



**Asia (exc. China & Japan)**  
excluding Finance and  
Real Estate

# **CREATIVE ACCOUNTING: IT'S NOT JUST FRAUD**

**Introducing the Bucephalus G.A.P. Score**

# CREATIVE ACCOUNTING: IT'S NOT JUST FRAUD



Market capitalisation losses around the world due to creative accounting – last two years Exposing Creative Accounting

Figure 1: The West

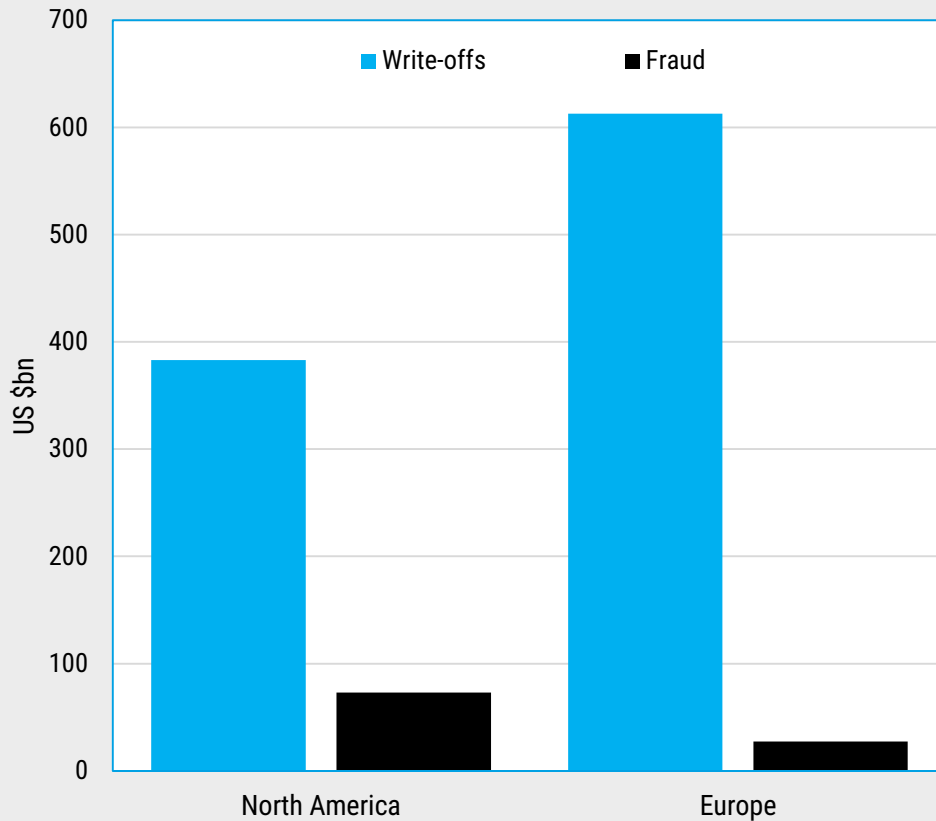
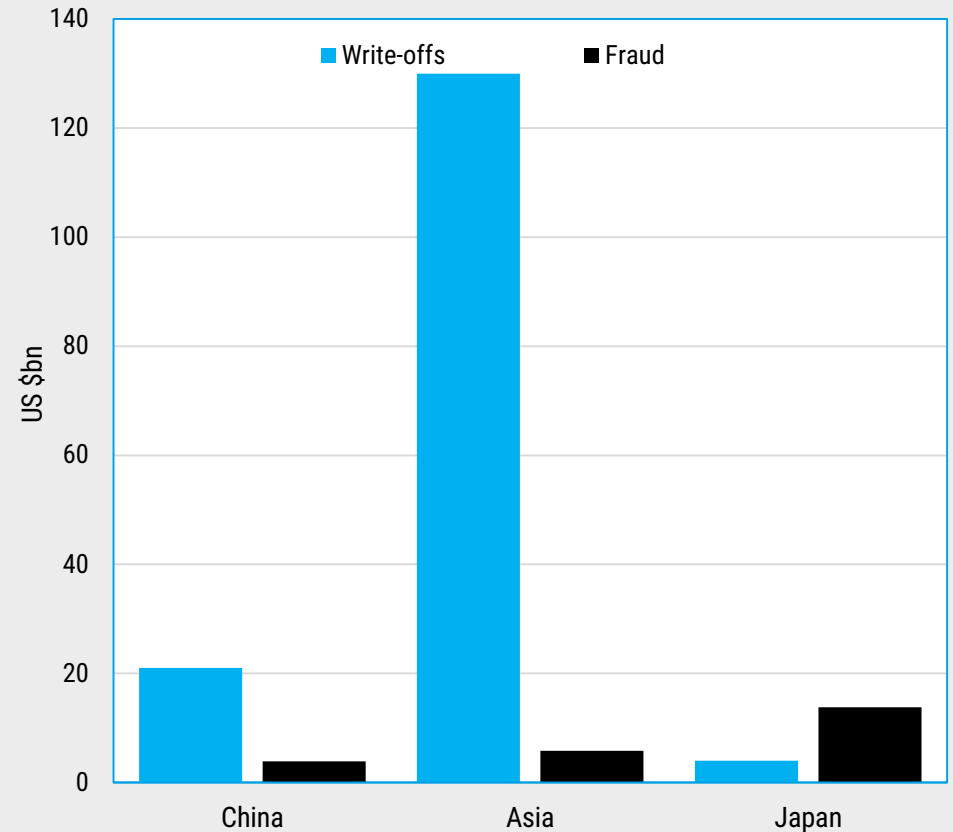


Figure 2: Asia



**Investors losses due to accounting write-offs exceed those due to fraud**

# EXPOSING CREATIVE ACCOUNTING

- Profit change drives long term stock performance
  - Accounting data as a guide to portfolio performance: profit change is the consistent indicator
  - The keys to better profit forecasts: avoid creative accounting
  - Sector investing is no defence: 75% of sectors had stocks that fell over 50%
- Treat auditors with scepticism
  - Variable standards: countries, industries and firms
  - Independence and conflicts: the auditor's dilemma - management vs shareholders
  - Legality vs reality: the result – management wins
- Introducing the Bucephalus G.A.P. Score
  - The G.A.P. Score: **G**overnance, **A**ccounting risk and **P**eer performance
  - *Please bear in mind*: this is our list of suspects, recommendations come next
  - Top AsiaX scores: [BEM TB/BECL TB, LT IN, ICT PM, 1038 HK, VED LN](#)

## The Bucephalus G.A.P. Score: quantifying the risk of creative accounting

# PROFIT CHANGE DRIVES LONG TERM PERFORMANCE

- Accounting data as a guide to portfolio performance
  - 37 accounting ratios and 3 valuation metrics used
  - Profit change is the consistent indicator of stock performance
- For better profit forecasts
  - Be wary of vested interests: management, auditors and brokers
  - Identify creative accounting: reality trumps fiction
  - Bucephalus Research Partnership: G.A.P. Score and company reviews
- Sector investing is no defence
  - While most sectors did well - over 90% of sectors rose more than 5%
  - Many stocks within them did badly: over 75% had stocks that fell more than 50%

