ESG 2.0
Emerging Asia

The Basic Materials Report

SOLABILITY
Sustainability Advice

ESG 2.0
Integrating The Future.

Sustainable Investment.
Better Performance.

About This Report

About this Report

Researched and compiled by SolAbility
Design by Gulo Güggs & Wolf
Printed on Ones & Zeros

About SolAbility

SolAbility is a consultancy specialized in sustainability services. Founded in 2005 by a former analyst for the Dow Jones Sustainability Index, SolAbility has served leading and internationally known Korean companies to develop and implement sustainability policies, management systems and strategies. The sustainability performance level of three SolAbility clients has been recognized through inclusion in the DJSI World Index.

The main success factor for SolAbility's consulting work has been the development of workable solutions that do have a direct impact in the internal efficiency in the managerial and operational context.

The focus on operational implementation and the hands-on exchange with sustainability practitioners in companies has allowed SolAbility to develop a unique sustainability assessment methodology (ESG analysis tool) that is based on practical realities (both managerial and operational) rather than on academic indicators or policy requirements as generally applied by ESG rating agencies. The added value of this approach is highlighted by the outperformance of both SRI and conventional benchmarks of an SRI/ESG fund based on SolAbility's ESG research on Korean equities.

SOLABILITY Sustainability Advice

Ilsan, South Korea
Tel ++82 31 811 3578

www.solability.com
contact@solability.com

Table of Contents

ESG 2.0

Foreword

Andy Gebhardt
CEO

Mi Hyang Lee
Managing Director

Dear Reader

It is clear by now that Asia is coming back of Age. In some countries, new middle classes have already emerged, while other some countries - in the wake of the regional dynamic - are just about to kick-start economic growth. The fast economic development represents – amongst others – new investment opportunities. Huge investment opportunities. The question is – how to identify long-term investment value?

Recent developments and increasing awareness for the value of sustainable investment are encouraging. However, lots of terms are floating around, both in the financial industry and the corporate world looking for a long-term profitable (i.e. sustainable) business approach. What is "SRI"? "Responsible Investment"? "ESG"? "Sustainable Investment"?

These terms and their particular meanings are familiar only to experts within the field of professional "sustainability"; to the outside World – "the mainstream" - they most likely are shades of the same color.

Fully integration or mainstreaming sustainability in investment requires a pragmatic and realistic view on the world around us. While some investors do invest according to principles and choices (faith, believe, or responsibility considerations), these investors do and always will present a small minority. The vast majority of asset managers and investors (including institutional investors and pension funds) always have, and always will, look first and foremost at the bottom line: adding value to the portfolio, generating profit.

It is therefore paramount that "sustainable investment" research can identify long-term sustainable value. Unfortunately, the best-known and recognized sustainability indexes that serve as show-case for sustainable investment for the wider public ("the mainstream") - the Dow Jones Sustainability Index and the FTSE4Good (and many other sustainability rankings) - fail to identify sustainable value or even underperform conventional benchmarks. Which rises the question "why?" - answerable with two possible causes: insufficient allocation of resources for research, or methodical deficits.

While tremendous advancements have been made in adaption of sustainability-related policies as well as the amount and scope of sustainability-related communication in the corporate world (compare the number of published sustainability reports in 2000 and 2011…), the methodologies and indicators applied by ESG agencies have remained more or less the same. Furthermore, many companies have based their policies at least to some extend on the indicators and questionnaires of ESG rating agencies, meaning that there is little to no visible distinction between different companies in terms of policies, communication and external management certification and assurance standards these days using those indicators. Which is, most likely, the reason why most sustainability ratings today look suspiciously similar to size ratings.

Against these developments, ESG research needs to be radically renewed and based on indicators that measure performance that allow for anticipation of future costs, margins, and revenue growth potential, based on key sustainability challenges and opportunities. SolAbility's ESG 2.0 methodology has proven to identify clear outperformance against both conventional and traditional ESG benchmarks in the Korean context. We are now applying the same methodology to emerging Asian markets.

We hope you enjoy reading this report on the findings in the basic materials sector.

Andy Gebhardt Mi Hyang Lee

Highlights

Significant differences between sustainable leaders and laggards are visible, allowing for identification of sustainable value through ESG 2.0

Policies, external management system certification & reporting reflect size, not sustainability performance – useless to pinpoint future winners

Resource efficiency, (in particular energy efficiency) and sustainability related R&D are key differentiators for future operational costs.

"Citizenship" has become a theme for nearly all companies, in all countries. However, strategic use for win-win solutions are hardly developed.

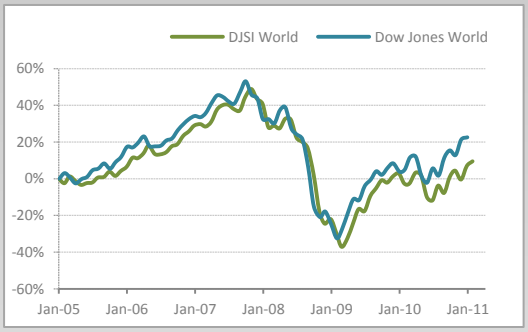
Sustainable Value Identification

NOT More Of The Same

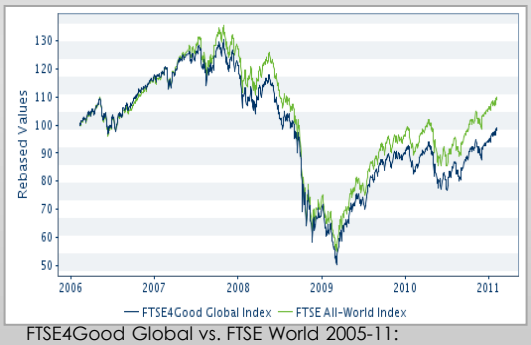
Conventional ESG methodologies

"Conventional" ESG screening and analysis methodologies are geared to assess large-cap global companies - based on policies, commitments, and voluntarily disclosure. Under such a methodology, a company's "ESG performance" depends on policies and disclosure. The "strict" and "rules-based" approach means that most ESG and SRI rankings have become a rating of Sustainability Reports and corporate commitments in the form of policies and certifications of management systems – all of which have little meaning and even less impact on the day-to-day operational efficiency. With a very high percentage of large-cap companies now producing sustainability reports, the sustainability indexes have become a mirror of conventional indexes. This limited approach is also reflected in the performance of the major ESG benchmarks who – unfortunately - fail to identify substantial sustainable value, or, in the worst case, underperform the market.

The underwhelming performance of the leading sustainability benchmarks is a also a major barrier for the wider acceptance of the concept of sustainable investment with mainstream and retail investors.



DJSI World vs. Dow Jones Global, 2005-11l:
Underperforming, no added value

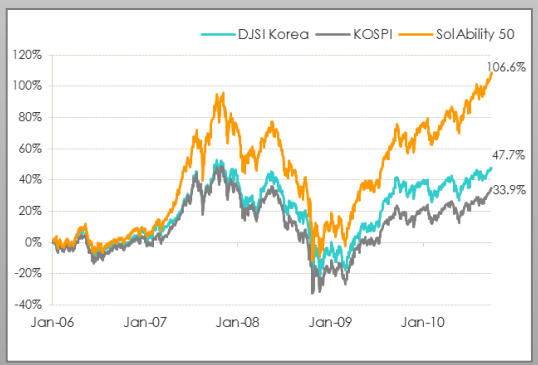


FTSE4Good Global vs. FTSE World 2005-11:
Underperforming, no added value

ESG 2.0

This is not to say that there is no value in sustainable investment strategies – on the contrary. Given the right approach – focusing on performance and strategy rather than policies and reporting – sustainable value can be identified, leading to improved index and portfolio performance.

