

# Popular Investment Screens

# Developed & Emerging markets screens monthly update

#### Europe Andrew Lapthorne

(44) 20 7762 5762 andrew.lapthorne@sgcib.com

### Rui Antunes

(44) 20 7762 5875 rui.antunes@sgcib.com

#### John Carson

(44) 20 7762 4979 iohn.carson@sqcib.com

### Georgios Oikonomou

(44) 20 7762 5261

### Yohan Le Jallé

(33) 1 42 13 71 61

#### Asia

# **Josh Cherian** (82) 2 2195 7431

- Our Popular Investment Screens publication is a roundup of our main quant screens. Inside, we track the monthly performance of these screens and provide updated links to spreadsheets containing all the latest scores. These can be filtered and adapted to suit your sector, region or valuation threshold.
- We provide our screens for developed and emerging markets. Our universe includes FTSE World Developed and FTSE 350 stocks for the developed markets screens and FTSE World Emerging stocks for emerging markets. Overall, we include five screens for each region.
  - Quality Income: The screen filters for companies with a high dividend yield (4%+), which also satisfy our 'quality' standards (i.e. companies in the top 40% of the universe by Merton's distance-to-default that also score 7 or better with Piotroski's fundamental score).
  - 2) Expensive stocks with poor earnings quality: We combine our earnings quality score with our value scoring formula to filter for companies that are both expensive and show poor earnings quality. The value score is based on five value factors (PE, FY1 PE, PB, FCF Yield and EV to EBITDA) all taken relative to the sector median. The earnings quality score is based on the average decile rank of ten factors (Total Accruals, Accruals Volatility, Inventory, Receivables, Asset Quality, Asset Turnover, Depreciation, SG&A and R&D expenses, Profit Margin and Leverage).
  - 3) Graham & Rea deep value screen: This includes companies that score 2.5 or better with both Graham & Rea value and risk criteria. The screen was developed by Benjamin Graham and James Rea. It is a set of ten basic investment criteria, with the first five focusing on value and second five on risk.
  - 4) Greenblatt's screen: Based on Joel Greenblatt's 'Magic formula', we filter for the companies with the highest return-on-capital (EBIT / net working capital + net fixed assets) and earnings yield (EBIT / Enterprise Value) average rank.
  - 5) **High dividend risk:** High yielding companies that score poorly with Merton's distance-to-default. In our work, we have found that the majority of significant dividend cuts have come from companies with poor Merton's scores.



# **Developed Market Screens**



# **DM - Quality Income stocks**

## (Click here for spreadsheet with full list of stocks)

## Methodology documents

Merton's distance-to-default Piotroski's F-Score **Quality Income** 

The screen includes companies with attractive and dividends. To make the screen companies need to rank within the top 2 quintiles by the Merton model, score 7 or better with the Piotroski model and yield more than 4% (consensus estimate for next-12-months). The universe is based on FTSE World Developed and FTSE 350 stocks. All financial companies are excluded from the screen and the universe. Performance is shown on US\$ gross total return basis and assumes monthly rebalancing.

### Last month & annualized return

Return

Screen

Universe

Volatility

Screen

Universe

Screen

Universe

**Max Loss** Screen

Universe

Return/Risk

Last

6.0

7.9

**Last Since** Month 5 years 2002

> 11.5 16.5

8.3 10.2

11.6 13.6

13.7 16.7

0.99 1.22

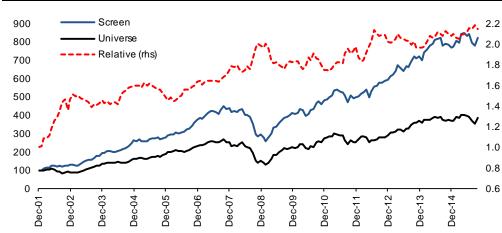
0.60 0.61

12.7 42.1

19.9

## Screen 900 Universe 800

Absolute & relative performance



Source: SG Cross Asset Research/Equity Quant. FactSet. FTSF, I/B/F/S

Source: SG Cross Asset Research/Equity Quant, FactSet, FTSE, I/B/E/S. Past performance is not indicative of future performance. Portfolio presented assumes no transaction costs. For additional details on portfolio performance please contact us

### Quality Income stocks - For full list follow the link above (sorted by market cap)

Sedol	Name	Country	Sector	Mcap (mUSD)	Yield	Merton Score	Piotroski Score
0925288	GlaxoSmithKline	United Kingdom	Health Care	105,601	5.9	4	7
B288C92	Iberdrola	Spain	Utilities	45,479	4.3	4	8
B02PY22	Singapore Telecommunications	Singapore	Telecommunications	45,309	4.7	5	7
7108899	ABB	Switzerland	Industrials	42,037	4.1	4	7
1834777	Vivendi	France	Telecommunications	33,109	6.5	4	7
38KQN82	Eaton Corp PLC	United States	Industrials	25,875	4.1	4	7
2680905	PPL Corporation	United States	Utilities	23,047	4.4	4	7
097017	CLP Holdings	Hong Kong	Utilities	22,004	4.1	5	7
208986	Next	United Kingdom	Consumer Services	18,888	4.2	5	7
696980	Potash Corp. of Saskatchewan	Canada	Basic Materials	16,899	7.6	4	8
3CZM1B2	ProSiebenSat.1 Media SE	Germany	Consumer Services	11,889	4.1	4	7
8066608	Amcor	Australia	Industrials	11,367	4.3	4	7
682538	Persimmon	United Kingdom	Consumer Goods	9,441	5.6	4	8
388MHC4	Hugo Boss AG	Germany	Consumer Services	7,278	4.4	4	8
30LKSK4	Telenet Group Holding NV	Belgium	Telecommunications	6,816	6.7	4	9
33Z5T14	Garmin Ltd	United States	Technology	6,751	5.8	4	7
701513	Elisa	Finland	Telecommunications	6,039	4.1	4	7
301FLG6	G4S	United Kingdom	Industrials	5,816	4.3	4	7
BBH7K66	bpost SA	Belgium	Industrials	5,031	5.6	4	7
123451	Coca-Cola Amatil	Australia	Consumer Goods	4,963	5.0	5	7
301G2K0	Mediaset Espana Com	Spain	Consumer Services	4,418	4.5	5	7
881436	Spark New Zealand	New Zealand	Telecommunications	4,159	7.1	4	8
OCRCP7	Tatts Group	Australia	Consumer Services	4,136	4.5	4	7
717483	Questar Corp	United States	Utilities	3,629	4.2	4	7
3218670	Boral	Australia	Industrials	2,860	4.1	4	8



# DM - expensive stocks with poor earnings quality

(Click here for spreadsheet with full list of stocks)

Methodology documents **SG Value Beta Index Earnings Quality** 

The screen is based on the five value factors included in our SG Value Beta (SGVB) index and the ten factors of our earnings quality score. We rank companies based on the average value and earnings quality decile score. The universe is based on FTSE World Developed and FTSE 350 stocks. All financial companies are excluded from the screen and the universe. Performance is shown on US\$ gross total return basis and assumes monthly rebalancing.