**Improving profit forecasts will improve portfolio performance**

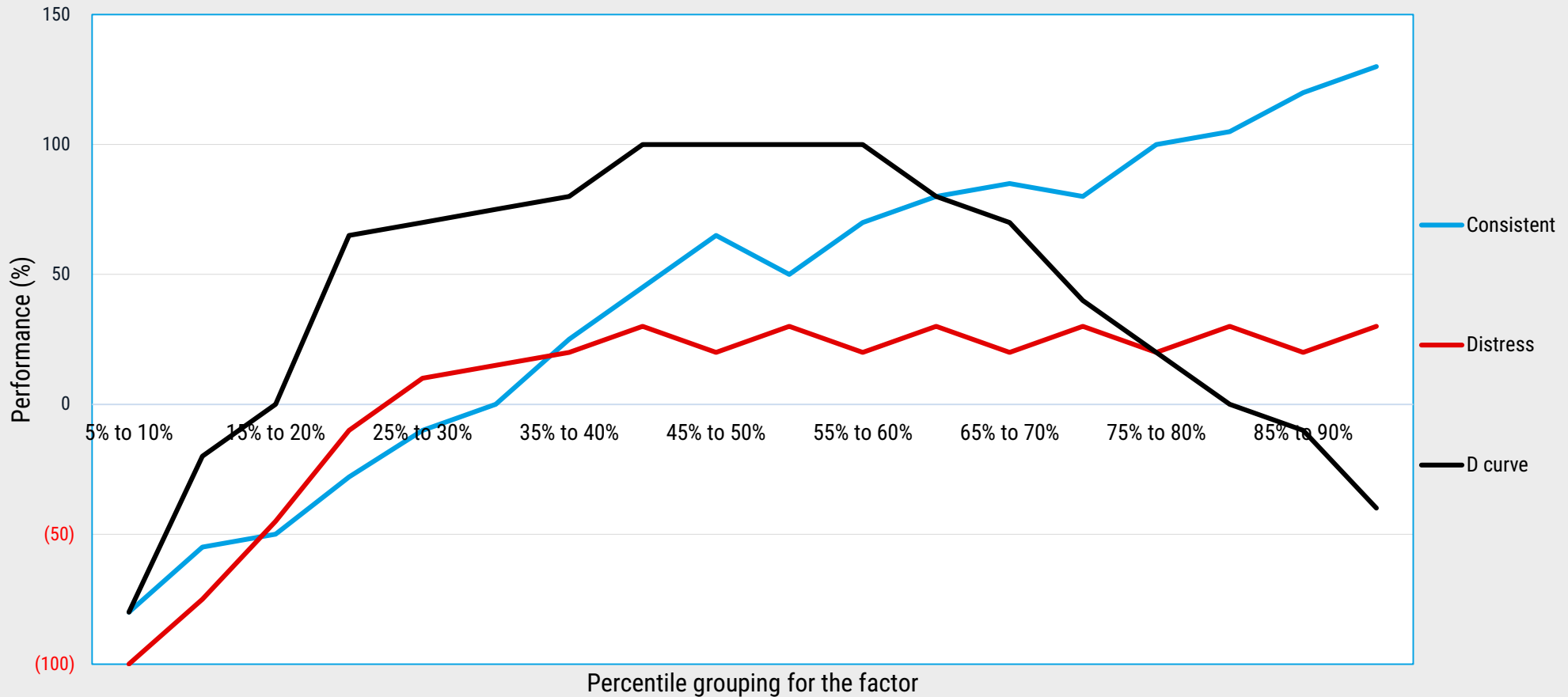
# ACCOUNTING DATA AS A GUIDE TO PERFORMANCE

- Measures tested
  - 34 ex ante accounting ratios: covering margins, leverage, returns, working capital, assets etc.
  - 3 measures of change: revenues, profit before tax and operating cashflow
  - 3 valuation ratios: EV to Sales, EV to EBITDA, Price to Book
- Geographic breakdown
  - Global
  - North America, Latin America, Europe, China, Japan and Asia X
- Time periods
  - 5, 4, 3, 2 and 1 year periods
- Results
  - Four performance indicator groupings: Useless, D curve, Distress or Consistent
  - Profit change is the consistent indicator: across both regions and time periods over a year

## A comprehensive test with clear results

# INDICATOR PERFORMANCE

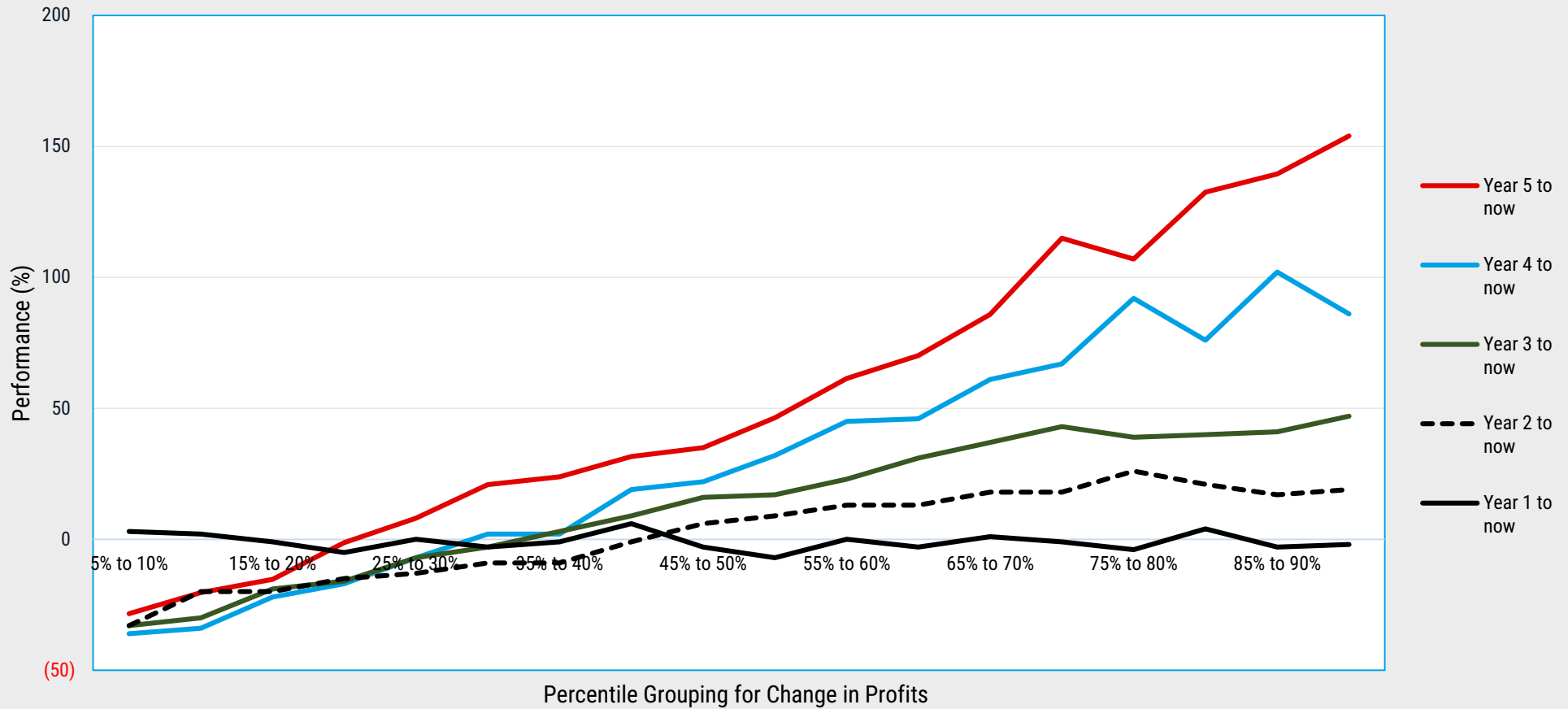
Figure 3: Stylised performance of indicator groupings