Using this approach, SolAbility has developed a unique sustainable value identification methodology. Applied to the Korean market, the SolA 50 Index outperforms both the market (KOSPI) and SRI benchmarks (DJSI Korea, KRX SRI) by large margins – both short and long-term.



SolA 50 vs. KOSPI vs. DJSI Korea 2006-11:
outperformance, substantial added value

Sustainable Value Identification

ESG 2.0 - The Secret To Success

SolAbility approach to emerging market ESG analysis

SolAbility has developed a Sustainable Value Identification Methodology for the Korean Market, which - while not pretending to be a complete re-invention of ESG research - differs considerably from conventional methodologies. Key points of the methodology include:

- focus on performance and strategy over policies and management systems,
- and inclusion of company size to adjust for reporting differences and/or deficits.

This approach yields a significant higher sustainable value identification than conventional approaches.

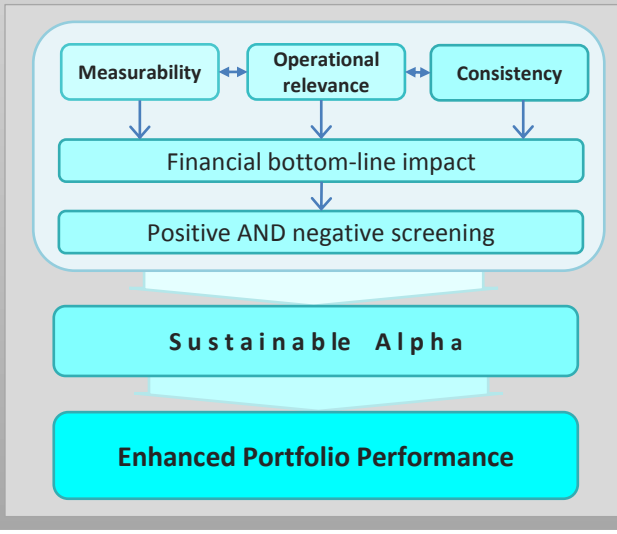
Contrary to large-cap companies in developed countries, the concept of corporate sustainability – and even more so the concept of sustainability communication – is less prevalent in emerging economies as of yet (but expected to increase significantly in the near future). Due to the different state of development, applying the SolAbility Korea Methodology to emerging markets, would therefore not automatically lead to the desired identification of long-term valuable investment opportunities.

Corporate Sustainability in emerging economies is characterized by

- Low awareness for cost implications of "extra-financial" factors
- Lower coverage of policies
- Lower coverage of certified management systems
- Limited reporting

In order to identify long-term sustainable value in the above described circumstances, the analysis methodology needs to include, and focus on, a combination of positive and negative ESG screening criteria that are

- Measurable
- Consistent
- Directly relevant to the financial bottom line
- Forward-looking
- Reflect industry-specific operational realities
- Allow for differentiation



As methodologies are part of our core intellectual know-ledge, the details of applied performance indicators are not revealed here.
If you wish more information on SolAbility's ESG 2.0 methodology, please contact us.

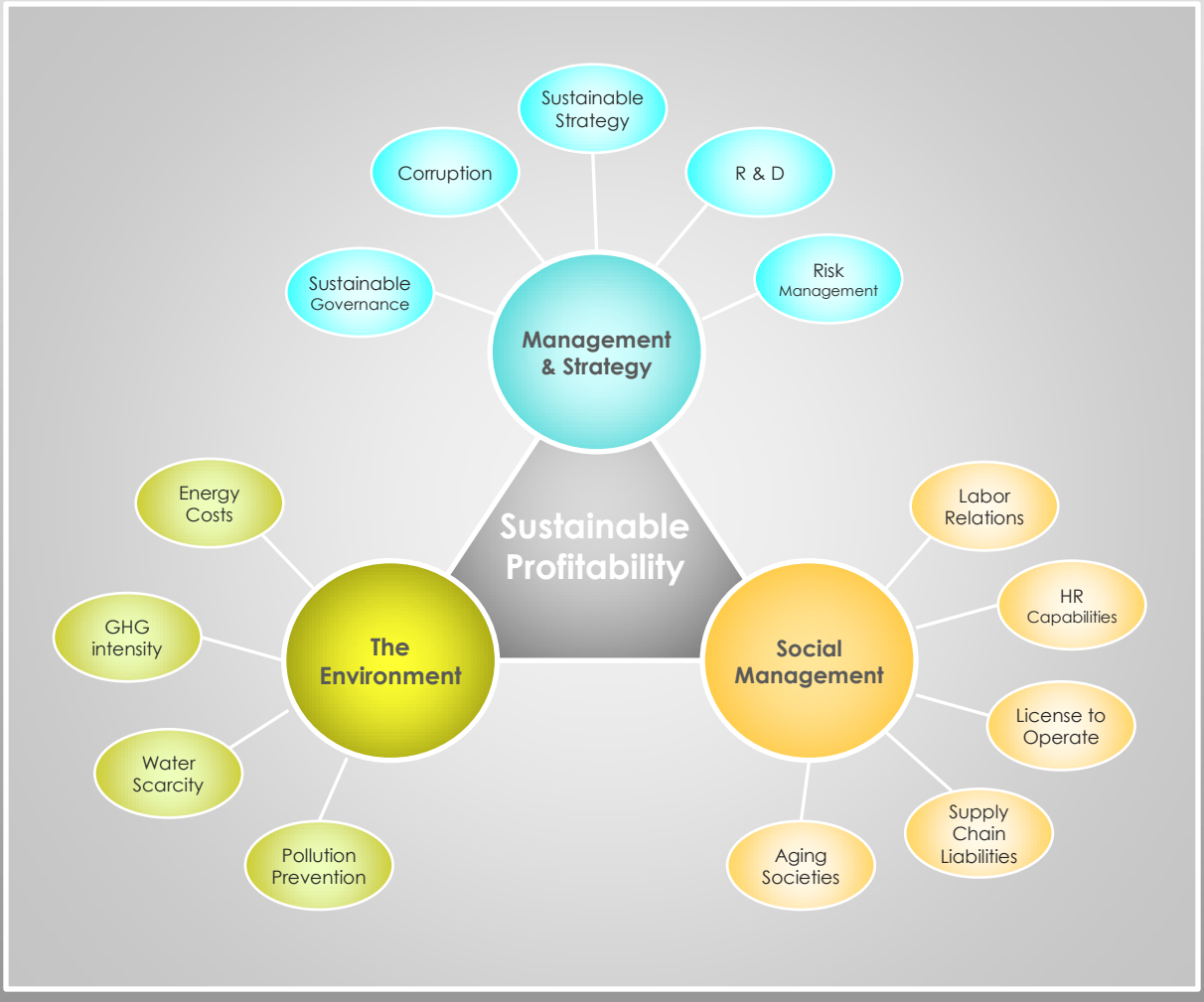
Sector Challenges

Sustainable Value Differentiators

Basic Materials: ESG Differentiators

Key challenges in the basic materials sector include:

