rank	2	2	0		
ES Rank	2	2	0		

Source: CLSA

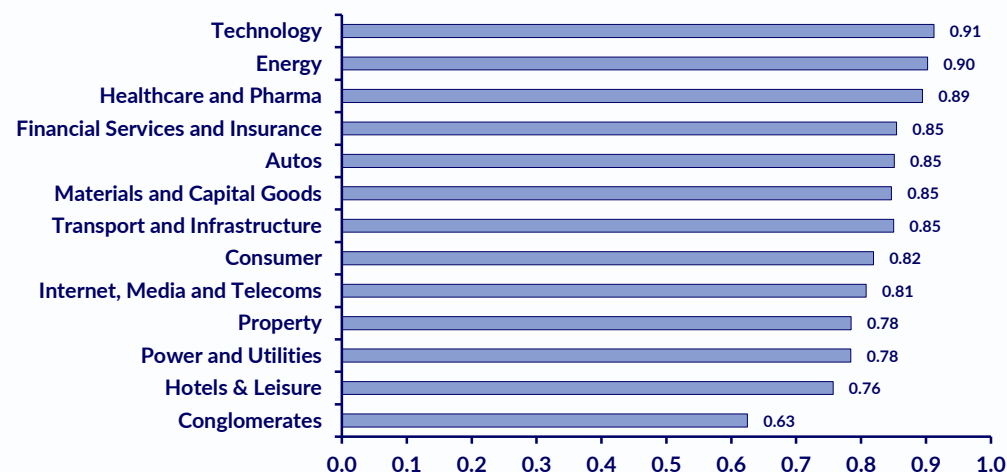
Top10 improvers

Ticker	Name	Country	Score vs. 2018, %	2-yr share price %
56190 KQ	SFA	Korea	54	(6.34)
005930 KS	Samsung Electronics	Korea	44	49.83
TECHM IB	Tech Mahindra	India	43	22.28
303 HK	VTech	HongKong	43	(26.55)
6134 JP	Fuji Corp	Japan	40	62.64
6502 JP	Toshiba	Japan	37	(31.57)
6594 JP	Nidec	Japan	37	62.31
2395 TT	Advantech	Taiwan	33	46.41
000660 KS	SK Hynix	Korea	32	36.49
034220 KS	LG Display	Korea	32	(16.81)
	Average		46	20.0

Source: CLSA, Factset

The bottom: Conglo

Related-party transactions which harm the interests of noncontrolling shareholders . . .



Top10 scorers

Ticker	Name	Country	2020 ESG score	2-yr share price %
7012 JP	KHI	Japan	82.7	(40.62)
LT IB	Larsen & Toubro	India	82.0	(24.21)
7013 JP	IHI	Japan	81.2	(61.34)
5631 JP	Japan Steel Works	Japan	77.6	17.72
IJM MK	IJM	Malaysia	74.4	(12.28)
STE SP	ST Engineering	Singapore	72.1	6.78
SCI SP	Sembcorp	Singapore	71.6	27.83
7011 JP	MHI	Japan	71.3	(42.44)
AC PM	Ayala Corp	Philippines	67.9	(7.13)
ASII IJ	Astra	Indonesia	66.9	(30.70)
	Average		74.8	(16.6)

Source: CLSA

Scorecard

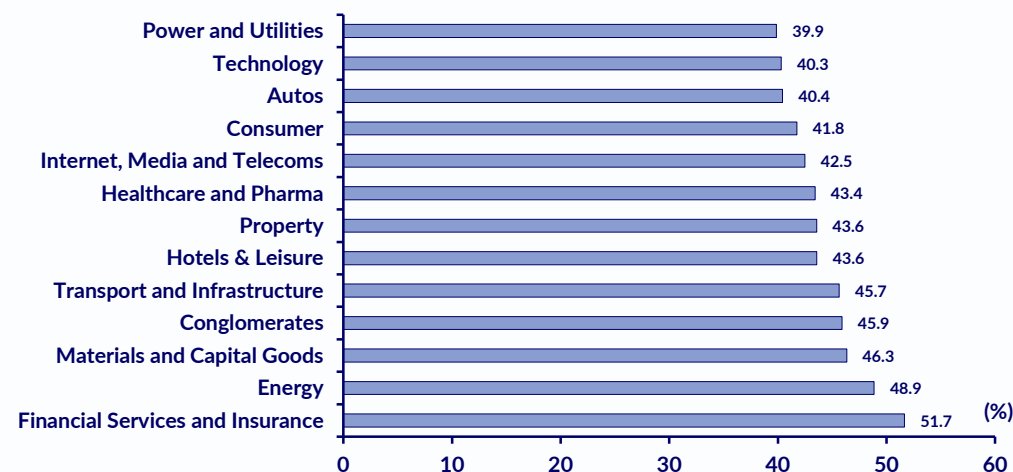
Sector name	Number of companies	Total market cap	% of number of companies	% of market cap	# of countries spread (total 13)
Conglomerates	33	281.3	2.8	1.7	9
Scores	2020	2018	% Improvement vs 2018	# of companies improved	# of companies declined
Responsibility	52.5	54.4	(3.5)	4	2
Transparency	70.2	65.3	7.4	7	9
Discipline	44.9	42.5	5.8	6	7
Fairness	69.7	75.6	(7.9)	4	3
Independence	44.4	47.4	(6.2)	9	10
Corporate governance	56.4	57.0	(1.2)	10	16
Environment social	61.3	62.3	(1.6)	9	5
CG Watch ESG score	56.8	57.8	(1.6)	9	16
Overall rank	13	12	(1)		
CG rank	13	12	(1)		
ES Rank	13	11	(2)		