Last month & annualized return

Absolute & relative performance (based on bottom100 companies by earnings quality/value)

	Last Month	Last 5 years	Since 2002	450		— Scre	en										
Return							verse										_
Screen	6.9	4.1	6.3	400			ative (rh	ne)								لبرد	$\sim\sim$
Universe	7.9	8.3	10.2	350	'n	11016	ii) əviik	13)							_		`
Volatility				300									۸,	١ .		<b>V</b>	
Screen		13.2	16.6	250	'`1					<b>\</b> \	( <u>)</u>	^	٦٠.	W١	سر	~~	~~
Universe		13.7	16.7	200	`	W		^ر			17.11	اسر	<b>~</b>	7.1		<b>~</b>	~ (
Return/Risk				150		Α,	·	مر الر	/سر ،	7 ~	1. 1	~~~	۲	<b>~</b> ·			
Screen		0.31	0.38		_			المرتع	1	<i>'</i>	W	<i>y</i> '\	, ••			١٨.	
Universe		0.60	0.61	100	~~	-	~		•/-							14	
Max Loss				50												•	
Screen		20.2	50.8	0 _			<u> </u>								-		
Universe		19.9	51.5	Dec-01	Dec-02	Dec-03	Dec-04	Dec-05	Dec-06	Dec-07	Dec-08	Dec-09	Dec-10	Dec-11	Dec-12	Dec-13	Dec-14

Source: SG Cross Asset Research/Equity Quant, FactSet, FTSE, I/B/E/S

Source: SG Cross Asset Research/Equity Quant, FactSet, FTSE, I/B/E/S. Past performance is not indicative of future performance. Portfolio presented assumes no transaction costs. For additional details on portfolio performance please contact us.

### Expensive stocks with poor earnings quality - For full list follow the link above

Sedol	Name	Country	Sector	Mcap (mUSD)	SGVB Score*	Earnings Quality Score*	Average Score
5962309	Lindt & Spruengli - Reg	Switzerland	Consumer Goods	17,103	9.4	9.1	9.3
5962280	Lindt & Spruengli - PC	Switzerland	Consumer Goods	14,077	9.0	9.1	9.1
B2QPKJ1	Fresnillo	United Kingdom	Basic Materials	8,308	10.0	7.8	8.9
2967181	Williams Cos	United States	Oil & Gas	29,571	9.0	8.5	8.8
B1JB4K8	Symrise AG	Germany	Basic Materials	8,590	9.6	7.7	8.7
B29NF31	Franco-Nevada	Canada	Basic Materials	7,950	10.0	7.3	8.6
7187627	Lundin Petroleum	Sweden	Oil & Gas	4,495	10.0	7.2	8.6
B5KKT96	Cable & Wireless Com	United Kingdom	Telecommunications	4,931	9.5	7.7	8.6
4005001	Umicore	Belgium	Basic Materials	4,652	8.6	8.4	8.5
BKX5CN8	Just Eat	United Kingdom	Consumer Services	4,440	8.8	8.1	8.5
BYT3416	Altice NV A	Netherlands	Telecommunications	12,942	8.5	8.4	8.5
B3N3363	Korea Aerospace Industries	Korea	Industrials	7,695	10.0	6.9	8.5
B3ZVCQ8	LinkedIn	United States	Technology	31,400	9.3	7.5	8.4
6198578	REA Group	Australia	Industrials	4,513	9.2	7.5	8.4
4595739	Genmab	Denmark	Health Care	5,878	9.2	7.4	8.3
2823777	Southern Copper Corp.	United States	Basic Materials	21,836	8.8	7.7	8.3
2857817	Netflix Inc	United States	Consumer Services	46,170	9.2	7.3	8.2
BWSRTH6	Goldin Financial Holdings	Hong Kong	Consumer Goods	13,062	9.8	6.7	8.2
2466149	Enbridge	Canada	Oil & Gas	36,741	9.4	7.0	8.2
B5LL299	Level 3 Communications	United States	Telecommunications	18,130	8.6	7.8	8.2
B613DJ9	Hanmi Pharmaceutical	Korea	Health Care	4,630	9.4	6.9	8.2
B0DJ8Q5	Alstom	France	Industrials	10,173	9.0	7.2	8.1
2422806	Hershey Company	United States	Consumer Goods	19,227	7.4	8.8	8.1
B1GHR88	MonotaRO	Japan	Consumer Services	3,202	9.8	6.3	8.1
B0PZN11	Under Armour Class A	United States	Consumer Goods	20,505	9.8	6.3	8.1

Source: SG Cross Asset Research\Equity Quant, FTSE, Factset \* higher scores for expensive stocks/poor earnings quality



# DM - Graham & Rea deep value stocks

(Click here for spreadsheet with full list of stocks)

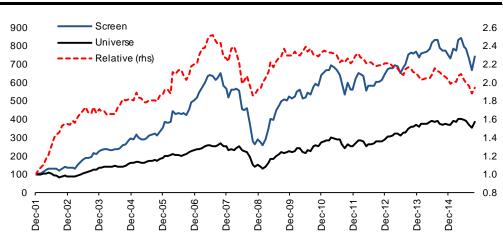
Methodology documents Graham & Rea

The screen shows companies that score 2.5 or better with Graham & Rea value and risk criteria. The universe is based on FTSE World Developed and FTSE 350 stocks. All financial companies are excluded from the screen and the universe. Performance is shown on US\$ gross total return basis and assumes monthly rebalancing.

Last month & annualized return

	1	1	C:
	Last Month	5 years	Since
Return	WOTH	o years	2002
Screen	11.4	4.6	15.6
Universe	7.9	8.3	10.2
Volatility			
Screen		17.1	21.3
Universe		13.7	16.7
Return/Risk			
Screen		0.27	0.73
Universe		0.60	0.61
Max Loss			
Screen		23.5	60.1
Universe		19.9	51.5





Source: SG Cross Research/Equity Asset Quant, FactSet, FTSE, I/B/E/S

Source: SG Cross Asset Research/Equity Quant, FactSet, FTSE, I/B/E/S. Past performance is not indicative of future performance. Portfolio presented assumes no transaction costs. For additional details on portfolio performance please contact us.

Graham & Rea - For full list follow the link above (sorted by market cap)

Sedol	Name	Country	Sector	Mcap (mUSD)	G&R (Total)	G&R (Value)	G&R (Risk)
6900643	Toyota Motor	Japan	Consumer Goods	194,789	5.5	3.0	2.5
BW9P816	CK Hutchison Holdings	Hong Kong	Industrials	53,039	5.5	3.0	2.5
2041364	Valero Energy	United States	Oil & Gas	32,770	6.5	2.5	4.0
B5B23W2	Sands China	Hong Kong	Consumer Services	29,309	5.5	2.5	3.0
B3K3L40	Marathon Petroleum	United States	Oil & Gas	27,661	5.5	2.5	3.0
6148272	Hyundai Motor 2nd Pfd.	Korea	Consumer Goods	26,865	5.5	3.0	2.5
6597045	Mitsubishi Electric	Japan	Industrials	22,593	6.5	2.5	4.0
2696980	Potash Corp. of Saskatchewan	Canada	Basic Materials	16,899	5.0	2.5	2.5
4065663	Abertis Infraestructuras	Spain	Industrials	15,517	6.0	3.0	3.0
7101069	Porsche Automobil Holding SE	Germany	Consumer Goods	14,412	8.5	4.0	4.5
B0J7D91	Daiichi Sankyo	Japan	Health Care	13,707	6.5	2.5	4.0
6895675	Tokyo Electron	Japan	Technology	10,661	5.5	2.5	3.0
B4R39F7	Chow Tai Fook Jewellery Group	Hong Kong	Consumer Goods	8,555	8.0	3.0	5.0
6858849	Sumitomo Metal Mining	Japan	Basic Materials	6,905	6.0	2.5	3.5
B3Z5T14	Garmin Ltd	United States	Technology	6,751	6.5	2.5	4.0
6641544	NSK	Japan	Basic Materials	6,469	6.0	2.5	3.5
2420101	Helmerich & Payne	United States	Oil & Gas	6,063	7.0	3.0	4.0
6616508	Seiko Epson	Japan	Industrials	5,506	5.0	2.5	2.5
0090498	Bellway	United Kingdom	Consumer Goods	4,912	7.0	2.5	4.5
B54C017	K+S	Germany	Basic Materials	4,853	6.0	3.0	3.0
B2NR3Y6	SJM Holdings	Hong Kong	Consumer Services	4,722	5.5	3.0	2.5
B05Q3L4	Olam International	Singapore	Consumer Goods	3,961	5.0	2.5	2.5
5713422	Metso Corporation	Finland	Industrials	3,690	5.5	3.0	2.5
2347608	First Quantum Minerals	Canada	Basic Materials	3,676	6.5	3.0	3.5
6490917	KCC Corp	Korea	Industrials	3,510	6.5	3.5	3.0