**Consistent indicators worked across each percentile grouping**

# PROFIT CHANGE: The only consistent indicator

Figure 4: Change in PBT vs change in stock prices



## Performance improved with time

# FOR BETTER PROFIT FORECASTS

- Be wary of vested interests
  - Managements are incentivised to be optimistic
  - Auditors can be conflicted and quality varies
  - Brokers, deal driven and focused on management's message
- Identify creative accounting
  - Eventually business reality trumps accounting fiction
  - Cashflow vs profits is not sophisticated enough
  - Check standards chosen, assumptions used and consistency of use
- Bucephalus, your independent research partner
  - G.A.P. Score based on an accounting database using global industry metrics
  - A team of fully-qualified accountants
  - Thematic research and individual stock ideas

## **Avoid creative accounting**



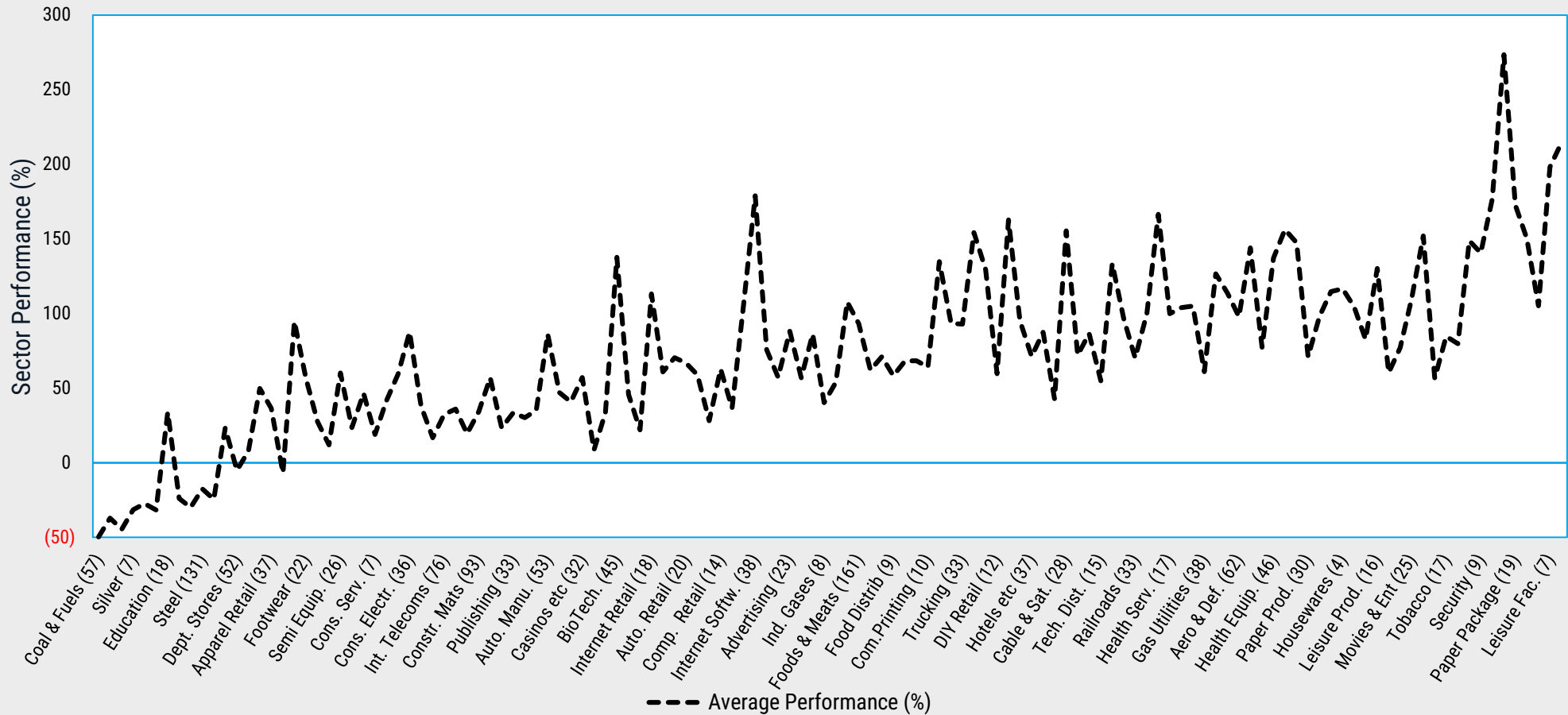
# SECTOR INVESTING IS NO DEFENCE

- Last five years
  - Over 4,860 stocks from around the world
  - Original market caps over US\$800m
  - Excludes Financials and Real Estate companies
- The good news
  - The 128 GICS sub industry groups rose 73% on average over the five years
  - Over 80% of sectors rose 25%+, another 12% were essentially neutral, i.e. +/- 25%
  - Over 2,800 stocks rose 25%+
- The bad news
  - Three of the oil & gas sub sectors, coal, copper, precious metals & mining all fell 25% or more
  - 1,000 stocks fell over 25% of which 500 fell over 50% and 230+ over 75%
  - 63 of the sectors classified as neutrals or risers had stocks that fell over 75%