- high intensity of non-renewable resources. Global rise in energy prices and raw material costs will affect future margins. Operational efficiency, related R&D and business diversification to related services are future differentiators
- High risk of environmental pollution, representing risk of conflicts with regulators AND host communities
- High water intensity – reduction of water intensity and prevention of pollution in light of diminishing aquifers need to be addressed timely
- Low attractiveness for talented skill: good management-labor relations and programs to counter the scarcity of talented workers in aging societies are key

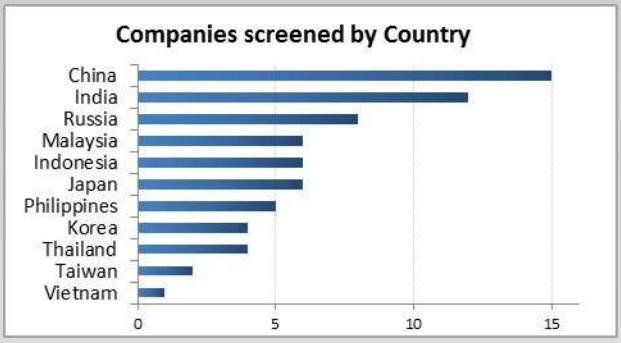


Country Overview

Sustainability Performance

Screening Universe

The assessment universe of basic materials sector companies located in Asia covered in this report consists of 130 companies from 11 countries. The largest contingents are located in the fast-growing economies of China and India, where construction and heavy industry consume large amounts of steel and other metals to power growth.



Country Frontrunners

For reference purposes, the leading (frontrunner) company in each country is published.

The difference of SolAbility's methodology to prioritize performance over policies is highlighted in the fact that Korea's leading sustainability company in the basic materials sector is not the POSCO, which is recognized as a sustainability leader by conventional ESG methodologies. While POSCO has far-reaching sustainability disclosure, high coverage of management systems certification and policies covering all aspects that ESG rating agencies look for, POSCO's performance has not improved in line with its policies. Despite numerous initiatives as described in its reports, the company's GHG and energy intensity has improved only marginally over the past 10 years and is considerably higher compared to leading companies, which will have cost implications in light of rising energy and possibly carbon costs. In addition, the company' multi-billion investment project in India has stalled for several years over unawareness of the local socio-economic environment, leading to considerable capital costs.

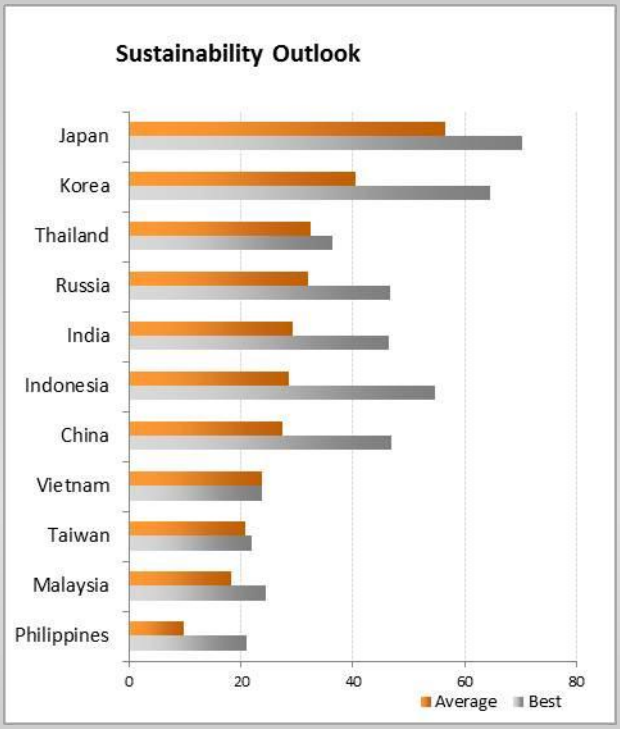
Country	Sustainability Frontrunner
China	Sinosteel
India	National Aluminum Company
Indonesia	Aneka Tambang PT
Japan	Nippon Steel
Korea	Hyundai Steel
Malaysia	CSC Steel
Philippines	Philex Mining
Russia	Magnitogorsk Iron & Steel
Taiwan	China Steel Corporation
Thailand	Sahaviriya Steel Industries
Vietnam	Vietnam Steel Corporation

Sustainability Performance

Country averages

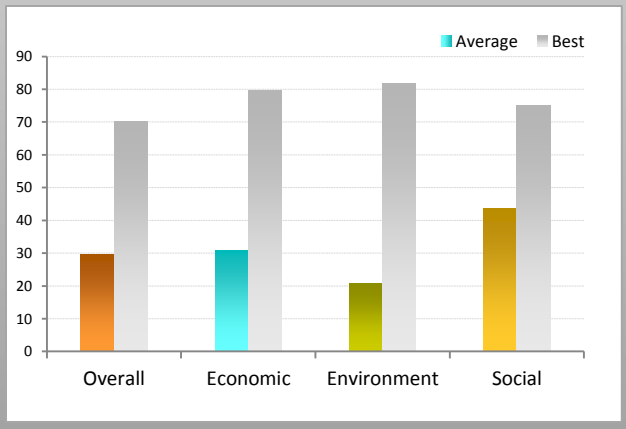
Key Observations: Overall Sustainability

- Maybe not surprisingly, the highest averages are achieved in countries where economic development has taken off earlier than in the emerging economies (Japan, Korea).
- Introduction of stringent levels of environmental and work-place-related have lead to higher adaption of operational safety measurements (Korea, Japan)
- comparable high historical energy taxes have lead to a long-rooted awareness for the cost-saving implications of eco-efficiency .
- Companies based in Thailand achieved a surprisingly high average
- Russian companies have started to "clean up their act", reflected in above average scores
- India and China remain mixed bags, with some companies achieving good performance, while others lay behind
- Corporate sustainability has not really taken root yet amongst companies in frontier markets (Philippines, Indonesia). Early stages focus on social activities rather than all-inclusive sustainable management approach



Criteria Observations

- Social aspects management and performance are highest developed across averages of all countries
- Environmental efficiency management - perceived as cost factor in the short term financial view point - shows lowest average performance, and therefore serves a strong differentiator between future winners and leaders in the resource intensive basic material sector