## DM - Greenblatt Screen

## (Click here for spreadsheet with full list of stocks)

Methodology documents Greenblatt

The screen ranks companies by the average ranking based on return-on-capital (EBIT/(net working capital +net fixed assets) and earnings yield (EBIT to Enterprise Value). The universe is based on FTSE World Developed and FTSE 350 stocks. All financial companies are excluded from the screen and the universe. Performance is shown on US\$ gross total return basis and assumes monthly rebalancing.

Last month & annualized return

Absolute & relative performance (based on top100 companies by average rank)

	· aa			7 100010	.o a roia	uro pe		uoo (.	baooa	011 top		opu.		4.0.0	ago . a.	,		
	Last Month	Last 5 years	Since 2002	600		— Scre	een											1.
Return				000			verse										^	
Screen	7.1	11.1	12.9	500			verse ative (rh	20/									~~ \	V
Universe	7.9	8.3	10.2			- Rei	ative (ii	15)									TV.	<b>^</b> 1.
Volatility				400			1	-1							5	/ <sub>'!\</sub> (^)	ĹM	.,
Screen		16.0	19.5			,	N	~~v.	ورارر	<b>W</b>		h=>		١.٨	به سمر		•	<b>V</b> 1.
Universe		13.7	16.7	300		<i>'</i>			مر	im	<b>L</b>	<b>۸</b> نز	براس و ا	NA.	أدبرو	•		
Return/Risk				200		,^~-	~~			~~~	A i	^ـــــ/\	~~	-A4 1				1.
Screen		0.69	0.66	200	N/V	~	~/_	بمرر	~	,		/						
Universe		0.60	0.61	100			~											1.
Max Loss					/						<b>y</b> *							
Screen		22.2	57.2	0 🖟	<u>.</u>		<del></del>			<del>.</del>			<u> </u>	-			<del></del> -	<b>–</b> 1.0
Universe		19.9	51.5	Dec-01	Dec-02	Dec-03	Dec-04	Dec-05	Dec-06	Dec-07	Dec-08	Dec-09	Dec-10	Dec-11	Dec-12	Dec-13	Dec-14	
				Dec	Dec	De	De	Dec	Dec	De	Dec	Dec	Dec	Dec	Dec	Dec	De	

Source: SG Cross Asset Research/Equity Quant, FactSet, FTSE, I/B/E/S

Source: SG Cross Asset Research/Equity Quant, FactSet, FTSE, I/B/E/S. Past performance is not indicative of future performance. Portfolio presented assumes no transaction costs. For additional details on portfolio performance please contact us.

### Greenblatt Screen - For full list follow the link above

Sedol	Name	Country	Sector	Mcap (mUSD)	ROC Rank	EY Rank	Average Rank
BRS65X6	Indivior	United Kingdom	Health Care	2,282	6	14	10.0
2767228	Rockwell Collins	United States	Industrials	11,427	36	1	18.5
2200530	Chicago Bridge & Iron	United States	Industrials	4,775	13	47	30.0
7107250	OPAP	Greece	Consumer Services	2,837	1	94	47.5
6266301	Delek Automotive Systems	Israel	Industrials	884	56	57	56.5
6949431	Seven West Media	Australia	Consumer Services	728	110	29	69.5
B0LLFT5	GameStop Corp	United States	Consumer Services	4,860	71	87	79.0
B84B5K9	COLOPL	Japan	Technology	2,025	99	64	81.5
2369174	Gilead Sciences	United States	Health Care	162,087	119	49	84.0
B0C5VF4	Sky Network Television	New Zealand	Consumer Services	1,195	82	88	85.0
B3D7KG4	Discovery Communications C	United States	Consumer Services	11,837	26	152	89.0
B3D7K31	Discovery Communications A	United States	Consumer Services	12,663	27	151	89.0
B0SRLF4	Viacom (New) Class B	United States	Consumer Services	19,615	32	194	113.0
B7341C6	Michael Kors Holdings	United States	Consumer Goods	7,474	209	28	118.5
0736554	Carillion	United Kingdom	Industrials	2,030	63	186	124.5
3169889	William Hill	United Kingdom	Consumer Services	4,329	22	228	125.0
2692632	Altria Group	United States	Consumer Goods	118,562	2	257	129.5
6220501	CyberAgent	Japan	Consumer Services	2,597	147	125	136.0
2214832	CA Inc	United States	Technology	12,158	77	226	151.5
2861078	Symantec Corp	United States	Technology	14,094	143	160	151.5
2046251	Apple Inc.	United States	Technology	666,252	35	273	154.0
B0539H3	Herbalife	United States	Consumer Goods	5,183	95	215	155.0
0060800	Atkins (WS)	United Kingdom	Industrials	2,131	135	187	161.0
ввн7К66	bpost SA	Belgium	Industrials	5,031	200	128	164.0
2313405	Emerson Electric	United States	Industrials	31,037	156	173	164.5



# DM - high dividend risk companies

(Click here for spreadsheet with full list of stocks)

Methodology documents Merton's distance-to-default

The screen includes companies with a dividend yield (consensus estimate for next-12-months) greater than 4% and weak balance sheets (bottom quintile by our Merton model). The universe is based on FTSE World Developed and FTSE 350 stocks. All financial companies are excluded from the screen and the universe. Performance is shown on US\$ gross total return basis and assumes monthly rebalancing.

1.3 1.2 1.1 1.0 0.9 0.8 0.7

Dec-14

### Last month & annualized return

## Absolute & relative performance

						-					
	Last Month	Last 5 years	Since 2002	450		— Scre	en				
Return							/erse				
Screen	14.5	0.7	7.4	400			ative (rh	۵)			
Iniverse	7.9	8.3	10.2	350		Reia	ative (iii	S)	المحمو	`\	
olatility				300			- j <sup>a</sup> \i		, , ,	14	
creen		25.8	30.1	250			<i>;</i> *	1.1	' //	<b>√</b>	
niverse		13.7	16.7	200	1	201				<b>M</b>	h
leturn/Risk				150	١	<u>,</u> -'	<i>/</i> ≈				٦
creen		0.03	0.24	~4	Mai						'n
niverse		0.60	0.61	100	W/						
lax Loss				50	•						
creen		37.0	69.6	0 —					<del></del>		
Iniverse		19.9	51.5	Dec-01	Dec-02	Dec-03	Dec-04	Dec-05	Dec-06	Dec-07	

Source: SG Cross Asset Research/Equity Quant, FactSet, FTSE, I/B/E/S

Source: SG Cross Asset Research/Equity Quant, FactSet, FTSE, I/B/E/S. Past performance is not indicative of future performance. Portfolio presented assumes no transaction costs. For additional details on portfolio performance please contact us.