**The average sector performance was up 73%, even so 500 stocks fell over 50%**

# WHILE MOST SECTORS DID WELL

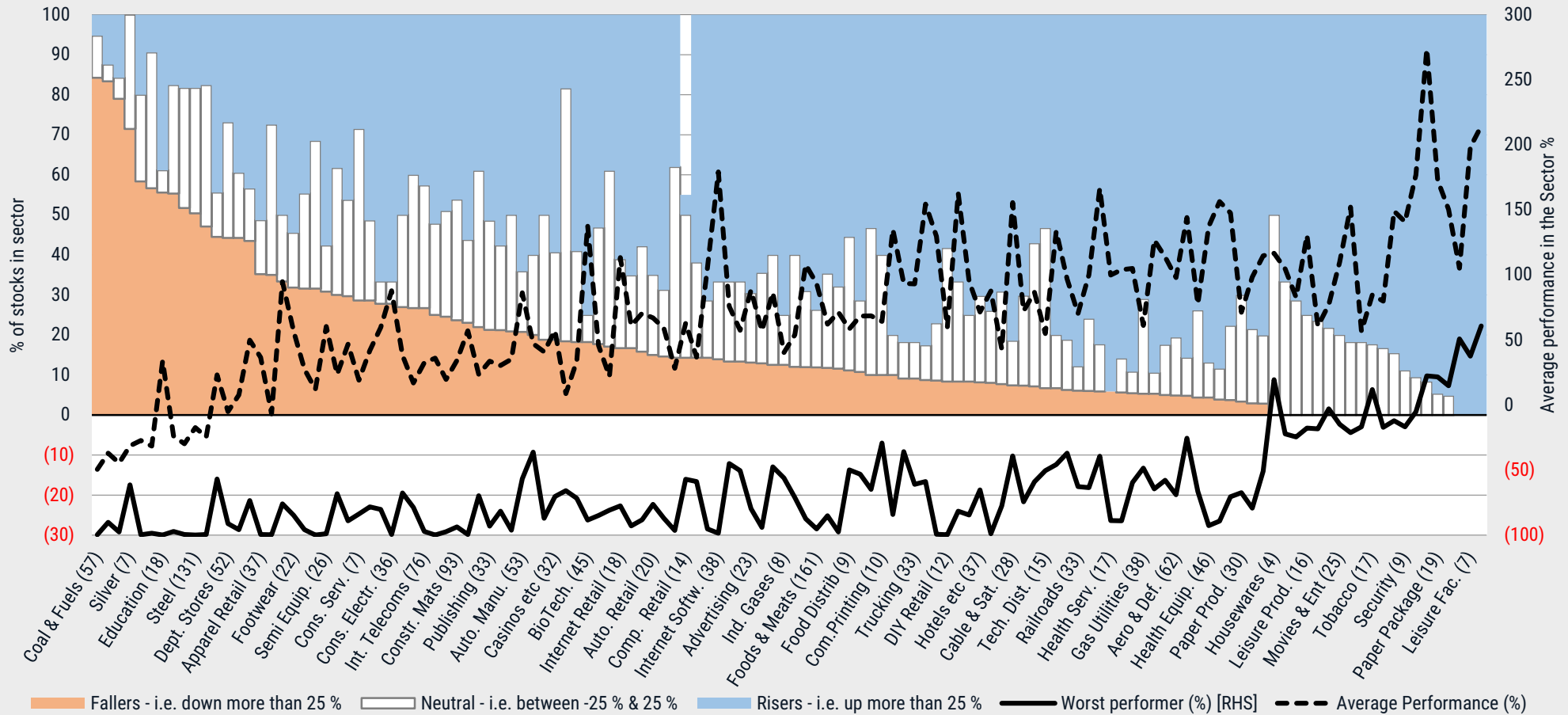
Figure 5: Global GICS sector price performance - last 5 years



**Over 90% of sectors rose more than 5%**

# MANY STOCKS WITHIN THEM DID BADLY

Figure 6: Stock performance groupings within GICS sectors - last 5 years

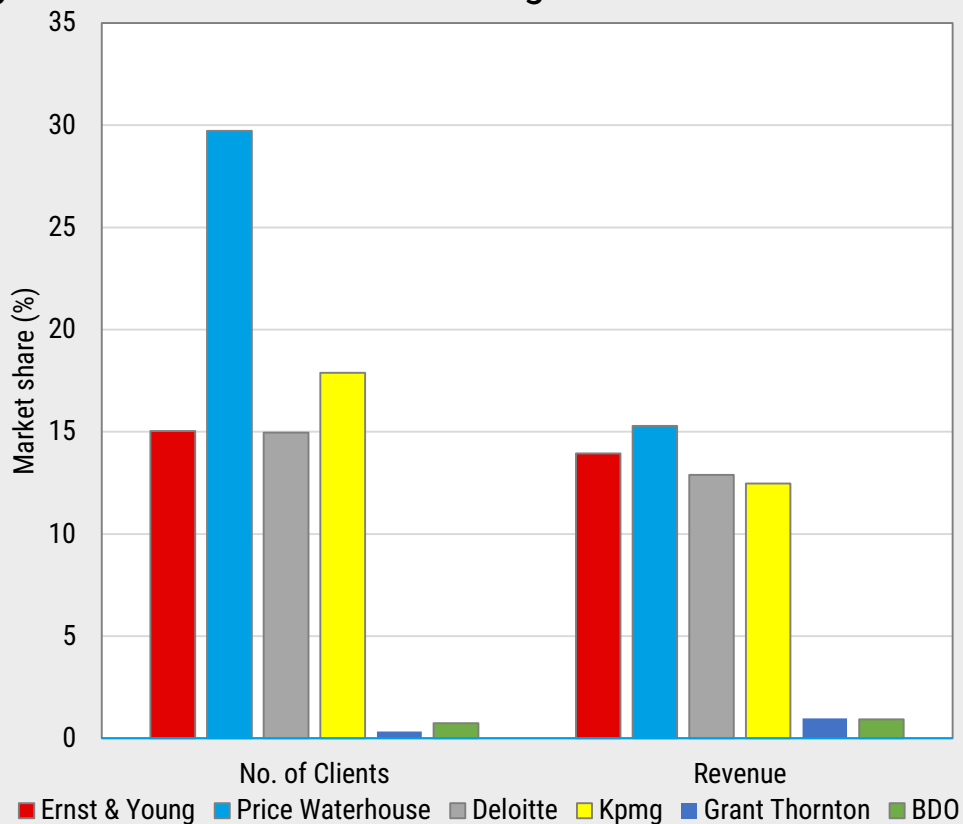


**Over 75% of sectors had stocks that fell more than 50%**

# TREAT AUDITORS WITH SCEPTICISM

- Variable standards
  - Countries
  - Industries
  - Within Firms
- Independence and conflicts
  - Management choose the auditors
  - Auditors verify performance and pay
  - Limited investor recourse
- Legality vs reality
  - Legally defensible
  - Cautious and prudent

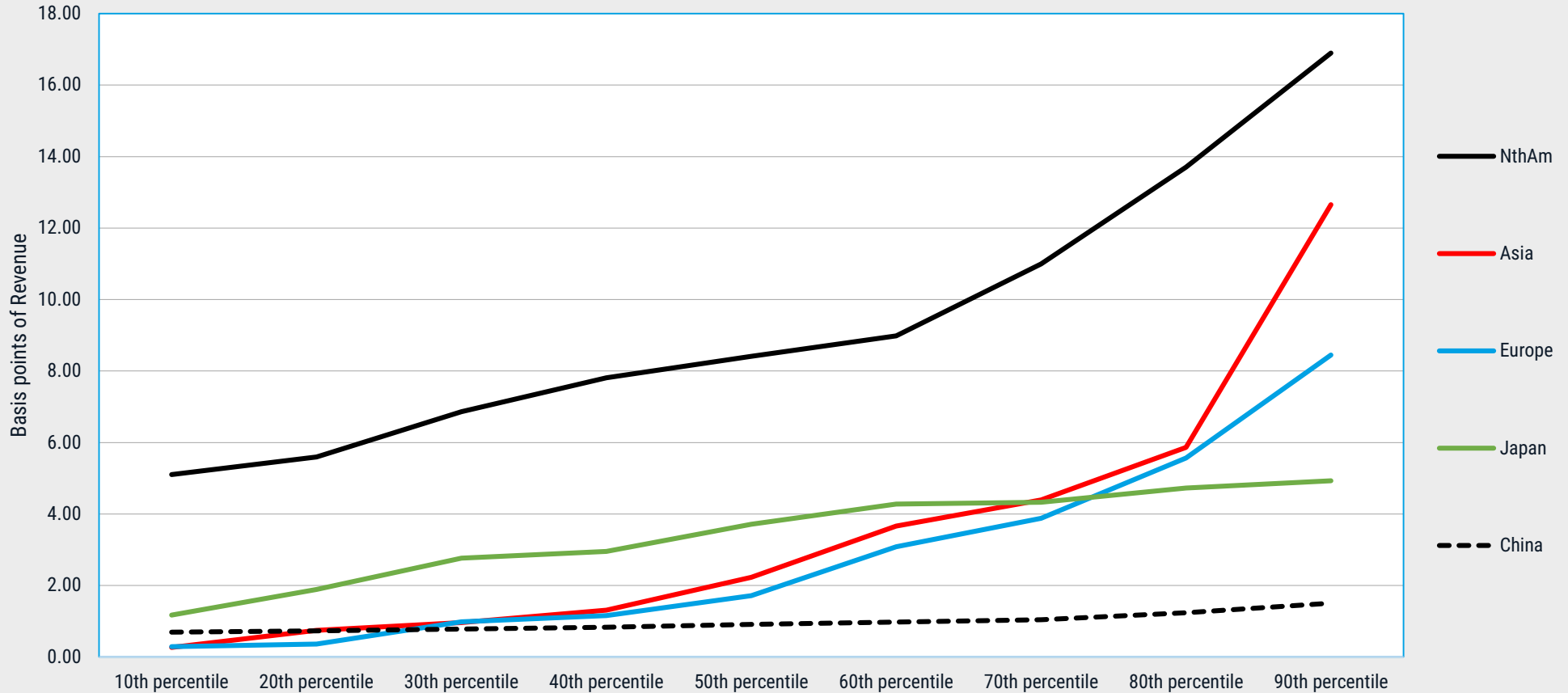
Figure 7: Market share of the large audit firms – AsiaX FY15