Top10 improvers

Ticker	Name	Country	Score vs. 2018, %	2-yr share price %
028260 KS	Samsung C&T	Korea	87	20.39
7012 JP	KHI	Japan	47	(40.62)
GTCAP PM	GT Capital	Philippines	38	(21.25)
7013 JP	IHI	Japan	37	(61.34)
7011 JP	MHI	Japan	22	(42.44)
5631 JP	Japan Steel Works	Japan	14	17.72
LT IB	Larsen & Toubro	India	9	(24.21)
AC PM	Ayala Corp	Philippines	5	(7.13)
IJM MK	IJM	Malaysia	2	(12.28)
JM SP	Jardine Matheson	Singapore	0	(21.19)
	Average		26	(19.2)

Most improved: Finance

Share of independent directors on the board



Source: CLSA, Factset

Top10 scorers

Ticker	Name	Country	2020 ESG score	2-yr share price %
MFG AU	Magellan	Australia	92.6	133.77
HDFC IB	HDFC	India	91.1	25.75
1299 HK	AIA	Hong Kong	89.5	36.38
UOB SP	UOB	Singapore	88.1	(8.73)
CGF AU	Challenger	Australia	86.2	(46.75)
SGX SP	Singapore Exchange	Singapore	86.2	28.33
PBK MK	Public Bank	Malaysia	86.0	(24.57)
VUK AU	Virgin Money UK	Australia	85.9	(50.00)
PDL AU	Pendal	Australia	85.9	(24.97)
PTM AU	Platinum	Australia	85.5	(32.11)
	Average		87.7	3.7

Source: CLSA

Scorecard

Sector name	Number of companies	Total market cap	% of number of companies	% of market cap	# of countries spread (total 13)
Finance and Insurance	110	2,749.0	9.5	16.9	11
Scores	2020	2018	% Improvement vs 2018	# of companies improved	# of companies declined
Responsibility	59.4	58.8	1.0	16	7
Transparency	79.6	72.5	9.7	24	3
Discipline	56.9	52.3	8.9	24	11
Fairness	88.7	78.9	12.4	17	2
Independence	58.0	46.3	25.4	35	12
Corporate governance	68.5	61.8	10.9	60	15
Environment social	68.0	63.7	6.8	31	11
CG Watch ESG score	68.5	62.0	10.5	59	15
Overall rank	6	11	5		
CG rank	5	10	5		
ES Rank	10	10	0		