### High yielding stocks in the lowest Merton quintile - For full list follow the link above

Sedol	Name	Country	Sector	Mcap (mUSD)	Distance to default	Merton Score	Dividend Yield (%)
6949431	Seven West Media	Australia	Consumer Services	728	2.9	1	10.2
B67C8W8	Crescent Point Energy	Canada	Oil & Gas	6,787	3.1	1	9.2
B1XZS82	Anglo American	United Kingdom	Basic Materials	11,834	2.3	1	8.5
3327706	Vedanta Resources	United Kingdom	Basic Materials	2,055	1.5	1	8.3
2197933	Frontier Communications	United States	Telecommunications	6,005	2.9	1	8.2
5669354	Repsol	Spain	Oil & Gas	17,751	3.5	1	8.1
6562474	WorleyParsons Ltd.	Australia	Oil & Gas	1,140	2.4	1	7.7
2130109	ONEOK Inc	United States	Oil & Gas	7,095	3.4	1	7.4
B0NJJ17	Electricite de France (EDF)	France	Utilities	34,796	4.1	1	7.2
BFG3KF2	Noble Corporation	United States	Oil & Gas	3,259	2.4	1	6.9
2967181	Williams Cos	United States	Oil & Gas	29,571	2.6	1	6.9
B01CLC3	Noble Group	Singapore	Industrials	2,380	1.0	1	6.8
B4YCDF5	TalkTalk Telecom Group	United Kingdom	Telecommunications	3,732	4.0	1	6.6
6465573	Downer Group	Australia	Industrials	1,096	3.7	1	6.5
B0C2CQ3	Engie	France	Utilities	42,921	4.1	1	6.3
B05NXN7	Xinyi Glass Holding	Hong Kong	Consumer Goods	2,039	3.3	1	6.2
0028262	Amec Foster Wheeler	United Kingdom	Oil & Gas	4,282	4.0	1	6.1
4178419	Casino Guichard Perrachon	France	Consumer Services	6,545	3.3	1	5.8
B00HLY1	Huabao International Holdings	Hong Kong	Basic Materials	1,303	2.4	1	5.8
5698790	TDC	Denmark	Telecommunications	4,214	3.9	1	5.6
7145056	Eni	Italy	Oil & Gas	59,113	4.1	1	5.6
4942904	E.ON	Germany	Utilities	21,213	2.7	1	5.3
4768962	RWE	Germany	Utilities	8,594	2.0	1	5.3
B2NR3Y6	SJM Holdings	Hong Kong	Consumer Services	4,722	3.8	1	5.0
B0H2K53	Petrofac	United Kingdom	Oil & Gas	4,504	2.9	1	5.0



# **Emerging Market Screens**



# **EM - Quality Income stocks**

## (Click here for spreadsheet with full list of stocks)

### Methodology documents

Merton's distance-to-default Piotroski's F-Score **Quality Income** 

The screen includes companies with attractive and sustainable dividends. To make the screen companies need to rank within the top 2 quintiles by the Merton model, score 7 or better with the Piotroski model and yield more than 4% (consensus estimate for next-12-months). The universe is based on FTSE World Emerging stocks. All financial companies are excluded from the screen and the universe. Performance is shown on US\$ gross total return basis and assumes monthly rebalancing.

### Last month & annualized return

## Absolute & relative performance

							- 1												
Return	Last Month	Last 5 years	Since 2002	1400	)		_	<u> </u>	creen								_		2.0
				4000			_	<u> —</u> и	niverse								$\sim$	A.	
Screen	5.7	4.5	18.3	1200	)				elative							^ _	بر 🔨 🔻	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	1.8
Universe	7.1	-1.9	13.5	1000	١			K	erative	(IIIS)						י דאל, ו	<b>V</b>	- 1	,
Volatility				1000	,										∿%			`	1.6
Screen		15.0	16.8	800	)							À.			<b>/V</b>				
Universe		17.9	21.8	600	`							$I\Lambda$	~	~NT	١ ٨	.^	~/	~~	1.4
Return/Risk				000	,	1.00		1100	-54		-AXX	X	لمرسي	مهم	W	٠ حرـ	WV	•	<b>/</b> 1.2
Screen		0.30	1.09	400	) 🕺	_' ' '		•	\	المطولة		$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	٠-'ر						1.2
Universe		-0.11	0.62	200	, -i		_	<b></b>				W							1.0
Max Loss				200	<u> </u>														
Screen		24.4	40.2	C											-			<del></del>	- 0.8
Universe		24.0	57.2		Dec-01	Dec-02	Dec-03	Dec-04	Dec-05	Dec-06	Dec-07	Dec-08	Dec-09	Dec-10	Dec-11	Dec-12	Dec-13	Dec-14	
				_															

Source: SG Cross Asset Research/Equity Quant, FactSet, FTSE, I/B/E/S

Source: SG Cross Asset Research/Equity Quant, FactSet, FTSE, I/B/E/S. Past performance is not indicative of future performance. Portfolio presented assumes no transaction costs. For additional details on portfolio performance please contact us.

### Quality Income stocks - For full list follow the link above (sorted by market cap)

Sedol	Name	Country	Sector	Mcap (mUSD)	Yield	Merton Score	Piotroski Score
6438564	Hon Hai Precision Industry	Taiwan	Technology	42,426	4.2	4	8
B5B1TX2	MMC NORILSK NICKEL	Russia	Basic Materials	23,364	10.7	4	7
2299453	Enersis	Chile	Utilities	12,963	12.0	4	7
B247XZ6	Manila Electric	Philippines	Utilities	7,824	4.0	5	7
B59FPC7	Novolipetsk Steel	Russia	Basic Materials	7,341	6.7	4	8
BKXLD77	Intouch Holdings	Thailand	Technology	6,761	7.5	5	7
6284864	Globe Telecom	Philippines	Telecommunications	6,464	4.4	4	9
B07C763	Tractebel Energia	Brazil	Utilities	5,752	5.3	5	8
B1G8KX7	Transmissora Alianca Eletrica	Brazil	Utilities	5,351	10.9	5	8
6454861	Indocement Tunggal Prakarsa	Indonesia	Industrials	4,841	5.2	4	7
B03MS97	Eregli Demir Ve Celik	Turkey	Basic Materials	4,823	6.8	4	8
6916628	United Microelectronics	Taiwan	Technology	4,625	4.3	4	8
B03MSR5	Ford Otosan	Turkey	Consumer Goods	4,134	4.7	4	7
6752349	BAT (Malaysia)	Malaysia	Consumer Goods	4,109	5.1	5	9
B83J214	AES Gener S.A.	Chile	Utilities	4,065	8.0	4	7
B7W5GK3	Astro Malaysia Holdings	Malaysia	Consumer Services	3,465	4.7	5	7
2311238	Aguas Andinas S.A. A	Chile	Utilities	3,221	6.0	5	7
B196FC2	E.ON Russia JSC	Russia	Utilities	2,999	13.3	4	8
B1RMFT9	TAV Havalimanlari Holding AS	Turkey	Industrials	2,857	5.0	4	7
6040958	AVI	South Africa	Industrials	2,045	4.4	5	7
4577469	Magyar Telekom Telecom	Hungary	Telecommunications	1,452	5.4	5	7
B3PRVV4	Multiplus SA	Brazil	Industrials	1,450	8.3	4	8
B057555	Synthos	Poland	Industrials	1,268	5.4	4	8
5978953	Asseco Poland SA	Poland	Technology	1,231	4.6	4	7
B03MN81	Akcansa Cimento	Turkey	Industrials	901	9.5	4	7



# EM - expensive stocks with poor earnings quality

## (Click here for spreadsheet with full list of stocks)

Methodology documents **SG Value Beta Index Earnings Quality** 

The screen is based on the five value factors included in our SG Value Beta (SGVB) index and the ten factors of our earnings quality score. We rank companies based on the average value and earnings quality decile score. The universe is based on FTSE World Emerging stocks. All financial companies are excluded from the screen and the universe. Performance is shown on US\$ gross total return basis and assumes monthly rebalancing.