**Investors are faced with limited choice**

# VARIABLE STANDARDS: Countries

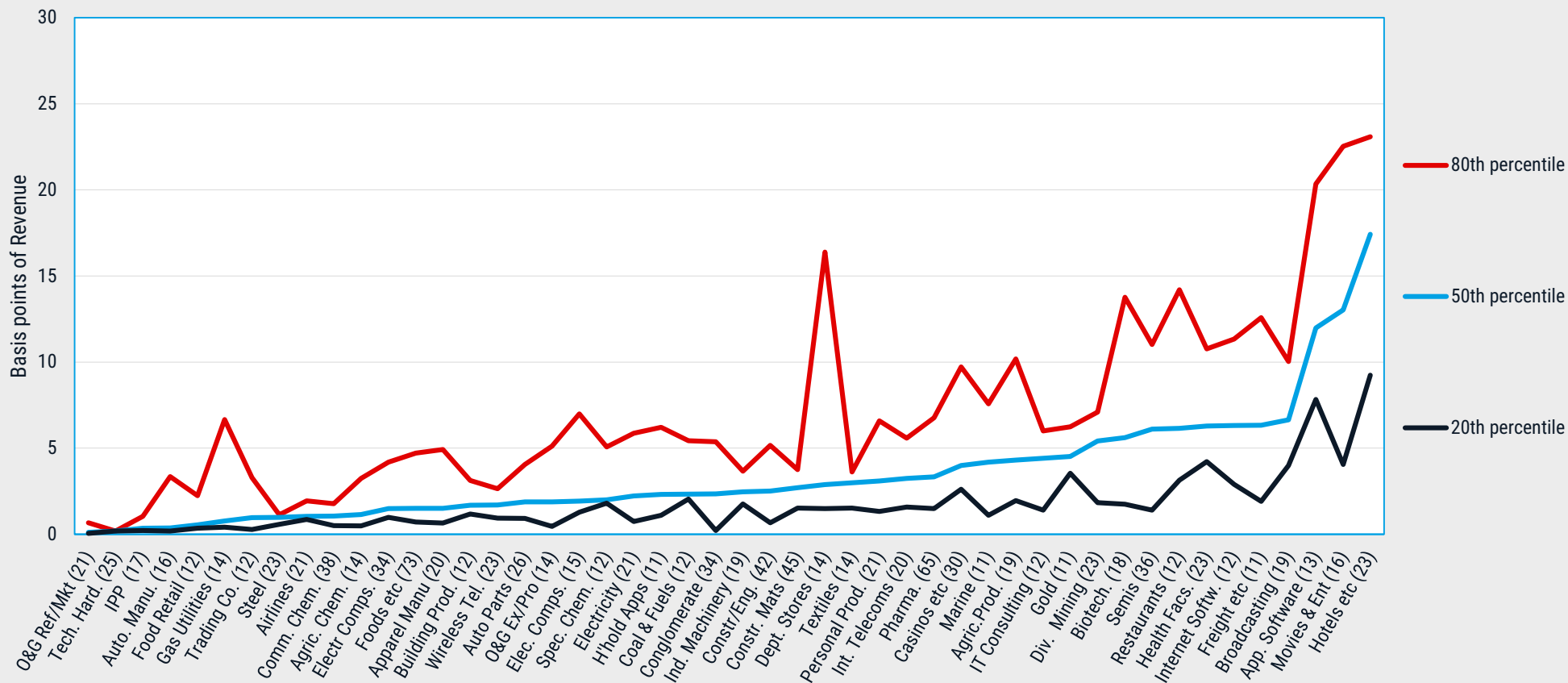
Figure 8: Audit fees (Basis points of Revenue) for Electricity Utilities around the world



**Counting power stations in the North America costs 4 times as much as in Japan**

# VARIABLE STANDARDS: Industries

Figure 9: Audit fees (Basis points of Revenue) – AsiaX



**Airlines get audited for 1.05 Bps/Rev vs Freight at 6.64 Bps/Rev**

# VARIABLE STANDARDS: Firms

Figure 10: Telecommunications audited by Ernst & Young & Price Waterhouse

Name	Ticker	Industry	Mkt Cap (US\$bn)	Revenue (US\$bn)	Audit fee (BpsRev)	Normal	Auditor	Bucephalus G.A.P. Score
<b>Kt Corp</b>	030200 KS	Int. Telecoms	7.1	19.7	<b>1.2</b>	Low	Price Waterhouse	<b>60</b>
<b>Telstra Corp</b>	TLS AU	Int. Telecoms	42.6	18.9	<b>4.1</b>	Normal	Ernst & Young	<b>92</b>
<b>Axiata Group Ber</b>	AXIATA MK	Wireless Tel.	9.4	5.1	<b>6.3</b>	Normal	Price Waterhouse	<b>68</b>
<b>Pccw Ltd</b>	8 HK	Int. Telecoms	4.3	5.1	<b>9.7</b>	High	Price Waterhouse	<b>118</b>
<b>Pldt Inc</b>	TEL PM	Wireless Tel.	6.2	3.8	<b>2.5</b>	Normal	Ernst & Young	<b>124</b>
<b>Telekom Malaysia</b>	T MK	Int. Telecoms	5.5	3.0	<b>3.2</b>	Normal	Price Waterhouse	<b>80</b>
<b>Maxis Bhd</b>	MAXIS MK	Wireless Tel.	10.0	2.2	<b>0.9</b>	Low	Price Waterhouse	<b>94</b>
<b>Digi.Com Bhd</b>	DIGI MK	Wireless Tel.	8.9	1.8	<b>0.5</b>	Low	Ernst & Young	<b>92</b>

## Similar businesses, very different audit fees

# INDEPENDENCE AND CONFLICTS

- Managements choose the auditors
  - AGM vote - form over substance
  - No alternatives offered
  - The audit report goes to management, minimal investors interaction
- Auditors verify management's performance and pay
  - Executive pay can be multiples of audit fees
  - A clear incentive for auditors to please their employer
  - Acquiescence and creativity beats questioning and conservatism
- Limited investor recourse
  - Auditors rarely get questioned
  - Employed by company so not beholden to shareholders
  - The [Livent](#) case in Canada, 2014, may offer shareholders some hope