Source: CLSA

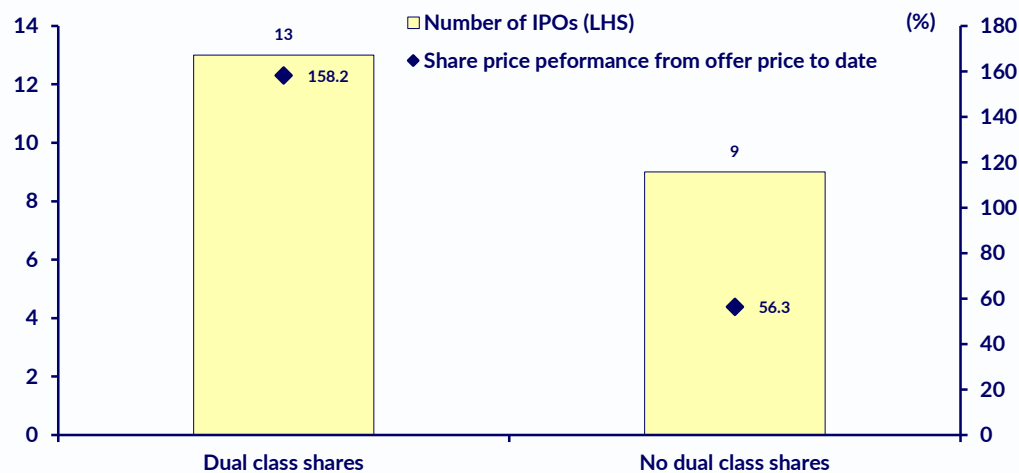
Top10 improvers

Ticker	Name	Country	Score vs. 2018, %	2-yr share price %
3968 HK	CMB	China	58	52.76
KTB TB	Krung Thai Bank	Thailand	47	(49.50)
HDFC IB	HDFC	India	43	25.75
005830 KS	DB Insurance	Korea	37	(35.80)
KKP TB	Kiatnakin Phatra Bank	Thailand	37	(38.16)
BTPS IJ	BTPS	Indonesia	36	153.76
SCB TB	Siam Commercial Bank	Thailand	29	(40.55)
ICICIBC IB	ICICI Bank	India	28	32.77
2127 JP	Nihon M&A Center	Japan	26	135.68
1988 HK	Minsheng	China	26	(26.28)
	Average		37	21.0

Source: CLSA, Factset

The underperformer: Internet/media/telcos

Asian internet IPOs since 2017



Note: Include secondary listings. Source: CLSA, Factset

Top10 scorers

Ticker	Name	Country	2020 ESG score	2-yr share price %
TLS AU	Telstra	Australia	95.2	4.28
REA AU	REA	Australia	90.5	84.90
DHG AU	Domain	Australia	90.5	90.13
INFOE IS	Info Edge	India	90.5	181.97
TPG AU	TPG Telecom	Australia	86.2	
9434 JP	Softbank Corp	Japan	85.0	
ADVANC TB	AIS	Thailand	84.1	(1.69)
CAR AU	Carsales.com	Australia	82.6	88.69
ST SP	Singtel	Singapore	82.6	(24.26)
4751 JP	CyberAgent	Japan	81.7	27.31
	Average		86.9	56.4

Source: CLSA

Scorecard

Sector name	Number of companies	Total market cap	% of number of companies	% of market cap	# of countries spread (total 13)
Internet/media/Telcos	106	3,516.4	9.1	21.6	12
Scores	2020	2018	% Improvement vs 2018	# of companies improved	# of companies declined
Responsibility	67.9	62.7	8.3	9	3
Transparency	77.0	70.7	8.9	24	9
Discipline	55.9	49.2	13.8	16	11
Fairness	78.6	74.8	5.1	11	5
Independence	46.1	44.1	4.7	21	14
Corporate governance	65.1	60.3	8.0	48	28
Environment social	70.3	68.3	3.0	23	15
CG Watch ESG score	65.6	61.3	7.0	45	24
Overall rank	10	11	1		
CG rank	10	11	1		
ES Rank	7	6	(1)		