### Last month & annualized return

## Absolute & relative performance (based on bottom100 companies by earnings quality/value)

	Last Month	Last 5 years	Since 2002	800				c	creen										1
Return					14														·
Screen	6.1	-4.6	6.7	700	•	\			niverse					. ^				$^{\wedge}$	0.
Universe	7.1	-1.9	13.5	600		124		R	elative	(rhs)				~~	Ι.Λ	<b>/</b> /\	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	<b>-</b> '\	
Volatility				500		•	N. Contraction				٨		$\lambda$	<b>,</b>	M A	م	•	V	0.
Screen		17.3	22.4							,	ν W	4	/						
Universe		17.9	21.8	400			'		المسر	·		\ 1	,						0.
Return/Risk				300				100	٨	ノ',	J' lin	<u>.</u> \ /		<b>^~</b> ^	1. ^	~		~~	. 0.
Screen		-0.27	0.30	200			_	~	~/~	اسر		Im.	ا مهر		W (	ٔ سر	<b>~</b>		, 0.
Universe		-0.11	0.62		_		$\sim$					W	1000		-9				0.
Max Loss				100													_		
Screen		28.0	65.2	0				<del></del>									-	1.	- 0.
Universe		24.0	57.2		Š	702	Dec-03	Dec-04	Dec-05	90,	70%	80,	Dec-09	7.10	7	7.	7.	<u>7</u>	
					Dec-01	Dec-02	Dec	Dec	Dec	Dec-06	Dec-07	Dec-08	Dec	Dec-1	Dec-1	Dec-1	Dec-1	Dec-14	

Source: SG Cross Asset Research/Equity Quant, FactSet, FTSE, I/B/E/S

Source: SG Cross Asset Research/Equity Quant, FactSet, FTSE, I/B/E/S. Past performance is not indicative of future performance. Portfolio presented assumes no transaction costs. For additional details on portfolio performance please contact us.

### Expensive stocks with poor earnings quality - For full list follow the link above

Sedol	Name	Country	Sector	Mcap (mUSD)	SGVB Score*	Earnings Quality Score*	Average Score
B1BFBC9	Godrej Industries	India	Basic Materials	2,010	10.0	7.7	8.9
B84XBP2	Infraestructura Energetica Nova	Mexico	Utilities	5,561	9.8	7.4	8.6
6661519	Oriental Union Chemical	Taiwan	Basic Materials	654	9.2	7.5	8.4
BWFGD63	Tech Mahindra	India	Technology	7,937	8.4	8.3	8.4
6294863	Cummins India	India	Industrials	4,557	9.4	7.2	8.3
B03MWY0	Petkim	Turkey	Basic Materials	1,477	9.2	7.3	8.3
6393317	CSSC Offshore and Marine (H)	China	Industrials	3,498	9.0	7.3	8.2
B038WK4	The Spar Group	South Africa	Industrials	2,495	7.8	8.5	8.2
6205122	Infosys	India	Technology	39,736	8.6	7.6	8.1
BCRWL65	Asian Paints	India	Basic Materials	12,164	9.6	6.3	8.0
6152217	Essar Oil Ltd	India	Oil & Gas	4,232	9.0	6.8	7.9
6474494	Jollibee Foods	Philippines	Consumer Services	4,704	8.4	7.4	7.9
B15T569	Siemens India	India	Industrials	7,234	9.4	6.3	7.9
B0JJV59	Pidilite Industries	India	Basic Materials	4,405	9.6	6.1	7.9
B83J214	AES Gener S.A.	Chile	Utilities	4,065	9.2	6.4	7.8
B56HH42	Sany Heavy Equipment (P Chip)	China	Industrials	859	7.8	7.8	7.8
6126773	EOH Holdings Ltd.	South Africa	Technology	1,463	9.3	6.3	7.8
6630940	China Everbright International	China	Industrials	7,255	8.8	6.6	7.7
2297628	Entel	Chile	Telecommunications	2,190	8.6	6.8	7.7
2434760	Mexichem SAB de CV	Mexico	Basic Materials	5,318	8.6	6.8	7.7
6315344	Charoen Pokphand Indonesia	Indonesia	Consumer Goods	2,995	6.8	8.5	7.7
B1QY745	ISAGEN	Colombia	Utilities	2,894	9.2	6.1	7.6
6100357	Shree Cements	India	Industrials	6,572	9.2	6.1	7.6
B614LY3	Cielo SA	Brazil	Industrials	17,852	8.2	6.9	7.5
BYM8TY6	True	Thailand	Telecommunications	13,976	9.4	5.7	7.5

Source: SG Cross Asset Research\Equity Quant, FTSE, Factset \* higher scores for expensive stocks/poor earnings quality



# EM - Graham & Rea deep value stocks

(Click here for spreadsheet with full list of stocks)

Methodology documents Graham & Rea

The screen shows companies that score 2.5 or better with Graham & Rea value and risk criteria. The universe is based on FTSE World Emerging stocks. All financial companies are excluded from the screen and the universe. Performance is shown on US\$ gross total return basis and assumes monthly rebalancing.

Last month & annualized return

### Absolute & relative performance

							- 1											
	Last Month	Last 5 years	Since 2002	2000				c	0.00									
Return									creen									Λ
Screen	9.7	-1.0	21.1	1800			_	<u> </u>	niverse									$\Delta$
Jniverse	7.1	-1.9	13.5	1600				R	elative	(rhs)			λ	~~	1.1	Д	~/	M
Volatility				1400									'`\ <sub>\\</sub>	Tiv.	₩\	7 3	N. N.	121
Screen		20.9	24.2	1200								2/2	$\sim$	<b>/</b> -	1-			
Universe		17.9		1000								j,	/					
		17.5	21.0	800							1. A.	ካ <i>I</i>						
Return/Risk		0.05	0.07	600						ممور		\ /		~~~	7. ^	~	<b>~</b> ~	~~
Screen			0.87								~~~	_ W	^~	~	W		-	
Jniverse		-0.11	0.62	400				يتردر		مر		$\mathbf{A}_{\cdot}$	,					
Max Loss				200		100				_		~						
Screen		32.4	48.9	0														
Universe		24.0	57.2		Dec-01	Dec-02	Dec-03	40.	Dec-05	Dec-06	Dec-07	Dec-08	Dec-09	Dec-10	Dec-11	Dec-12	Dec-13	<u>7</u>
					Sec	Sec	Эес	Dec-04	Sec	Sec	Эес	Sec	Sec	Sec	Sec	Эес	Sec	Dec-14

Source: SG Cross Asset Research/Equity Quant, FactSet, FTSE, I/B/E/S

Source: SG Cross Asset Research/Equity Quant, FactSet, FTSE, I/B/E/S. Past performance is not indicative of future performance. Portfolio presented assumes no transaction costs. For additional details on portfolio performance please contact us.