## The auditor's dilemma: management vs investors



# MANAGEMENT CHOOSES THE AUDITORS (1)

Figure 11: Extreme executive pay vs audit fees – AsiaX

Name	Ticker	Industry	Mkt Cap (US\$bn)	Revenue (US\$bn)	Executive pay as multiple of audit cost (x)	Total Executive pay (US\$m)	Audit fee (BpsRev)	Auditor	Bucephalus G.A.P. Score
Sun Tv Network	SUNTV IN	Broadcasting	2.9	0.4	439.5	22.2	1.28	Ernst & Young	110
Divi Labs Ltd	DIVI IN	Life Sciences	4.8	0.6	192.0	13.2	1.19	Pvrk Nageswara Rao & Co	95
Tech Mahindra Lt	TECHM IN	IT Consulting	6.2	4.1	54.8	34.4	1.55	Deloitte	104
Amara Raja Batt	AMRJ IN	Elec. Comps.	2.4	0.7	54.2	5.3	1.38	Deloitte	92
Oil Search Ltd	OSH AU	O&G Ex/Pro	7.5	1.6	52.1	15.6	1.89	Deloitte	85
Upl Ltd	UPLL IN	Agric. Chem.	4.8	2.0	51.7	2.8	0.27	Ernst & Young	89
Brit Amer Tobacc	ROTH MK	Tobacco	2.9	1.2	32.5	3.3	0.87	Price Waterhouse	70
Bajaj Auto Ltd	BJAUT IN	Motorcycle	11.3	3.4	31.7	7.0	0.65	Price Waterhouse	88
Aurobindo Pharma	ARBP IN	Pharma.	6.7	2.1	31.1	8.4	1.27	Ernst & Young	92
Apollo Hospitals	APHS IN	Health Facs.	2.6	0.9	30.4	5.4	1.90	S Viswanathan	101

**The audit fee is a fraction of what management is to receive**

# MANAGEMENT CHOOSES THE AUDITORS (2)

Figure 12: Extreme executive pay vs Audit fees – Rest of the World

Name	Ticker	Industry	Mkt Cap (US\$bn)	Revenue (US\$bn)	Average Executive cost (US\$m)	Executive pay as multiple of audit cost (x)	Audit fee (BpsRev)	Auditor	Bucephalus G.A.P. Score
<b>North America</b>									
Monster Beverage	MNST US	Soft Drinks	23.9	2.7	4.5	128.8	0.5	Deloitte	100
Regeneron Pharm	REGN US	Biotech.	44.3	4.1	25.1	72.9	N/A	Price Waterhouse	156
Masimo Corp	MASI US	Health Equip.	3.0	0.6	24.6	70.7	27.6	Grant Thornton	102
<b>Europe</b>									
Berkeley Group	BKG LN	Homebuilding	4.2	3.1	11.9	94.7	2.4	Kpmg	110
Genmab A/S	GEN DC	Biotech.	10.5	0.2	2.3	65.2	4.2	Price Waterhouse	63
Ds Smith Plc	SMDS LN	Paper Pkge	4.6	6.1	4.3	57.6	0.2	Deloitte	104
<b>Japan</b>									
Fanuc Corp	6954 JP	Ind. Machinery	37.3	5.2	3.1	103.7	0.6	Ernst & Young	103
Takeda Pharmaceu	4502 JP	Pharma.	34.4	15.1	3.7	42.1	0.3	Kpmg	133
Asahi Intecc Co	7747 JP	Health Suppl	2.6	0.3	2.9	25.4	6.8	Deloitte	65
<b>China</b>									
China Cyts-A	600138 CH	Hotels etc	2.5	1.7	0.3	34.0	0.5	Daxin Cpa	90
Jiangsu Hengru-A	600276 CH	Pharma.	15.7	1.5	0.2	25.5	0.8	Jiangsu Suya Jincheng Cpa	75
China Biologic P	CBPO US	Biotech.	3.4	0.3	4.4	23.9	31.3	Kpmg	71

**Executive pay is lower overseas, but then so are the audit fees**

# LEGALITY vs REALITY

- Auditors do what is legally defensible
  - Obscure but disclosed e.g. buried in note 365 on page 450 of the accounts
  - Obtuse assumptions: discount rates, tax, asset lives and valuations
  - Letter of the law vs the spirit e.g. The balance sheet reflects the accounts as at the year end date (but not any other day!)
- Cautious and prudent is what investors need
  - Reveal assumptions
  - Add relevant detail
  - Consistency of standards and presentation

## The result: management wins

# INTRODUCING THE BUCEPHALUS G.A.P. SCORE



- The G.A.P. Score: quantifying the risk of creativity
  - 16 **G**overnance tests to assess the likelihood that management could get creative
  - 17 **A**ccounting risk tests for individual outliers
  - 17 **P**eer performance tests measuring ratios relative to competitors
- *Please bear in mind:* this is our list of suspects, recommendations come next
  - The Bucephalus process: Score, Review and Recommend. This report is Score
  - Investigate high scores: be suspicious, all high G.A.P. scores are worthy of review
  - N.B. Extreme single factors can be as important as high aggregate scores
- Top G.A.P. Scores: AsiaX
  - **BEM TB/BECL TB, LT IN, ICT PM, 1038 HK, VED LN, CPALL TB, CPF TB, ADSEZ IN, 2207 TT, TRUE TB**
  - Summary sheets for the top score: **LT IN**
  - Summary sheets for the lowest scoring comparable company: **JSMR IJ**

## Scoring: Governance, Accounting risk and Peer Performance

# THE G.A.P. SCORE

- **Governance: potential **G** Score of 155**
  - Factors include: executive costs, pension policy, tax payments, stock compensation, director tenure and board compensation
- **Accounting risks: potential **A** Score of 150**
  - Factors include: working capital, related cos, off balance sheet liabilities, debt churn, unrealised profit, intangibles and investment
- **Peer performance: potential **P** Score of 110**
  - Factors include: working capital, employee and director productivity, earnings cash conversion, leverage, margins, returns

## Quantifying the risk of creativity

# TOP G.A.P. SCORES

Figure 13: Governance, Accounting risk and Peer performance – AsiaX

Name	Ticker	Industry	Mkt Cap (US\$bn)	EV/Sales T12M	Audit fee (BpsRev)	Range	Auditor	Broker views (B/H/S)	G.A.P. percentiles (G/Ar/Pp)	Bucephalus G.A.P. Score
<b>Bangkok Express</b>	BEM TB	Road & Rail	3.3	13.1	N/A	N/A	Ernst & Young	7/4/6	<b>96/89/99</b>	<b>148</b>
<b>Larsen &amp; Toubro</b>	LT IN	Constr. & Eng.	19.1	2.2	N/A	N/A	Deloitte	29/13/4	<b>100/73/94</b>	<b>143</b>
<b>Intl Contain Ter</b>	ICT PM	Ports & Serv.	3.1	4.6	18.5	High	Ernst & Young	12/1/0	<b>53/100/96</b>	<b>142</b>
<b>Cki Holdings</b>	1038 HK	Electricity	22.4	36.2	12.6	High	Deloitte	6/7/1	<b>97/94/85</b>	<b>140</b>
<b>Vedanta Resource</b>	VED LN	Div. Mining	2.8	1.9	2.2	Normal	Deloitte	1/8/1	<b>97/74/97</b>	<b>139</b>
<b>Cp All Pcl</b>	CPALL TB	Food Retail	15.6	1.7	N/A	N/A	Kpmg	24/3/0	<b>94/97/80</b>	<b>138</b>
<b>Charoen Pok Food</b>	CPF TB	Foods & Meats	6.7	1.1	N/A	N/A	Kpmg	20/0/1	<b>100/91/63</b>	<b>137</b>
<b>Adani Ports And</b>	ADSEZ IN	Ports & Serv.	8.5	11.9	N/A	N/A	Ernst & Young	20/4/2	<b>72/81/100</b>	<b>136</b>
<b>Hotai Motor Co</b>	2207 TT	Auto. Retail	6.1	1.6	N/A	N/A	Price Waterhouse	2/5/0	<b>87/89/94</b>	<b>135</b>
<b>True Corp Pcl</b>	True TB	Int. Telecoms	6.8	2.6	N/A	N/A	Price Waterhouse	6/8/11	<b>93/94/77</b>	<b>133</b>