Source: CLSA

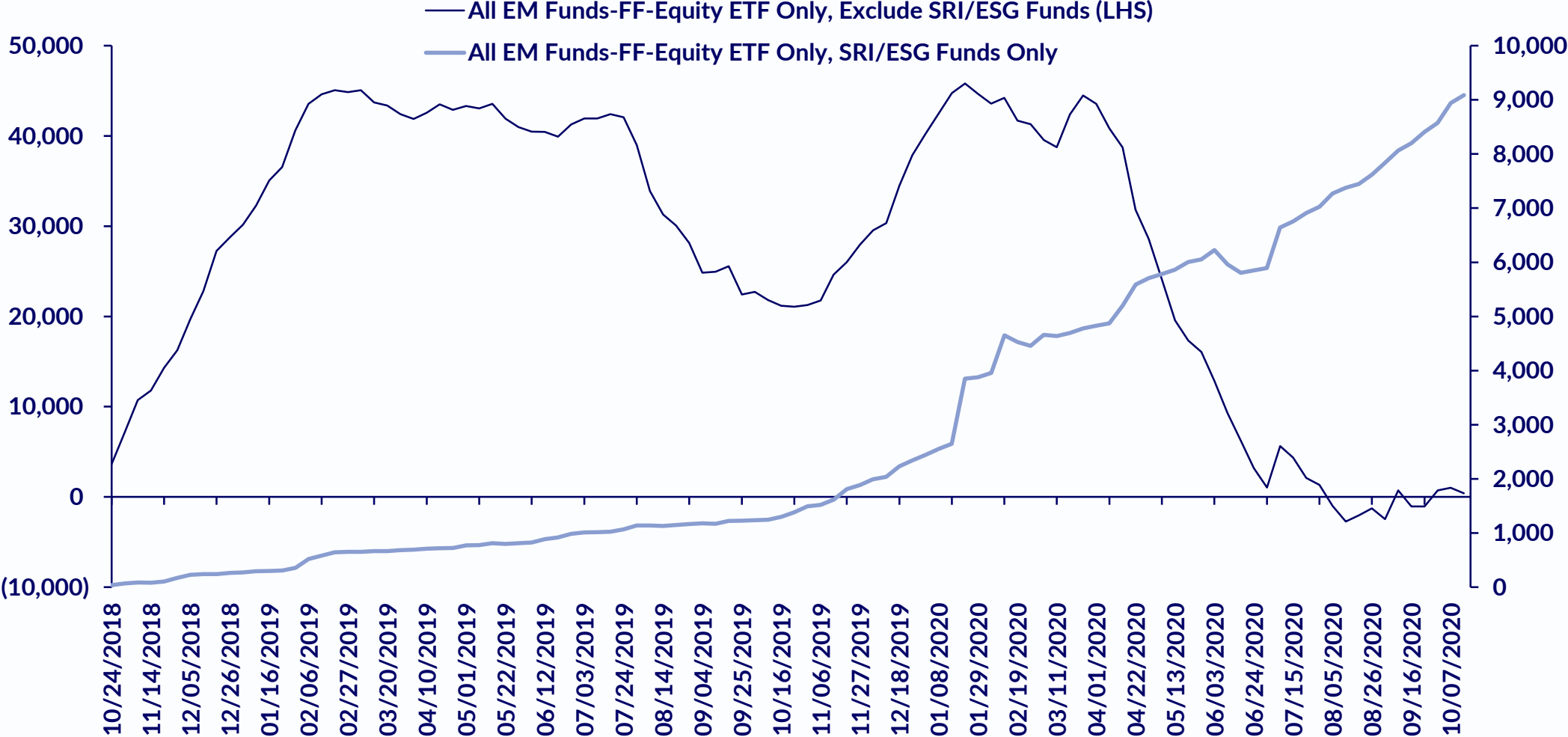
Top10 improvers

Ticker	Name	Country	Score vs. 2018, %	2-yr share price %
036570 KS	NCsoft	Korea	71	68.95
3765 JP	GungHo	Japan	65	2.68
030000 KS	Cheil Worldwide	Korea	54	(5.66)
078340 KS	Com2us	Korea	51	(4.98)
2432 JP	DeNA	Japan	49	(11.69)
214320 KS	Innocean Worldwide	Korea	41	5.95
3632 JP	Gree	Japan	37	18.22
DTAC TB	Total Access Comm	Thailand	36	(26.20)
TRUE TB	True Corp	Thailand	29	(45.98)
9437 JP	NTT Docomo	Japan	28	50.90
	Average		46	5.2