Graham & Rea - For full list follow the link above (sorted by market cap)

Sedol	Name	Country	Sector	Mcap (mUSD)	G&R (Total)	G&R (Value)	G&R (Risk)
B00G0S5	CNOOC (Red Chip)	China	Oil & Gas	50,062	5.5	2.5	3.0
B59L4L7	OAO Gazprom	Russia	Oil & Gas	48,855	6.5	4.0	2.5
B09N7M0	China Shenhua Energy (H)	China	Basic Materials	33,671	5.5	2.5	3.0
B5BHQP1	Surgutneftegaz	Russia	Oil & Gas	20,024	7.5	3.0	4.5
6080396	Anhui Conch Cement (H)	China	Industrials	16,240	5.5	2.5	3.0
2458771	Itausa PN	Brazil	Industrials	12,659	6.0	2.5	3.5
6372480	MediaTek	Taiwan	Technology	12,259	6.0	3.0	3.0
6718255	Great Wall Motor Company (H)	China	Consumer Goods	11,165	5.5	2.5	3.0
B0L9113	Polskie Gornictwo Naftowe	Poland	Oil & Gas	10,507	5.5	2.5	3.0
6159478	Chongqing Changan Auto (B)	China	Consumer Goods	8,634	5.0	2.5	2.5
B1WJ4X2	Belle International (P Chip)	China	Consumer Goods	8,206	8.0	3.0	5.0
6051046	Asustek Computer Inc	Taiwan	Technology	6,658	5.5	3.0	2.5
B5B1TJ8	TATNEFT PFD	Russia	Oil & Gas	6,434	7.5	2.5	5.0
B4PLX17	Pegatron	Taiwan	Technology	6,399	7.0	3.0	4.0
6148119	NMDC	India	Basic Materials	6,064	8.0	3.0	5.0
6560995	China Oilfield Services (H)	China	Oil & Gas	5,332	5.5	2.5	3.0
6719764	Perusahaan Gas Negara	Indonesia	Oil & Gas	5,313	6.0	2.5	3.5
B03MS97	Eregli Demir Ve Celik	Turkey	Basic Materials	4,823	5.5	2.5	3.0
B1G2NN0	Cairn India	India	Oil & Gas	4,407	8.0	3.5	4.5
6808877	Siliconware Precision Industries	Taiwan	Technology	4,133	5.5	2.5	3.0
6801779	Foxconn Technology	Taiwan	Industrials	3,670	8.0	3.0	5.0
B01Z8S7	GOME Electrical Appliances (P)	China	Consumer Services	3,130	5.5	2.5	3.0
B1HVJ16	China Communications (H)	China	Telecommunications	2,788	7.0	2.5	4.5
2205706	Interconexion Electrica SA	Colombia	Utilities	2,659	5.0	2.5	2.5
B3VZ220	China Zhongwang Holdings (P)	China	Basic Materials	2,412	5.5	3.0	2.5



# EM - Greenblatt Screen

(Click here for spreadsheet with full list of stocks)

Methodology documents Greenblatt

The screen ranks companies by the average ranking based on return-on-capital (EBIT/(net working capital +net fixed assets) and earnings yield (EBIT to Enterprise Value). The universe is based on FTSE World Emerging stocks. All financial companies are excluded from the screen and the universe. Performance is shown on US\$ gross total return basis and assumes monthly rebalancing.

Last month & annualized return

Absolute & relative performance (based on top100 companies by average rank)

				7 1100010110	o o.u					• top		ompa		, 4.0.	<b></b>	,		
	Last Month	Last 5 years	Since 2002	1800			C	oroon										
Return								creen									1	2.4
Screen	7.3	-0.8	20.2	1600		_		niverse						1	,	··-'/	7-1	
Universe	7.1	-1.9	13.5	1400			R	elative	(rhs)				- 1/2	1./\	~/~	<b>√</b>	7	- 2.2
Volatility				1200							,	1000		M.			'	2.0
Screen		17.9	22.8	1000							$\wedge f$	~^^	•					1.8
Universe		17.9	21.8	800						m	h							
Return/Risk							J^^~	500	^\7	/</td <td>\ /</td> <td></td> <td>~~</td> <td>٦ .</td> <td>~</td> <td> /</td> <td>~~</td> <td>1.6</td>	\ /		~~	٦ .	~	/	~~	1.6
Screen		-0.04	0.88	600		2.00	•	~	رمرب	~~~	LW	^~	<i>ل</i> م	W	٠ حرـ	<b>~ ~</b>	`	<b>y</b> 1.4
Universe		-0.11	0.62	400		,.,,,	~~		مر		$\sum_{i}$	_						4.6
Max Loss				200			~	~			~~							1.2
Screen		30.7	52.0	0 🚣	-									1	-		<u> </u>	<b>-</b> 1.0
Universe		24.0	57.2	Dec-01	Dec-02	Dec-03	Dec-04	Dec-05	Dec-06	Dec-07	Dec-08	Dec-09	Dec-10	Dec-11	Dec-12	Dec-13	Dec-14	

Source: SG Cross Asset Research/Equity Quant, FactSet, FTSE, I/B/E/S

Source: SG Cross Asset Research/Equity Quant, FactSet, FTSE, I/B/E/S. Past performance is not indicative of future performance. Portfolio presented assumes no transaction costs. For additional details on portfolio performance please contact us.

### Greenblatt Screen - For full list follow the link above

Sedol	Name	Country	Sector	Mcap (mUSD)	ROC Rank	EY Rank	Average Rank
B1R9JX2	Sidi Kerir Petrochemicals Co	Egypt	Basic Materials	868	23	17	20.0
B3NWLD3	OHL Mexico SAB de CV	Mexico	Industrials	2,277	7	36	21.5
B128R96	Equatorial Energia S/A Ord	Brazil	Utilities	1,776	29	41	35.0
B1YBRG0	Cemig PN	Brazil	Utilities	2,344	61	16	38.5
B1YBRK4	Cemig ON	Brazil	Utilities	2,210	62	15	38.5
6283601	Nanya Technology	Taiwan	Technology	2,995	35	58	46.5
6332741	Fauji Fertilizer Co	Pakistan	Basic Materials	1,513	26	76	51.0
6045180	Anhui Expressway (H)	China	Industrials	1,427	13	94	53.5
B5720R0	EcoRodovias Infraestrutura	Brazil	Industrials	861	5	102	53.5
B5B1TX2	MMC NORILSK NICKEL	Russia	Basic Materials	23,364	69	49	59.0
B5VGS74	PAO De Acucar CBD PN	Brazil	Consumer Services	3,504	101	18	59.5
6331566	Berjaya Sports Toto	Malaysia	Consumer Services	1,009	16	104	60.0
B29SK75	Indo Tambangraya Megah	Indonesia	Basic Materials	700	126	3	64.5
6346333	Novatek Microelectronics	Taiwan	Technology	2,081	99	45	72.0
B59MFL7	Uralkali	Russia	Basic Materials	5,405	104	42	73.0
B3PRVV4	Multiplus SA	Brazil	Industrials	1,450	6	145	75.5
6218089	Lenovo Group (Red Chip)	China	Technology	10,377	8	143	75.5
B5B9C59	Severstal JSC	Russia	Basic Materials	9,736	106	46	76.0
B1VZ1Q3	Global Telecom Holding	Egypt	Telecommunications	1,222	98	55	76.5
6732716	Oil & Gas Development	Pakistan	Oil & Gas	5,623	125	33	79.0
B97PYY2	Smiles S.A. ON	Brazil	Consumer Services	964	28	136	82.0
6196077	Lao Feng Xiang (B)	China	Consumer Goods	2,255	82	83	82.5
6718255	Great Wall Motor Company (H)	China	Consumer Goods	11,165	109	57	83.0
B1G4262	Kumba Iron Ore	South Africa	Basic Materials	1,398	167	2	84.5
B6QPBP2	ALROSA ao	Russia	Basic Materials	5,923	146	24	85.0



# EM - high dividend risk companies

(Click here for spreadsheet with full list of stocks)

Methodology documents Merton's distance-to-default

The screen includes companies with a dividend yield (consensus estimate for next-12-months) greater than 4% and weak balance sheets (bottom quintile by our Merton model). The universe is based on FTSE World Emerging stocks. All financial companies are excluded from the screen and the universe. Performance is shown on US\$ gross total return basis and assumes monthly rebalancing.