**AsiaX**

# ***PLEASE BEAR IN MIND***

- The Bucephalus process
  - Identify factors that matter and standards that can be manipulated
  - Screen and score all the factors to highlight anomalies
  - Single company accounting reviews by qualified accountants
- Investigate high scores
  - Data flaws and inappropriate accounting may result in overstated scores
  - Our multi-factor approach and weightings aim to reduce errors
  - All high scores suggest a high level of accounting risk and subjectivity
- Extreme single factors can be as important as high aggregate scores
  - Each factor is scored using deciles. Extreme outliers may be underscored
  - All single factors scoring 10's are worthy of review

**This report is our list of suspects, recommendations come next**

# SUMMARY SHEET – TOP G.A.P SCORE: 148

For the full downloadable PDF click here: [LTIN](#)



Larsen & Toubro Ltd

LTIN

Price

INR 1,377

info@bucephalus.com

23-Nov-16

Sector	Construction & Engineering	Address	Bakhtawan, Ground Floor Mumbai, 400 071	Accounting	www.larsentoubro.com	Free float %	86.5	S&P outlook & rating	---
Last Financial Year	Mar-16			Auditor's view	Unqualified	Ownership	24	Moodys outlook & rating	-WR
Next results	Aug-16			Audit/Sales (bps)	-	Buy/s	31	Fitch outlook and rating	-
Market cap. (m)	1,283,375	US\$	Tel. number 91-22-6686-5100	Audit/employee	-	Holds	11	Bloomberg health grade	C+
3mth Average Daily Turnover (m)	38.0	US\$	Auditor	Audit/salary (bps)	-	Skills	4		

Governance	31-Mar-08	31-Mar-09	31-Mar-10	31-Mar-11	31-Mar-12	31-Mar-13	31-Mar-14	31-Mar-15	31-Mar-16
Number of Board members	⊕⊕	⊕	⊕⊕	⊕⊕	⊕⊕	⊕⊕	⊕	⊕	⊕⊕
Oldest board member	⊕								
Longest tenure									
Director tenure over 10 yrs									
Double tier board									
Former CEO on the Board									
Depreciation rate - Average	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
Unl Op. CF/Unl CashflowOps	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
Lev. CashflowOps - Dep'n-Earnings									
Pension deficit	⊕								
Deferred tax as % of equity	⊕								
Audit Fee from the mean	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
(Prepays & Deferred costs)/Equity (%)									
Auditor (no of listed cos audited)									
Beneish score (probability of fraud)									
Monitor score (see appendix)									

Accounting Risk	31-Mar-08	31-Mar-09	31-Mar-10	31-Mar-11	31-Mar-12	31-Mar-13	31-Mar-14	31-Mar-15	31-Mar-16
Short term assets/Revenue- average	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
ROA- Average prior years	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
Asset growth- Earnings growth									
Excessive M&A									
Excessive Contingent liabilities									
Excessive Intangibles									
Other tangible assets/Equity									
Excessive Inventory									
Excessive Receivables	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
Excessive Payables	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
Payables - > Receivables	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
Other payables/ Total payables									
Loans to/receivables from Ass's etc									
Cash extraction from working capital									
Debt churn (zero if debt is falling)									
Interest spread vs national average*									

\*based on 245 cos in India

Peer Performance	10th Percentile	20th Percentile	30th Percentile	10% Tim Mean	70th Percentile	80th Percentile	90th Percentile	LTIN	Review
EBITDA margin (%)	3.5	4.8	5.8	8.5	10.2	12.0	16.8	12.4	⊕
Unlevered cash/ From operations margin	2	4	5	7.1	9	11	14	9.5	⊕
Unlevered operating cashflow margin	(8)	(1)	2	5.1	9	11	16	(11.8)	⊕⊕
Lev. CFO less depreciation/ Earnings	0	1	1	1.0	1	1	2	0.5	⊕⊕
Depreciation rate (%)	2.4	3.3	4.3	6.4	7.2	9.4	12.8	5.5	⊕
Inventory days	98	124	145	234	293	365	449	21	⊕
Payable days (based on COGS)	48	64	77	118	133	178	227	128	⊕
Free carry (Payables - Inventory) * % is good	(289)	(218)	(185)	(132)	(77)	(60)	(39)	95	⊕
Cash conversion cycle days	106	137	171	256	304	375	480	44	⊕
Prepayments (Days of COGS)	0	0	0	10	9	19	46	0	⊕
Sales/Net fixed assets (x)	2	4	5	12	14	21	35	4.3	⊕
PBT/Assets (%)	0	2	3	5	6	8	9	3.5	⊕
Return on assets (%)	0	1	2	3	5	6	7	2.4	⊕
Sales/Employee (US\$)	148,538	196,754	230,679	403,188	473,891	646,935	873,340	856,877	⊕
EBIT/Employee (US\$)	4,164	7,341	10,899	25,115	30,805	45,992	69,543	80,828	⊕
Employee cost (US\$)	5,047	7,339	10,423	30,404	41,926	61,657	86,118	115,832	⊕⊕
Employee cost/ (Emp cost +EBIT) (%)	18	24	27	47	63	77	87	58	⊕
Pension liability discount rate									
Ave. Exec. director compensation (US\$)	81,031	119,286	195,492	1,110,609	1,486,239	1,982,347	3,341,325	46,647	⊕
Sales/Director (US\$m)	58.8	101.9	146.1	909	614	1,038	1,420	772	⊕
Contingent liabilities as % of Equity	0.1	0.9	3.1	38	40	73	166	31	⊕
Contingent liabilities/ total Assets	0.1	0.4	0.9	10.4	10.2	19.7	44.3	6.0	⊕
Assets/Equity	1.8	2.1	2.4	3.5	4.1	4.9	6.5	5.2	⊕⊕
Gross debt/Sales	2.2	5.5	10.8	32.3	38.4	63.1	103.6	98.9	⊕⊕
(Total debt + Leases)/Sales (%)	1.3	7.9	13.6	34.4	43.6	63.1	104.4	100.1	⊕
Gross debt/Total assets	7%	7%	11%	20%	28%	32%	42%	45%	⊕
Borrowing cost (%)	3.7	5.3	6.7	26.4	43.7	62.9	117.9	3.83	⊕
Spread (bps) over the India 6M rate	(312)	(142)	0	264	437	629	1,114	(401)	⊕
Cash tax paid rate (Expensed rate if blank)	14	19	22	26	26	33	35	NAUDI	⊕
Altman Z score	1.17	1.50	1.64	2.56	3.20	3.66	4.88	1.46	⊕⊕
Audit costs (bps)	0.80	1.04	1.46	2.9	3.9	5	6	-	⊕