Source: CLSA

Exponential flow into EM ESG/SRI funds

Fund flows into EM. ESG/SRI vs ex SRI/ESG funds

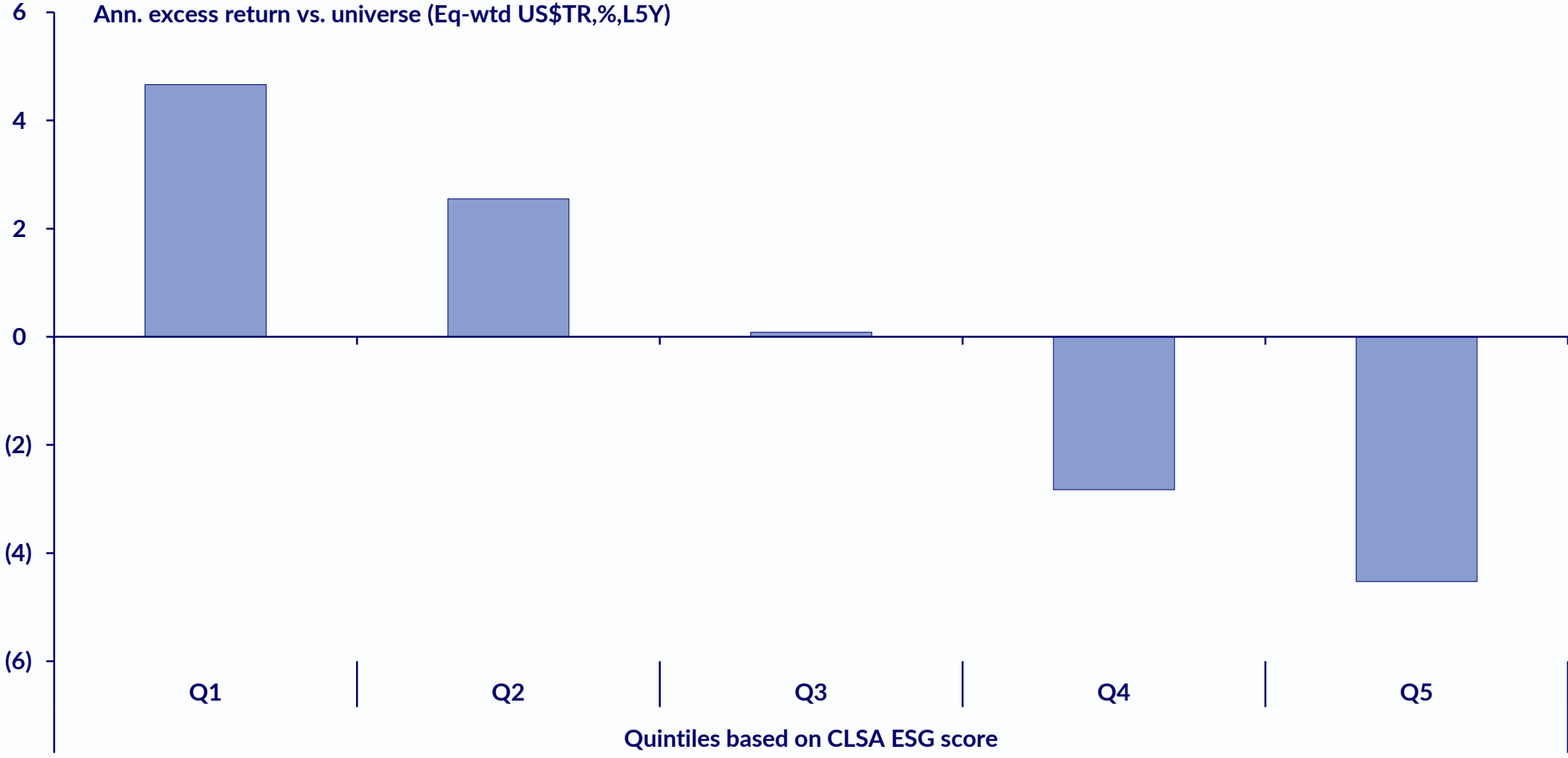


Source: CLSA, EFPR Global



Do good scores relate to good performances?