### Last month & annualized return

## Absolute & relative performance

	Last Month	Last 5 years	Since 2002	5000				oro o n									
Return								creen									۸
Screen	12.9	-0.4	28.7	4500		_		niverse				<b>A</b>	1.1	12	1	F1	1
Universe	7.1	-1.9	13.5	4000			R	elative	(rhs)			$i \setminus J$	4-1 Y	، اسرا	_ ^	ر . '	\ <b>\</b> \
Volatility				3500								, "		١ ٨	$\mathcal{N} \setminus$		W
Screen		25.0	29.7	3000							λį	^	۸	M.		W	
Universe			21.8	2500							الما أسر	~		•			
Return/Risk			20	2000					12-1	/- <u>.</u> /^	′ ,	J					
Screen		-0.02	0.97	1500				33	<i>y</i> '-'	<b>~</b> ~~	n 1						
Universe		-0.11	0.62	1000		_			كسر		W						
Max Loss				500		/				~~~	<			~~			~~
Screen		34.0	47.4	0 7	<u> </u>									1			
Universe		24.0	57.2	Dec-01	Dec-02	Dec-03	Dec-04	Dec-05	Dec-06	Dec-07	Dec-08	Dec-09	Dec-10	Dec-11	Dec-12	Dec-13	Dec-14
				Dec	Dec	Dec	Dec	Dec	Ģ	Dec	Dec	Dec	Dec	Ģ	Ģ	Dec	Ģ

Source: SG Cross Asset Research/Equity Quant, FactSet, FTSE, I/B/E/S

Source: SG Cross Asset Research/Equity Quant, FactSet, FTSE, I/B/E/S. Past performance is not indicative of future performance. Portfolio presented assumes no transaction costs. For additional details on portfolio performance please contact us.

### High yielding stocks in the lowest Merton quintile - For full list follow the link above

Sedol	Name	Country	Sector	Mcap (mUSD)	Distance to default	Merton Score	Dividend Yield (%)
B1G4262	Kumba Iron Ore	South Africa	Basic Materials	1,398	2.0	1	9.3
2684532	Petrobras PN	Brazil	Oil & Gas	26,166	2.0	1	8.3
2308445	Centrais Eletricas Brasileiras B	Brazil	Utilities	3,319	2.4	1	8.1
2311120	Centrais Eletricas Brasileiras	Brazil	Utilities	1,767	2.4	1	8.0
2257127	Vale Do Rio Doce PN A	Brazil	Basic Materials	18,811	2.4	1	7.8
6225744	Compal Electronics	Taiwan	Technology	2,766	2.6	1	7.2
2196286	Vale Do Rio Doce	Brazil	Basic Materials	22,873	2.4	1	7.0
344ZV94	China Hongqiao Group (P Chip)	China	Basic Materials	3,328	1.6	1	6.7
6672481	Wistron Corp	Taiwan	Technology	1,271	2.4	1	6.6
6080716	Datang International Power (H)	China	Utilities	4,929	2.5	1	6.5
142780	Huadian Power International (H)	China	Utilities	7,254	1.9	1	6.2
392NYC9	Sinopec Engineering (H)	China	Industrials	3,828	2.5	1	5.7
35720R0	EcoRodovias Infraestrutura	Brazil	Industrials	861	2.6	1	5.6
302ZKQ8	China Power International	China	Utilities	4,620	2.3	1	5.1
990763	Zhejiang Expressway (H)	China	Industrials	5,369	2.5	1	4.8
30CC0M5	Innolux	Taiwan	Industrials	3,357	2.7	1	4.7
491318	Kingboard Chemical Holdings	China	Basic Materials	1,453	2.7	1	4.6
3BQFC4	Adaro Energy PT	Indonesia	Basic Materials	1,390	2.1	1	4.6
196077	Lao Feng Xiang (B)	China	Consumer Goods	2,255	2.6	1	4.5
718255	Great Wall Motor Company (H)	China	Consumer Goods	11,165	2.3	1	4.4
394VG58	China Machinery Engineering	China	Industrials	3,599	1.9	1	4.3
32RJKP8	Shandong Chenming Paper (H)	China	Basic Materials	1,084	1.8	1	4.2
6159478	Chongqing Changan Auto(B)	China	Consumer Goods	8,634	2.1	1	4.2
6725299	Zijin Mining Group (H)	China	Basic Materials	5,810	2.3	1	4.1
30774N4	Braskem S.A. PN	Brazil	Basic Materials	4,511	2.1	1	4.0



## APPENDIX

### **ANALYST CERTIFICATION**

The following named research analyst(s) hereby certifies or certify that (i) the views expressed in the research report accurately reflect his or her or their personal views about any and all of the subject securities or issuers and (ii) no part of his or her or their compensation was, is, or will be related, directly or indirectly, to the specific recommendations or views expressed in this report: Andrew Lapthorne, Rui Antunes, John Carson, Georgios Oikonomou, Yohan Le Jallé, Josh Cherian

The analyst(s) who author research are employed by SG and its affiliates in locations, including but not limited to, Paris, London, New York, Dallas, Hong Kong, Tokyo, Bangalore, Mumbai, Frankfurt, Madrid, Milan, Seoul, Warsaw and Moscow.

All pricing information included in this report is as of market close, unless otherwise stated.

MSCI DISCLAIMER: The MSCI sourced information is the exclusive property of Morgan Stanley Capital International Inc. (MSCI). Without prior written permission of MSCI, this information and any other MSCI intellectual property may not be reproduced, redisseminated or used to create any financial products, including any indices. This information is provided on an "as is" basis. The user assumes the entire risk of any use made of this information. MSCI, its affiliates and any third party involved in, or related to, computing or compiling the information hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to any of this information. Without limiting any of the foregoing, in no event shall MSCI, any of its affiliates or any third party involved in, or related to, computing or compiling the information have any liability for any damages of any kind. MSCI, Morgan Stanley Capital International and the MSCI indexes are service marks of MSCI and its affiliates or such similar language as may be provided by or approved in advance by MSCI.

FOR DISCLOSURES PERTAINING TO COMPENDIUM REPORTS OR RECOMMENDATIONS OR ESTIMATES MADE ON SECURITIES OTHER THAN THE PRIMARY SUBJECT OF THIS RESEARCH REPORT, PLEASE VISIT OUR GLOBAL RESEARCH DISCLOSURE WEBSITE AT http://www.sgresearch.com/compliance.rha or call +1 (212).278.6000 in the U.S.

### **European Specialty Sales**

If a European specialist sales personnel is listed on the cover of research reports, these employees are in SG's Global Markets division responsible for the sales effort in their sector and are not part of SG's Cross-Asset Research Department. Specialist Sales do not contribute in any manner to the content of research reports in which their names appear.

The analyst(s) responsible for preparing this report receive compensation that is based on various factors including SG's total revenues, a portion of which are generated by investment banking activities.