Trade  
 4, out of 75  
 14, out of 25  
 0, out of 30  
 9, out of 46  
 13, out of 54  
 5, out of 22  
 1, out of 3

Any single factor might indicate a serious underlying problem  
 So while lots of scores means plenty to look at, one bad score might be more important



# COMPETITOR'S SUMMARY SHEET - G.A.P SCORE: 90

For the full downloadable PDF click here: [JSMR IJ](#)



Jasa Marga (Persero) Tbk Pt		JSMR IJ		Price		IDH 4260		info@buceph.com		23-Nov-16	
Sector	Highways & Railroads	Address	Plaza Tol	Accounting	www.jasmarga.com	Free float %	30.0	S&P outlook & rating	2, out of 25		
Last Financial Year	Dec-15		Spain	Auditor's view		Moody outlook & rating	N/A	FTI outlook and rating	N/A		
Next results	May-16			Audit/Sales (bps)		Risk outlook and rating	-	Bloomberg health grade	A		
Market cap. (tn)	28,968,000	US\$	Tel number	62-21-841-3630	Audit/employee	5					
3mth Average Daily Turnover (tn)	2,148		Auditor	Ernst & Young	Audit/Salary (bps)	16					
		3.3									
			31-Dec-07	31-Dec-08	31-Dec-09	31-Dec-10	31-Dec-11	31-Dec-12	31-Dec-13	31-Dec-14	31-Dec-15
<b>Governance</b>											
Number of Board members			⊗			⊗		⊗			⊗
Oldest Board member											⊗
Longest tenure											
Director tenure over 10 yrs											
Double tier board											
Former CEO on the Board											
Depreciation rate - Average			⊗			⊗		⊗			⊗
Unl Op. Cr/Unl Cashflows											
Lev. Cashflows - Dep'n-Earnings			⊗			⊗		⊗			⊗
Pension deficit			⊗			⊗		⊗			⊗
Deferred tax as % of equity			⊗			⊗		⊗			⊗
Audit fee from the mean			⊗			⊗		⊗			⊗
(Prepays & Deferred costs)/equity (%)											
Auditor (no of listed cos audited)											
Benefit score (probability of fraud)			⊗			⊗		⊗			⊗
Monte score (see appendix)											
<b>Accounting Risk</b>											
Short term assets/Revenue- average			⊗			⊗		⊗			⊗
ROA- Average prior yrs											
Asset growth- Earnings growth			⊗			⊗		⊗			⊗
Excessive M&A			⊗			⊗		⊗			⊗
Excessive Contingent liabilities			⊗			⊗		⊗			⊗
Excessive Intangibles			⊗			⊗		⊗			⊗
Other tangible assets/Equity			⊗			⊗		⊗			⊗
Excessive Inventory			⊗			⊗		⊗			⊗
Excessive Receivables			⊗			⊗		⊗			⊗
Payables > Receivables			⊗			⊗		⊗			⊗
Other payables/Trial payables			⊗			⊗		⊗			⊗
Other receivables/Trial receivables			⊗			⊗		⊗			⊗
Loans to/receivables from Ass's etc			⊗			⊗		⊗			⊗
Cash extraction from working capital			⊗			⊗		⊗			⊗
Debt churn (Zero to debt is falling)			⊗			⊗		⊗			⊗
Interest spread > national average*			⊗			⊗		⊗			⊗
<b>Peer Performance</b>											
32 listed cos with sales of over US\$100m											
		10th Percentile	20th Percentile	30th Percentile	10% Trim Mean	70th Percentile	80th Percentile	90th Percentile	JSMR IJ	Review	
EBITDA margin (%)	24.8	40.1	44.6	55.7	71.5	73.7	79.1	11.9	⊗	Poor	
Unlevered cash Flow operations margin	17	25	30	43.3	55	58	72	13.8	⊗	Poor	
Unlevered operating cashflow margin (Lev CFO less depreciation)/Earnings	8	18	26	37.3	51	59	68	11.4	⊗	Poor	
Depreciation rate (%)	0	0	1	0.9	1	1	2	1.3	⊗	Alert	
Inventory days	29	3.0	3.7	4.7	5.6	6.4	7.7	9.6	⊗	Beware	
Payable days (based on COGS)	6	14	24	155	173	157	221	398	⊗	-	
Free carry (Payables - Inventory) +ve is good	12	18	22	60	81	99	117	117	⊗	-	
Prepayments (Days of COGS)	0	0	1	22	15	16	221	398	⊗	Weak	
Prepays/Net fixed assets (x)	0	0	1	22	15	16	22	84	⊗	Beware	
PBT/Assets (%)	2	2	3	4	5	6	8	10	⊗	High	
Return on assets (%)	2	2	3	4	5	6	8	10	⊗	-	
Sales/Employee (US\$)	156083	163,290	189,436	214,072	335,599	384,729	460,963	8	⊗	Poor	
EBIT/Employee (US\$)	46,790	52,375	55,735	93,016	116,474	132,816	161,485	1	⊗	Beware	
Employee cost (US\$)	2,425	5,089	7,392	25,383	28,736	49,381	70,736	2	⊗	Beware	
Emploee cost/ (Emp cost +EBIT) (%)	3	6	9	20	29	32	37	70	⊗	Beware	
Person liability discount rate	8.50	8.90	8.95	8.98	9.07	9.11	9.25	3.90	⊗	Beware	
Ave. Exec director compensation (US\$)	34,866	38,874	68,887	304,981	242,835	475,368	826,560	270	⊗	Beware	
Sales/Director (US\$tn)	36.9	70.8	95.2	119	135	159	200	0	⊗	Poor	
Contingent liabilities as % of Equity	0.6	0.8	1.3	1.8	1.3	2.0	59	4	⊗	-	
Contingent liabilities/Trial assets	1.8	2.0	0.5	0.5	4.2	7.4	17.3	1.0	⊗	-	
Assets/Equity	6.22	121.3	163.4	251.9	326.9	354.9	433.4	83.3	⊗	-	
Gross debt/Sales	78.9	117.9	162.4	241.0	310.3	347.9	418.3	86.3	⊗	-	
(Total debt + Leases)/Sales (%)	19%	21%	29%	41%	50%	58%	65%	32%	⊗	-	
Borrowing cost (%)	4.7	5.7	6.7	8.9	10.6	12.1	14.1	3.90	⊗	Beware	
Spread (bps) over the Indonesia 6M rate	(260)	(162)	(62)	151	318	454	643	(411)	⊗	Beware	
Cash tax paid rate (Expensed rate if blank)	2	12	19	20	23	25	25	5.17	⊗	National rate (%)	
Altman Z score	0.93	1.24	1.65	2.49	2.95	3.68	5.17	1.31	⊗	Weak	
Audit costs (bps)	1.69	2.26	2.83	5.1	6.2	8	12	-	⊗	Alert	

Any single factor might indicate a serious underlying problem So while lots of scores means plenty to look at, one bad score might be more important

⊗ 2, out of 25  
 ⊗ 15, out of 25  
 ⊗ 10, out of 30  
 ⊗ 10, out of 46  
 ⊗ 10, out of 54  
 ⊗ 2, out of 22  
 ⊗ 0, out of 3

\*based on 82 cos in Indonesia



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