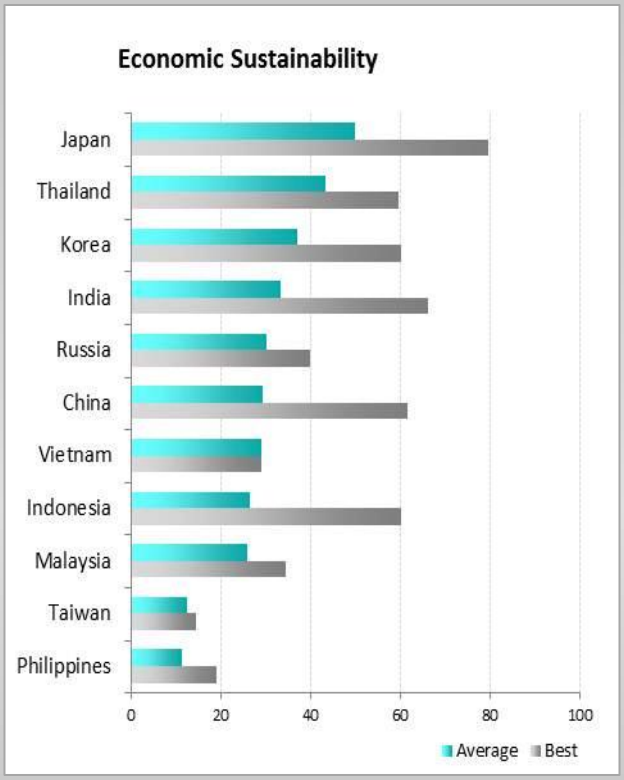
Economic Sustainability

Overview

Economic Sustainability Overview

Results are based on performance analysis of

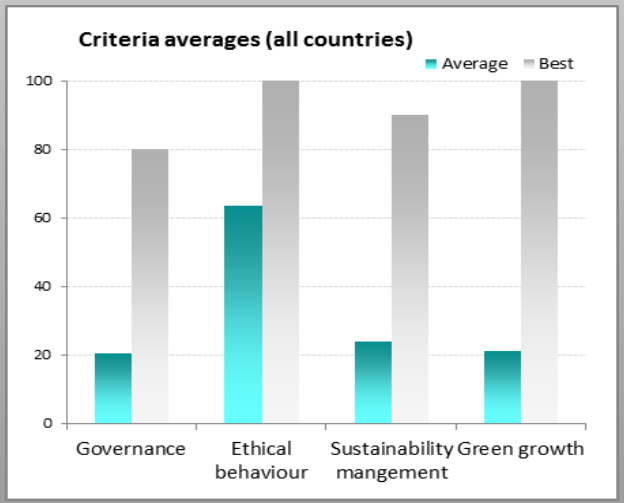
- Sustainable Governance (independent management overview to reduce strategic and mismanagement risks) Sustainability Governance (management role in corporate sustainability),
- Corruption performance, and
- Integration of Sustainability in strategic roadmap, R&D, and product development



- Large spread between average and best companies is visible in most countries (other than Russia and Thailand)
- Despite know issues with Governance (lack of independent management control through independent supervisory bodies), Japanese companies top the list
- Thailand scores surprisingly high on average, but does not have a top scorer in terms of sustainability management

Issue Observations

- Companies across all countries have advanced furthest with the adoption of ethical policies and management systems. However, while policies are applied to common staff, ethical management has not been implemented at top management level in all cases (corruption and illegal business practices present a management rather than an employee problem)
- Integration of sustainability management as a core strategic element remains low, and show large differences between leading companies and laggards both across and within countries
- While some companies have adapted green growth strategies, awareness for cost reduction potential and new business opportunities is still low at this point in time

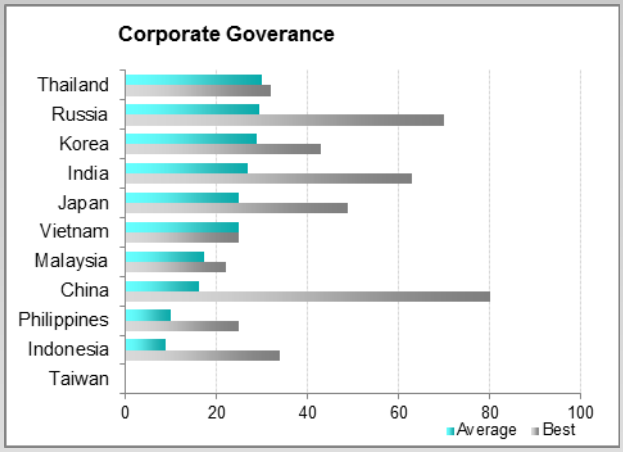


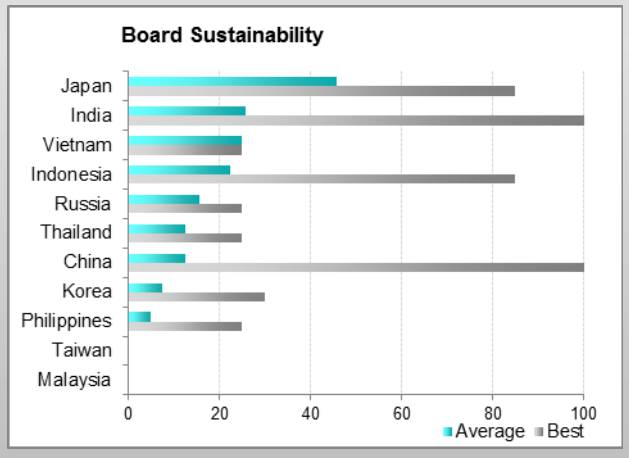
Governance & Corruption

Low Board Integration

Governance Issues

- Clear governance structures providing shareholders and investors with a certain level of guarantee against executive miss-management through independent management oversight, is not highly developed in most countries
- In addition, Governance issues are seen as a formal compliance issue with investor demands that should not interfere in management, particular in companies controlled by minority shareholders (e.g. the large Chaeobols in Korea, oligarchy-controlled companies in Russia)
- Thailand and Russia score surprisingly high
- In China, most assessed companies are still – in some form or another – supervised and/or controlled by the government or government agencies. Governments, by their nature, should have a strong interest in the long-term success of national or partially national companies

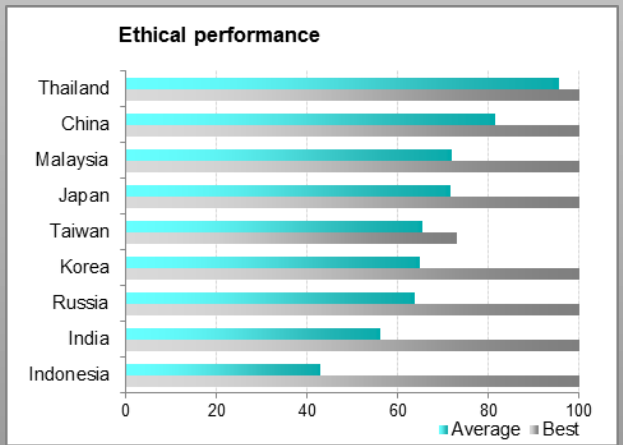




- Other than in Japan, Sustainability and related criteria are hardly managed, monitored or regarded as responsibility of the Board or other management supervisory bodies, reflecting the comparable low recognition of business value of a beyond business as usual approach in emerging/'frontier countries

Corruption performance

- Corruption policies have ben implemented in a more or less advanced ion nearly all companies, and low-level corruption is being pursued in most companies.
- However, ethical performance is a management problem rather than an employee problem, with price agreements and corporate bribing to win bids -often in very subtle form – is still widespread in most countries.