Five-year annualised excess returns based on CLSA ESG score, versus Universe

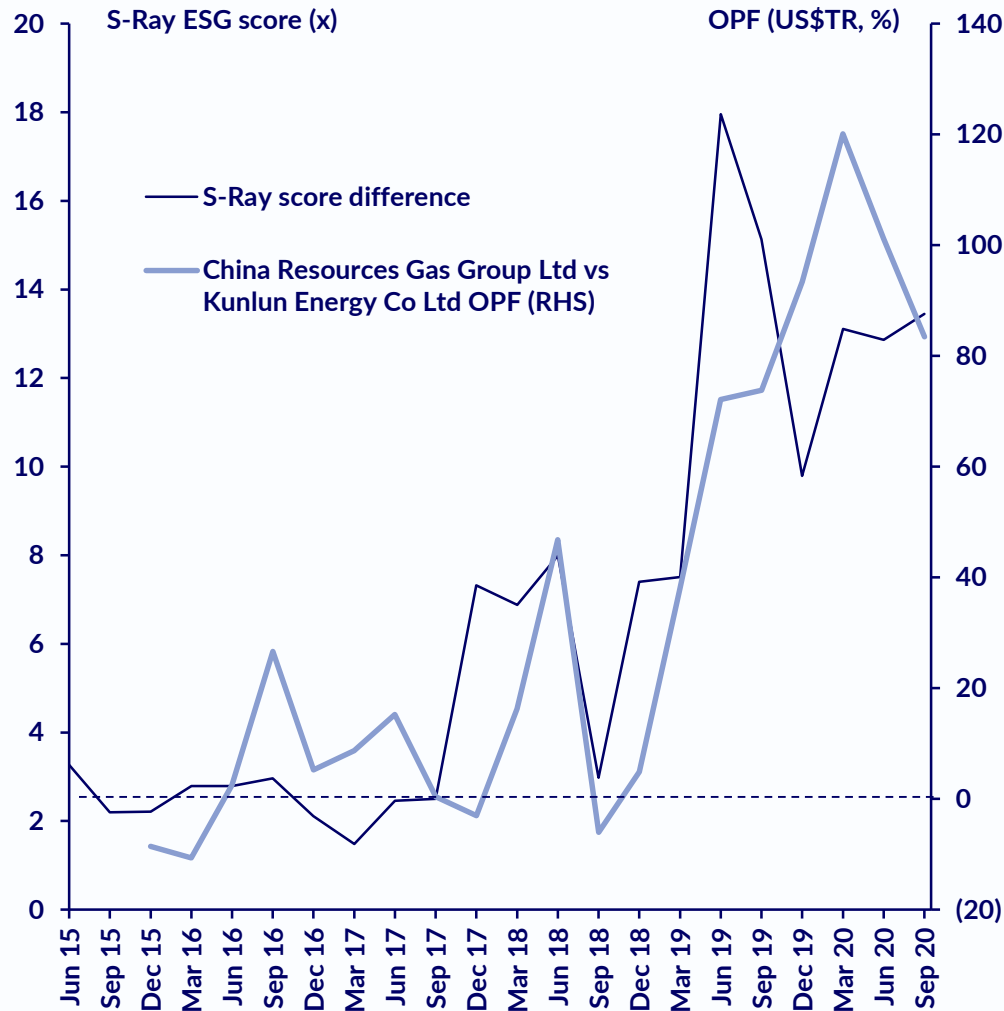


Source: CLSA



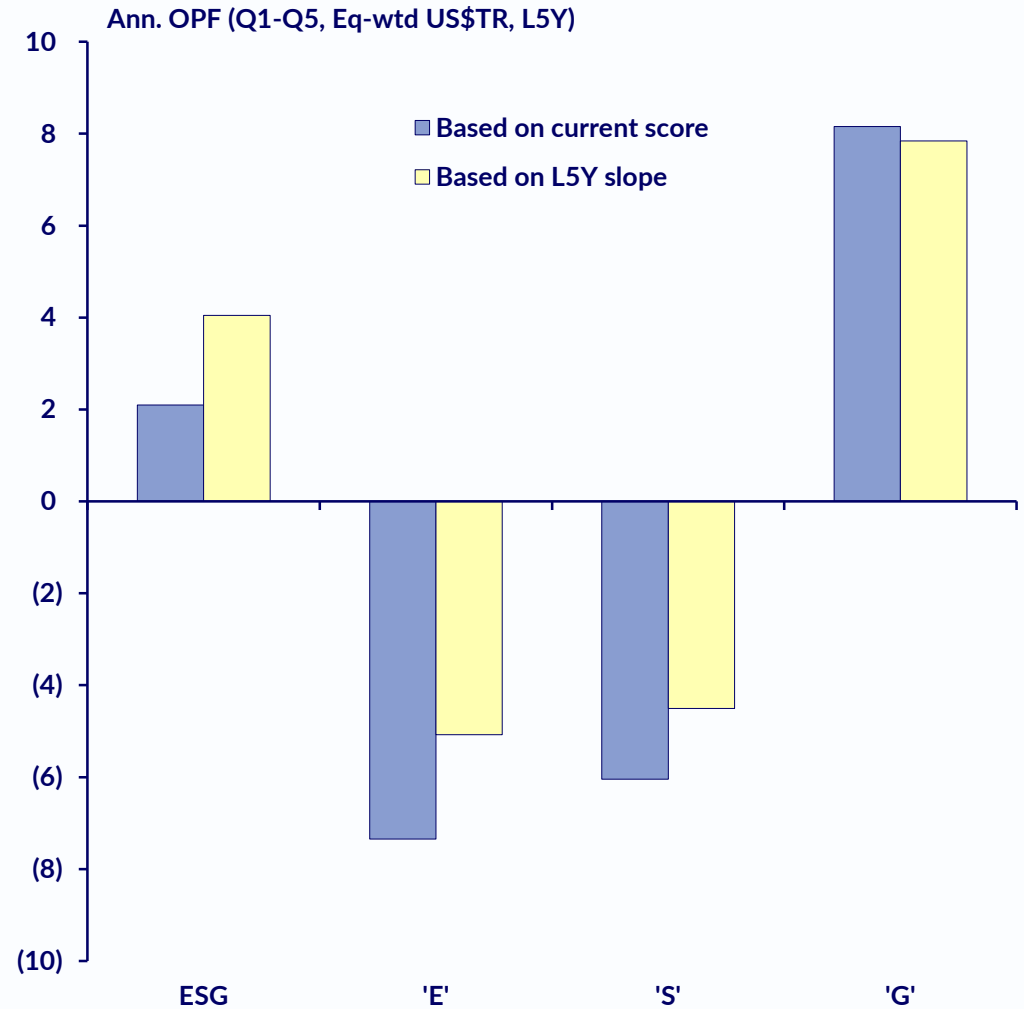
Good governance appears to be rewarded

Kunlun Energy and CR Gas S-Ray score gap vs share price performance



Source: CLSA, Arabesque S-Ray

S-Ray score by quintiles and share price outperformance by E/S/G



Source: CLSA, Factset, Arabesque S-Ray

Top 10 improvers have outperformed in the short term

Five-year and one-year absolute share price performance of top 10 scorers and improvers