Non-U.S. Analyst Disclosure: The name(s) of any non-U.S. analysts who contributed to this report and their SG legal entity are listed below. U.S. analysts are employed by SG Americas Securities LLC. The non-U.S. analysts are not registered/qualified with FINRA, may not be associated persons of SGAS and may not be subject to the FINRA restrictions on communications with a subject company, public appearances and trading securities held in the research analyst(s)' account(s): Andrew Lapthorne Société Générale London, Rui Antunes Société Générale London, John Carson Société Générale London, Georgios Oikonomou Société Générale London, Yohan Le Jallé Société Générale Paris, Josh Cherian Société Générale Seoul

IMPORTANT DISCLAIMER: The information herein is not intended to be an offer to buy or sell, or a solicitation of an offer to buy or sell, any securities and has been obtained from, or is based upon, sources believed to be reliable but is not guaranteed as to accuracy or completeness. Material contained in this report satisfies the regulatory provisions concerning independent investment research as defined in MiFID. Information concerning conflicts of interest and SG's management of such conflicts is contained in the SG's Policies for Managing Conflicts of Interests in Connection with Investment Research which is available at https://www.sgresearch.com/Content/Compliance/Compliance.aspx SG does, from time to time, deal, trade in, profit from, hold, act as market-makers or advisers, brokers or bankers in relation to the securities, or derivatives thereof, of persons, firms or entities mentioned in this document and may be represented on the board of such persons, firms or entities. SG does, from time to time, act as a principal trader in equities or debt securities that may be referred to in this report and may hold equity or debt securities positions. Employees of SG, or individuals connected to them, may from time to time have a position in or hold any of the investments or related investments mentioned in this document. SG is under no obligation to disclose or take account of this document when advising or dealing with or on behalf of customers. The views of SG reflected in this document may change without notice. In addition, SG may issue other reports that are inconsistent with, and reach different conclusions from, the information presented in this report and is under no obligation to ensure that such other reports are brought to the attention of any recipient of this report. To the maximum extent possible at law, SG does not accept any liability whatsoever arising from the use of the material or information contained herein. This research document is not intended for use by or targeted to retail customers. Should a retail customer obtain a copy of this report he/she should not base his/her investment decisions solely on the basis of this document and must seek independent financial advice.

The financial instruments discussed in this report may not be suitable for all investors and investors must make their own informed decisions and seek their own advice regarding the appropriateness of investing in financial instruments or implementing strategies discussed herein. The value of securities and financial instruments is subject to currency exchange rate fluctuation that may have a positive or negative effect on the price of such securities or financial instruments, and investors in securities such as ADRs effectively assume this risk. SG does not provide any tax advice. Past performance is not necessarily a guide to future performance. Estimates of future performance are based on assumptions that may not be realized. Investments in general, and derivatives in particular, involve numerous risks, including, among others,



market, counterparty default and liquidity risk. Trading in options involves additional risks and is not suitable for all investors. An option may become worthless by its expiration date, as it is a depreciating asset. Option ownership could result in significant loss or gain, especially for options of unhedged positions. Prior to buying or selling an option, investors must review the "Characteristics and Risks of Standardized Options" at <a href="http://www.optionsclearing.com/about/publications/character-risks.jsp">http://www.optionsclearing.com/about/publications/character-risks.jsp</a> or from your SG representative. Analysis of option trading strategies does not consider the cost of commissions. Supporting documentation for options trading strategies is available upon request.

**Notice to French Investors:** This publication is issued in France by or through Société Générale ("SG") which is authorised and supervised by the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the Autorité des Marchés Financiers (AMF).

Notice to U.K. Investors: Société Générale is a French credit institution (bank) authorised by the Autorité de Contrôle Prudentiel (the French Prudential Control Authority) and the Prudential Regulation Authority and subject to limited regulation by the Financial Conduct Authority and Prudential Regulation Authority. Details about the extent of our authorisation and regulation by the Prudential Regulation Authority, and regulation by the Financial Conduct Authority are available from us on request.

**Notice to Swiss Investors:** This document is provided in Switzerland by or through Société Générale Paris, Zürich Branch, and is provided only to qualified investors as defined in article 10 of the Swiss Collective Investment Scheme Act ("CISA") and related provisions of the Collective Investment Scheme Ordinance and in strict compliance with applicable Swiss law and regulations. The products mentioned in this document may not be suitable for all types of investors. This document is based on the Directives on the Independence of Financial Research issued by the Swiss Bankers Association (SBA) in January 2008.

**Notice to Polish Investors:** this document has been issued in Poland by Societe Generale S.A. Oddzial w Polsce ("the Branch") with its registered office in Warsaw (Poland) at 111 Marszałkowska St. The Branch is supervised by the Polish Financial Supervision Authority and the French "Autorité de Contrôle Prudentiel". This report is addressed to financial institutions only, as defined in the Act on trading in financial instruments. The Branch certifies that this document has been elaborated with due dilligence and care.

**Notice to U.S. Investors**: For purposes of SEC Rule 15a-6, SG Americas Securities LLC ("SGAS") takes responsibility for this research report. This report is intended for institutional investors only. Any U.S. person wishing to discuss this report or effect transactions in any security discussed herein should do so with or through SGAS, a U.S. registered broker-dealer, futures commission merchant (FCM) and swap dealer. SGAS is a member of FINRA, NYSE, NFA and SIPC and its registered address is at 245 Park Avenue, New York, NY, 10167. (212)-278-6000.

Notice to Canadian Investors: This document is for information purposes only and is intended for use by Permitted Clients, as defined under National Instrument 31-103, Accredited Investors, as defined under National Instrument 45-106, Accredited Counterparties as defined under the Derivatives Act (Québec) and "Qualified Parties" as defined under the ASC, BCSC, SFSC and NBSC Orders

Notice to Singapore Investors: This document is provided in Singapore by or through Société Générale ("SG"), Singapore Branch and is provided only to accredited investors, expert investors and institutional investors, as defined in Section 4A of the Securities and Futures Act, Cap. 289. Recipients of this document are to contact Société Générale, Singapore Branch in respect of any matters arising from, or in connection with, the document. If you are an accredited investor or expert investor, please be informed that in SG's dealings with you, SG is relying on the following exemptions to the Financial Advisers Act, Cap. 110 ("FAA"): (1) the exemption in Regulation 33 of the Financial Advisers Regulations ("FAR"), which exempts SG from complying with Section 25 of the FAA on disclosure of product information to clients; (2) the exemption set out in Regulation 34 of the FAR, which exempts SG from complying with Section 27 of the FAA on disclosure of certain interests in securities.

**Notice to Hong Kong Investors**: This report is distributed in Hong Kong by Société Générale, Hong Kong Branch which is licensed by the Securities and Futures Commission of Hong Kong under the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong) ("SFO"). This document does not constitute a solicitation or an offer of securities or an invitation to the public within the meaning of the SFO. This report is to be circulated only to "professional investors" as defined in the SFO.

**Notice to Japanese Investors**: This publication is distributed in Japan by Societe Generale Securities (North Pacific) Ltd., Tokyo Branch, which is regulated by the Financial Services Agency of Japan. This document is intended only for the Specified Investors, as defined by the Financial Instruments and Exchange Law in Japan and only for those people to whom it is sent directly by Societe Generale Securities (North Pacific) Ltd., Tokyo Branch, and under no circumstances should it be forwarded to any third party. The products mentioned in this report may not be eligible for sale in Japan and they may not be suitable for all types of investors.

**Notice to Korean Investors**: This report is distributed in Korea by SG Securities Korea Co., Ltd which is regulated by the Financial Supervisory Service and the Financial Services Commission.

Notice to Australian Investors: Societe Generale is exempt from the requirement to hold an Australian financial services licence (AFSL) under the Corporations Act 2001 (Cth) in respect of financial services, in reliance on ASIC Class Order 03/824, a copy of which may be obtained at the web site of the Australian Securities and Investments Commission, http://www.asic.gov.au. The class order exempts financial services providers with a limited connection to Australia from the requirement to hold an AFSL where they provide financial services only to wholesale clients in Australia on certain conditions. Financial services provided by Societe Generale may be regulated under foreign laws and regulatory requirements, which are different from the laws applying in Australia.

http://www.sgcib.com. Copyright: The Société Générale Group 2015. All rights reserved.

This publication may not be reproduced or redistributed in whole in part without the prior consent of SG or its affiliates.