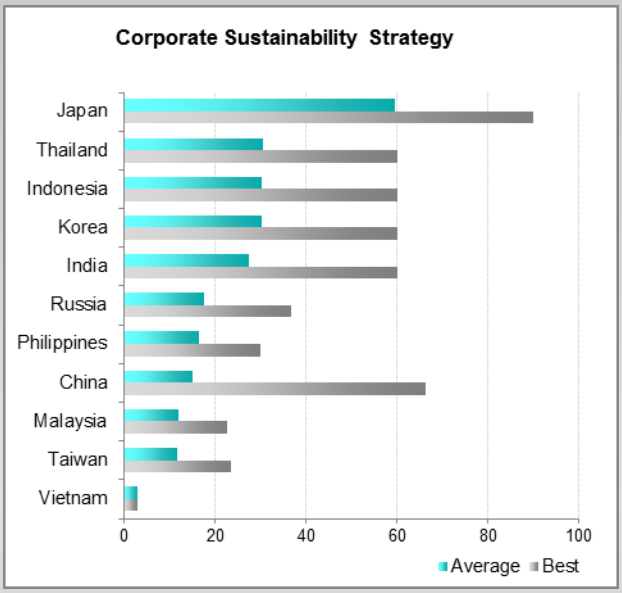


Sustainable Growth Strategy

Sustainable Differentiator

Sustainability Strategy Implementation

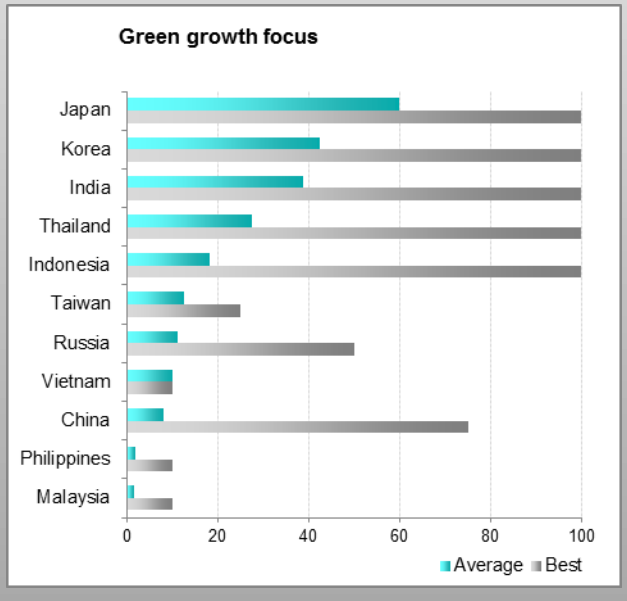
- Future profit margins as well as the strategic success are directed by management and investment decisions made in recent years and from now on forward. Integration of "non-financial" (financial!) sustainability criteria in strategic and investment decisions is therefore a key element of sustained business perspective.
- Early stages of sustainability concentrate on "CSR" – anti-corruption and social activities that do not add substantial business value
- The level of integration and comprehensiveness of sustainability strategy shows large differences between companies)leaders vs. laggards) across all countries



Green Growth Focus

- Japanese companies are leading the field
- Strategic national development policies increase business focus – identification of green growth opportunities have been kick-started by government policies in Korea, and China
- Large differences are visible between leading companies and laggards

- **Green growth and integration of sustainability management is a strong differentiator for identification of future business value of a company**



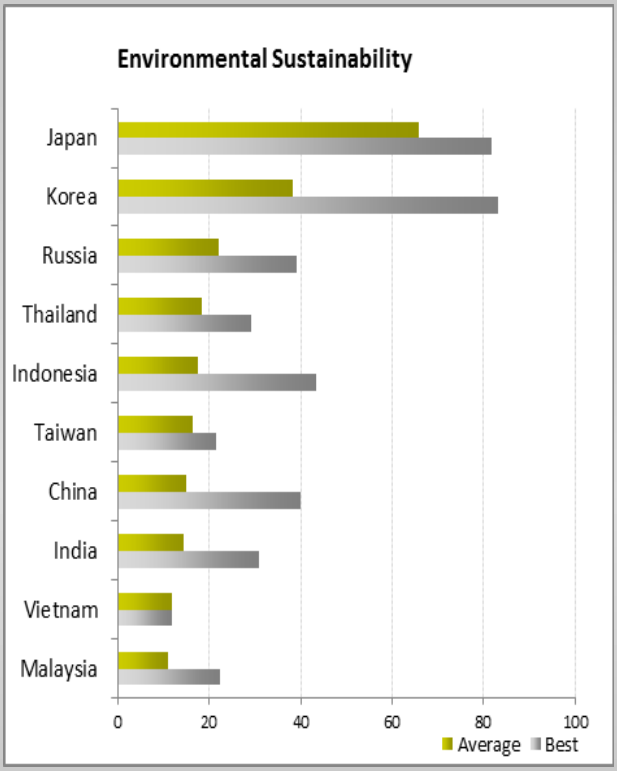
Environmental Sustainability

Overview

Environmental Performance

Results are based on based on

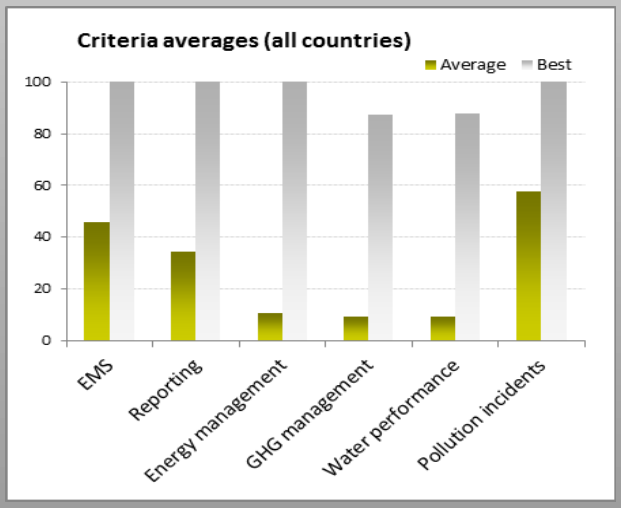
- Environmental management and environmental data management
- Energy management and efficiency
- GHG management and intensity
- Water risk management and water intensity
- Pollution prevention and incidents



- Average Japanese companies are far advanced over other economies
- Large differences between progressive companies (leaders) and companies following a compliance-driven business-as-usual approach
- Companies in emerging markets (China, India) have only started to introduce eco-efficiency measurements
- Companies in frontier markets hardly go beyond regulatory requirements as of yet

Issue Observations

- Average across all countries is highest in terms of implemented management systems
- Actual pollution incidents have been deceasing with tightening environmental regulation and increasing environmental awareness
- Average scores across all economies remains low in energy efficiency and GHG intensity, representing real differentiators for future operational cost development and internal margins
- Awareness for water scarcity risks has not yet been developed to a sufficient level in the basic material sector