5Y	Champions	Improvers	Champions' outperformance	1Y	Champions	Improvers	Champions' outperformance
Technology	260.5	80.9	179.6	Technology	21.0	6.6	13.9
Autos	10.9	19.4	(8.5)	Autos	(4.1)	8.6	(12.8)
Consumer	53.2	26.2	27.0	Consumer	6.7	5.2	1.5
Financial Services	26.4	66.0	(39.7)	Financial Services	(8.1)	(1.6)	(6.4)
Healthcare and Pharma	422.2	97.7	324.5	Healthcare and Pharma	28.0	54.6	(26.7)
Internet, media and telecoms	113.8	21.5	92.3	Internet, media and telecoms	16.2	2.7	13.5
Materials and Capital Goods	304.0	75.3	228.7	Materials and Capital Goods	15.3	28.8	(13.5)
Petro Chems and Batteries	18.1	32.8	(14.7)	Petro Chems and Batteries	(20.5)	17.2	(37.7)
Power and Utilities	6.3	120.2	(113.9)	Power and Utilities	(12.1)	(5.2)	(7.0)
Property	54.5	57.3	(2.8)	Property	(7.2)	(5.4)	(1.8)
Transports and Infrastructure	30.2	(17.5)	47.8	Transports and Infrastructure	(5.4)	(11.7)	6.3
Conglomerates	(17.2)	(25.7)	8.6	Conglomerates	(13.1)	(19.3)	6.2
Hotels & Leisure	14.1	19.2	(5.1)	Hotels & Leisure	(25.0)	(14.8)	(10.2)
Average	99.8	44.1	55.7	Average	(0.4)	5.1	(5.5)

Source: CLSA

CLSA Important notices

© 2020 CLSA Limited ("CLSA") and/or CL Securities Taiwan Co. Ltd ("CLST").

This publication/communication is subject to and incorporates the terms and conditions of use set out on the www.clsa.com website (www.clsa.com/disclaimer.html). Neither the publication/communication nor any portion hereof may be reprinted, sold, resold, copied, reproduced, distributed, redistributed, published, republished, displayed, posted or transmitted in any form or media or by any means without the written consent of CLSA group of companies ("CLSA") and/or CLST.

CLSA and/or CLST has/have produced this publication/communication for private circulation to professional, institutional and/or wholesale clients only and it may not be distributed to retail investors. The information, opinions and estimates herein are not directed at, or intended for distribution to or use by, any person or entity in any jurisdiction where doing so would be contrary to law or regulation or which would subject CLSA and/or CLST to any additional registration or licensing requirement within such jurisdiction. The information and statistical data herein have been obtained from sources we believe to be reliable. Such information has not been independently verified and we make no representation or warranty as to its accuracy, completeness or correctness. Any opinions or estimates herein reflect the judgment of CLSA and/or CLST at the date of this publication/communication and are subject to change at any time without notice. Where any part of the information, opinions or estimates contained herein reflects the views and opinions of a sales person or a non-analyst, such views and opinions may not correspond to the published view of CLSA and/or CLST.. Any price target given in the report may be projected from one or more valuation models and hence any price target may be subject to the inherent risk of the selected model as well as other external risk factors. Where the publication does not contain ratings, the material should not be construed as research but is offered as factual commentary. It is not intended to provide, nor should it be used to form, an investment opinion about the non-rated companies.

This publication/communication is for information purposes only and it does not constitute or contain, and should not be considered as an offer or invitation to sell, or any solicitation or invitation of any offer to subscribe for or purchase any securities in any jurisdiction and neither this publication/communication nor anything contained herein shall form the basis of any investment decision, contract or commitment whatsoever. This is not intended to provide professional, investment or any other type of advice or recommendation and does not take into account the particular investment objectives, financial situation or needs of individual recipients. Before acting on any information in this publication/communication, you should consider whether it is suitable for your particular circumstances and, if appropriate, seek professional advice, including tax advice. Investments involve risks, and investors should exercise prudence and their own judgement in making investment decisions. The value of any investment or income may go down as well as up, and investors may not get back the full (or any) amount invested. Past performance is not necessarily a guide to future performance. CLSA and/or CLST do/does not accept any responsibility and cannot be held liable for any person's use of or reliance on the information and opinions contained herein. To the extent permitted by applicable securities laws and regulations, CLSA and/or CLST accept(s) no liability whatsoever for any direct or consequential loss arising from the use of this publication/communication or its contents. Subject to any applicable laws and regulations at any given time, CLSA, CLST, their respective affiliates or companies or individuals connected with CLSA /CLST may have used the information contained herein before publication and may have positions in, may from time to time purchase or sell or have a material interest in any of the securities mentioned or related securities, or may currently or in future have or have had a business or financial relationship with, or may provide or have provided investment banking, capital markets and/or other services to, the entities referred to herein, their advisors and/or any other connected parties. As a result, investors should be aware that CLSA, CLST and/or their respective affiliates or companies or such individuals may have one or more conflicts of interest. Regulations or market practice of some jurisdictions/markets prescribe certain disclosures to be made for certain actual, potential or perceived conflicts of interests relating to research reports. Details of the discloseable interest can be found in certain reports as required by the relevant rules and regulation and the full details are available at http://www.clsa.com/member/research_disclosures/. Disclosures therein include the position of CLSA and CLST only. Unless specified otherwise, CLSA did not receive any compensation or other benefits from the subject company covered in this publication/communication, or from any third party. If investors have any difficulty accessing this website, please contact webadmin@clsa.com on +852 2600 8111. If you require disclosure information on previous dates, please contact compliance_hk@clsa.com.