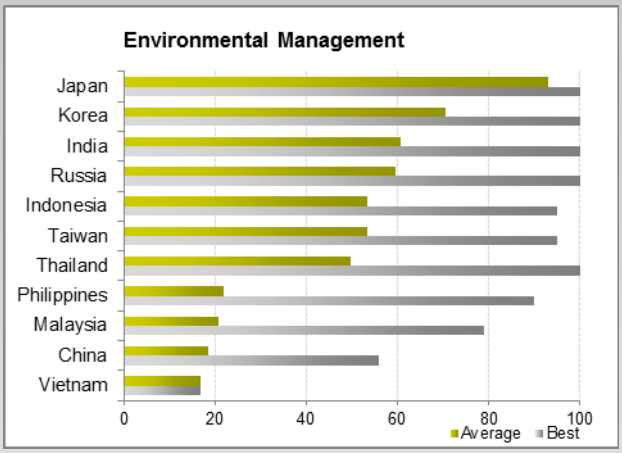


Management & Reporting

Lack of Performance Data

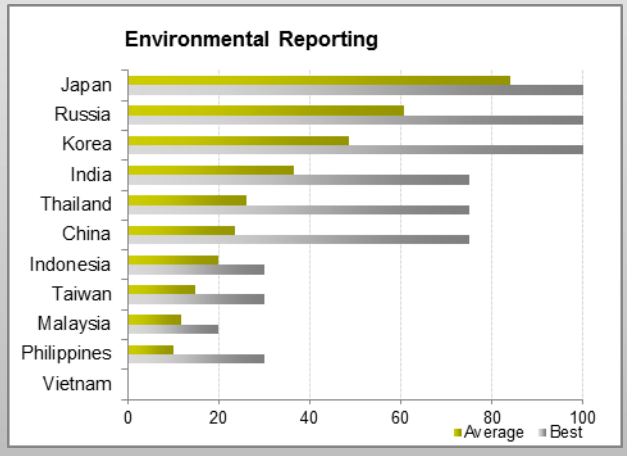
Environmental Management

- Formal environmental management systems are widely implemented in the more developed countries. However, overseas operations do not always follow the same strict approach as domestic operations
- Emerging economies are catching up fast with the implementation of environmental management systems and external certification
- Compliance driven approach: **certification remains a for-profit business** affecting the depth of individual implementation, which can vary to large degree from company to company. Certification therefore has limited value as ESG indicator.



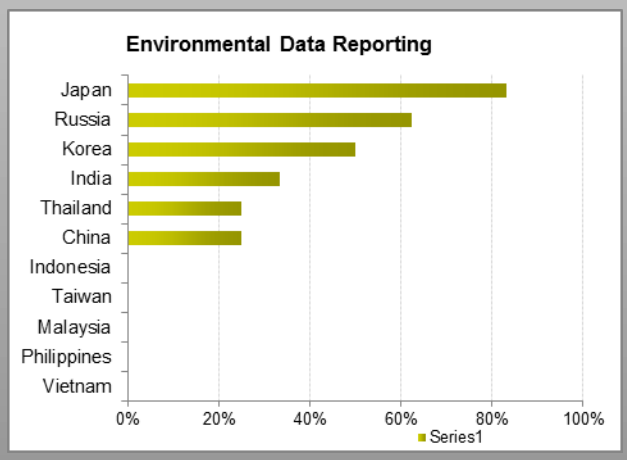
Environmental Reporting

- Environmental reporting levels mirror three main indicators: the size of the company (market capitalization),the level of international exposure of the company, and the state of national legislations and trends.
- Report assurance is increasing. However, the dissemination of the AA1000 based on a highly obscure "stakeholder engagement" definition, does not add value
- **Environmental reporting therefore has little or no value as an indicator and differentiator for the identification of outstanding sustainable value**



Availability of environmental performance data

- Data reporting indicates the level of internal sophistication of data management systems
- Data availability (data series over time) for relevant performance indicators (energy, GHG, water, pollution indicators) are clearly linked to the overall level of development of a country
- Lack of availability of valuable data negatively affects accuracy of ESG results
- Extension of disclosure initiatives such as the CDP or WDP to frontier markets would be highly desirable



Energy & Climate Change

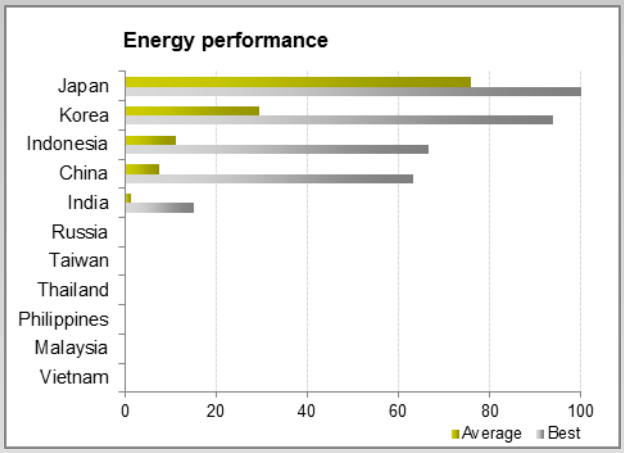
Future Margin Differentiator

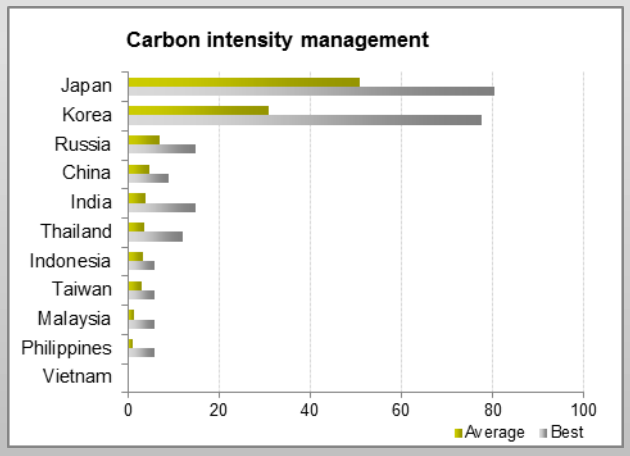
Energy usage

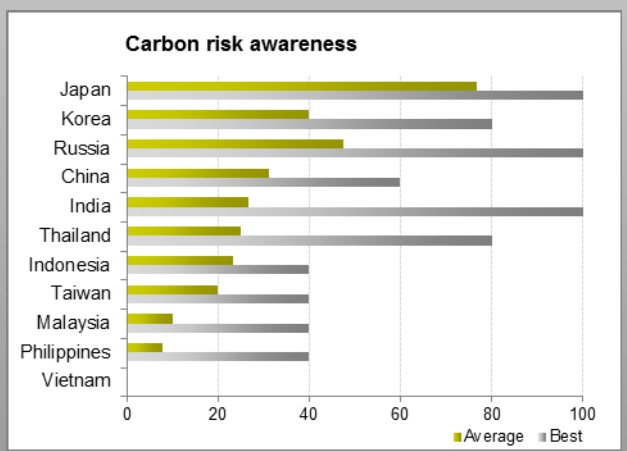
- Inter-governmental talks on Climate Change and international initiatives such as the CDP have brought the corporate focus on the management of, and reporting on, GHG emissions.
- However, unless a global carbon tax should be introduced (a highly unlikely scenario), the energy question remains of much higher importance from a bottom-line impact viewpoint.
- Rising energy costs will have a much higher impact on corporate performance than the complex, politically distorted and inefficient international and/or national cap-and-trade GHG reduction schemes (whose main beneficiaries seem to be consultancies).
- Unfortunately, reporting on energy usage remains weak across most nations.
- The impact of energy taxes on efficiency is clearly highlighted by the energy-efficiency leadership of Japanese companies, leading to above-average future margins.

GHG management & performance

- While energy consumption and GHG emissions are closely linked, GHG emissions also depend on the energy mix and can be educed through substituting of primary energy sources (e.g. coal/heavy oil to natural gas)
- Awareness for carbon risk is rising across all countries, with most companies now making public commitments to reduce GHG emissions
- Recent average GHG intensity reduction is higher in emerging markets than in developed economies with established regulations due to higher cost-effective reduction potential of previously unmanaged emissions sources
- However, systematic tracking of HG emissions in most countries remains low or is in its infancy, and is close to non-existing in frontier markets. Only leading companies have systematic performance tracking systems implemented.





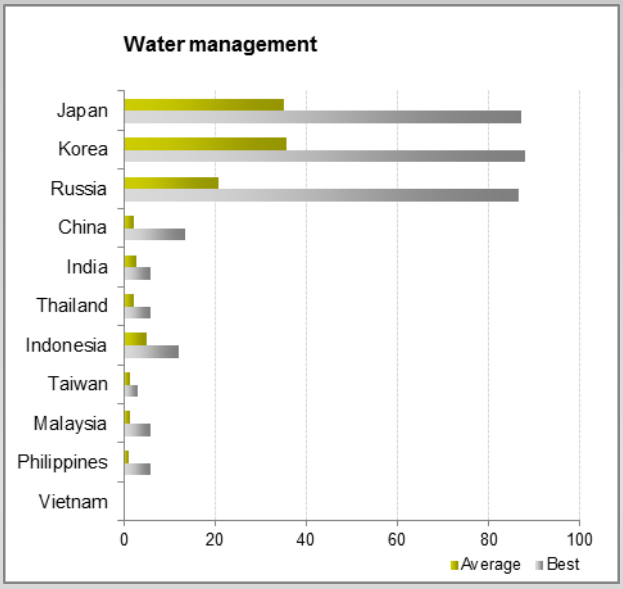


Water Scarcity

Underestimated Risks

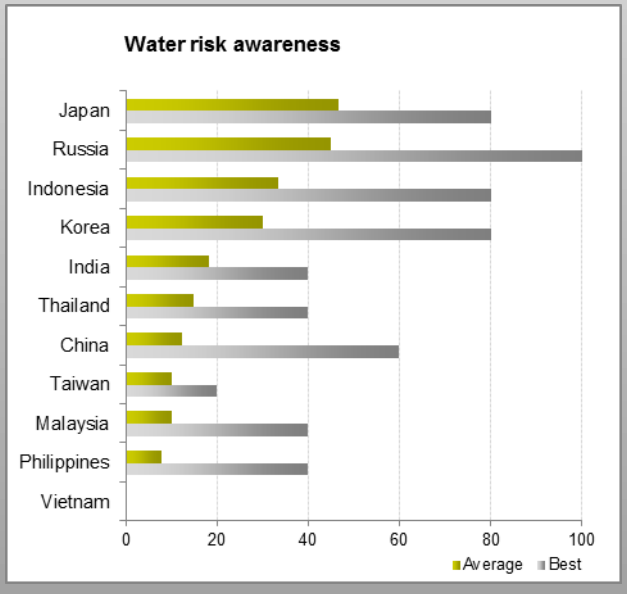
Water Intensity Performance

- Water resource issues and their impact on business operations are insufficiently recognized. Systematic usage tracking and data management systems are implemented only in few companies
- Korea, a country with high population density and accordingly high freshwater withdrawal rate, shows the best performance
- Interestingly, Japanese companies, who are leading the field in terms of energy-efficiency by a large margin, display lower performance for water-related business criteria and operational water intensity
- Chinese companies, operating in a country with highly overused water resources, need to take urgent action
- Very little attention is given to water resources in frontier economies – where, due to tropical climate, water availability is not (yet) critical



Water Risk Awareness

- Risks – both operational risks and its financial consequences – are insufficiently recognized and managed in most countries.
- Russian companies have above-average performance, possibly due to learnt lesson form a past with an equivocal track record, in particularly in relation to pollution
- Water scarcity as a business aspect is still an emerging issue. Recent activities indicate that awareness is rising, and the implementation of relevant policies, management systems and tracking are expected to increase significantly in the next few years, in particular in emerging economies facing potential water stress (India, China)

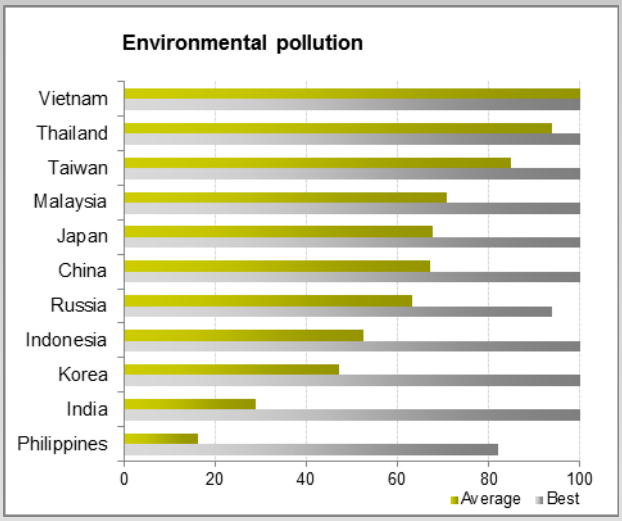


Environmental Pollution

Reduced Pollution Incidents

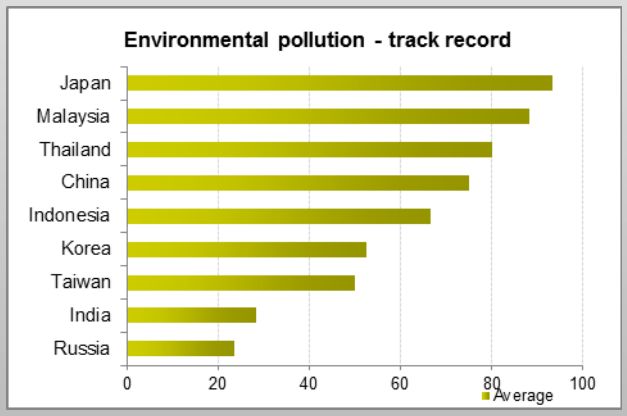
Environmental Pollution Performance

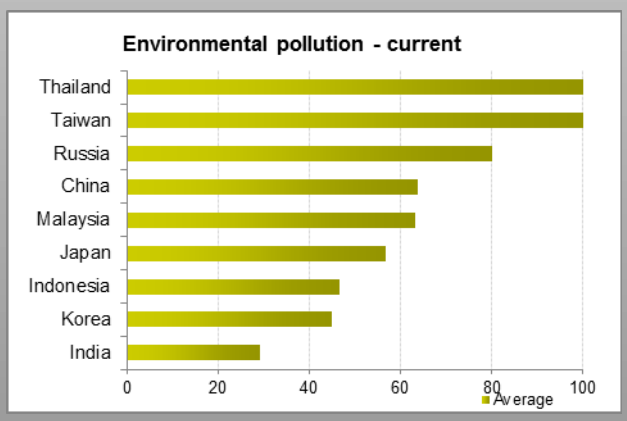
- Most company's follow a "don't hurt/do good" (i.e. CSR – Corporate Social Responsibility) approach as a first step before they advance to true sustainability, which focuses on long-term benefits, both tangible and intangible (similar to the investment community that started with "SRI" before moving to "ESG".
- In this light, it is probably no surprise that the average performance in terms of prevention and actual pollution incidents is highest amongst the considered issues.