This publication/communication is distributed for and on behalf of CLSA Limited (for research compiled by non-US and non-Taiwan analyst(s)), and/or CLST (for research compiled by Taiwan analyst(s)) in Australia by CLSA Australia Pty Ltd (ABN 53 139 992 331/AFS License No: 350159); in Hong Kong by CLSA Limited; in India by CLSA India Private Limited, (Address: 8/F, Dalamal House, Nariman Point, Mumbai 400021. Tel No: +91-22-66505050. Fax No: +91-22-22840271; CIN: U67120MH1994PLC083118; SEBI Registration No: INZ000001735 as Stock Broker, INM000010619 as Merchant Banker and INH00000113 as Research Analyst; in Indonesia by PT CLSA Sekuritas Indonesia; in Japan by CLSA Securities Japan Co. Ltd.; in Korea by CLSA Securities Korea Ltd.; in Malaysia by CLSA Securities Malaysia Sdn. Bhd.; in the Philippines by CLSA Philippines, Inc. (a member of Philippine Stock Exchange and Securities Investors Protection Fund); in Singapore by CLSA Singapore Pte Ltd and solely to persons who qualify as an "Institutional Investor", "Accredited Investor" or "Expert Investor" MCI (P) 024/12/2020; in Thailand by CLSA Securities (Thailand) Limited; in Taiwan by CLST and in the EU and United Kingdom by CLSA Europe BV or CLSA (UK).

Australia: CLSA Australia Pty Ltd ("CAPL") (ABN 53 139 992 331/AFS License No: 350159) is regulated by ASIC and is a Market Participant of ASX Limited and CHI-X. This material is issued and distributed by CAPL in Australia to "wholesale clients" only. This material does not take into account the specific investment objectives, financial situation or particular needs of the recipient. The recipient of this material must not distribute it to any third party without the prior written consent of CAPL. For the purposes of this paragraph the term "wholesale client" has the meaning given in section 761G of the Corporations Act 2001. CAPL's research coverage universe spans listed securities across the ASX All Ordinaries index, securities listed on offshore markets, unlisted issuers and investment products which Research management deem to be relevant to the investor base from time to time. CAPL seeks to cover companies of relevance to its domestic and international investor base across a variety of sectors.

United States of America: Where any section is compiled by non-US analyst(s), it is distributed into the United States by CLSA solely to persons who qualify as "Major US Institutional Investors" as defined in Rule 15a-6 under the Securities and Exchange Act of 1934 and who deal with CLSA Americas. However, the delivery of this research report to any person in the United States shall not be deemed a recommendation to effect any transactions in the securities discussed herein or an endorsement of any opinion expressed herein. Any recipient of this research in the United States wishing to effect a transaction in any security mentioned herein should do so by contacting CLSA Americas.

The European Union ("EU") and the United Kingdom: In these jurisdictions, this research is a marketing communication. It has not been prepared in accordance with the legal requirements designed to promote the independence of investment research, and is not subject to any prohibition on dealing ahead of the dissemination of investment research. The research is disseminated in these countries by either CLSA (UK) or CLSA Europe BV. CLSA (UK) is authorised and regulated by the Financial Conduct Authority. CLSA Europe BV is authorised and regulated by the Authority for Financial Markets in the Netherlands. This document is directed at persons having professional experience in matters relating to investments as defined in the relevant applicable local regulations. Any investment activity to which it relates is only available to such persons. If you do not have professional experience in matters relating to investments you should not rely on this document. Where the research material is compiled by the UK analyst(s), it is produced and disseminated by CLSA (UK) and CLSA Europe BV. For the purposes of the Financial Conduct Rules in the United Kingdom and MIFID II in other European jurisdictions this research is prepared and intended as substantive research material.

For all other jurisdiction-specific disclaimers please refer to www.clsa.com/disclaimer.html. The analysts/contributors to this publication/communication may be employed by any relevant CLSA entity or CLST, which is different from the entity that distributes the publication/communication in the respective jurisdictions. © 2020 CLSA Limited and/or CL Securities Taiwan Co. Ltd.