Past and Current Pollution Incidents

- Comparison of past and current environmental pollution performance reveals some interesting trends:
- Companies in Russia have a somewhat tainted track record. However, it seems that Russian-based basic material companies have "cleaned up their act" in recent times and are now operating cleaner than in the past
- The same is true, albeit to a lesser extend, for most other country averages



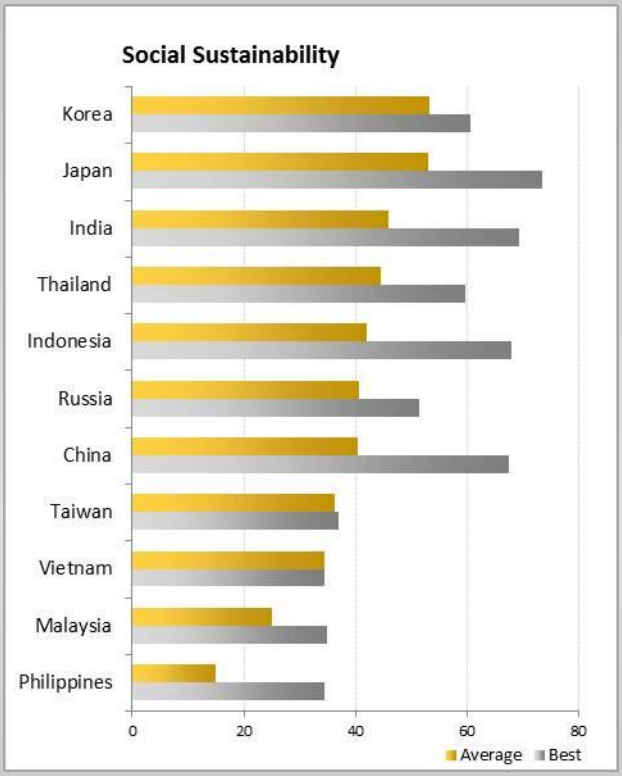


Social Sustainability

Overview

Social Sustainability Performance

- The results of social sustainability performance are are based on Labor relation indictors, HR development indicators, supply chain indicators, and license to operate indicators (social activities, community relations)
- Korean and Japanese companies, based in mature and developed economies, achieve the highest average performance related to social issues
- Differences in social sustainability performance between companies all countries are less significant than in strategic sustainability and green growth implementation (economic issues) or eco-efficiency (environmental issues)

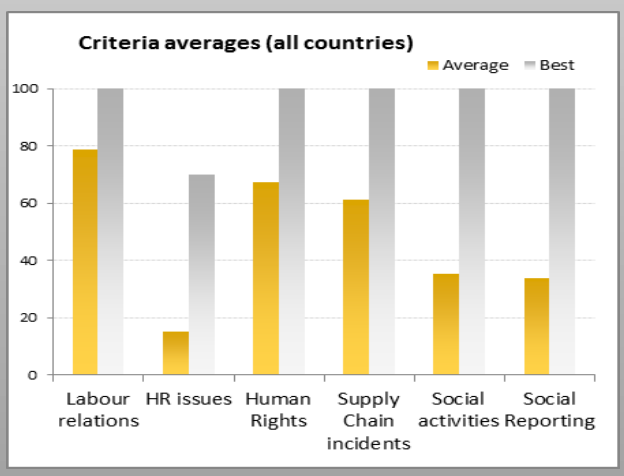


Issue Observations

• Largest spread between leading companies and averages is observed in HR-related indictors

• While some form of corporate social activities have become mainstream, efficient use of resources through win-win strategies are not yet applied in many companies, further sign of most companies being in early stages of implementing CSR

• Coherent reporting on social performance (other than social activities) is not yet a norm

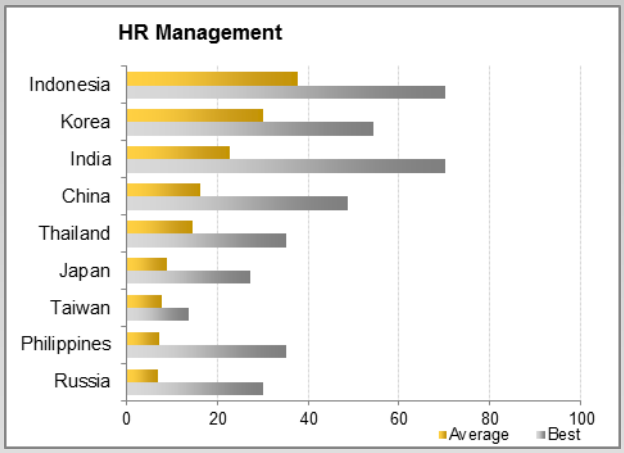


Labor relations and HR management

Social Sustainability

Human Capital Development

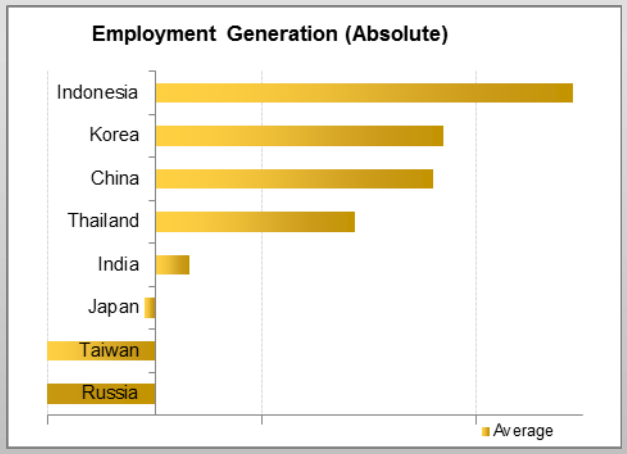
- Overall HR Score is composed of employment indicators, employment generation, gender diversity and development, and compensation (adjusted for Purchase power parity GDP in order to receive comparable results)



Employment generation

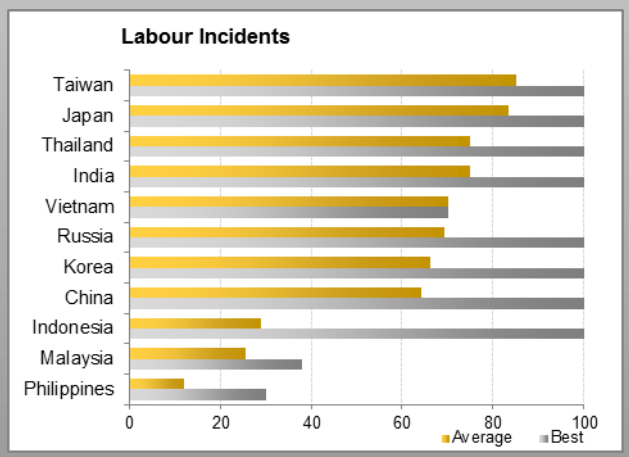
Employment generation (job creation), relative to revenues:

- Emerging markets have the highest employment generation rate in recent years; high productivity in developed economies have to relative loss of jobs.
- The results reflect – to some extend – recent average economic development trends in the respective countries



Labor Incidents

- Taiwan, Japan & Thailand score highest in terms of incident-free labor relations (including labor-management conflicts, strikes, employee safety and employee accidents)
- A combination of poor safety management and unsatisfactory work conditions leads to lower averages in frontier markets

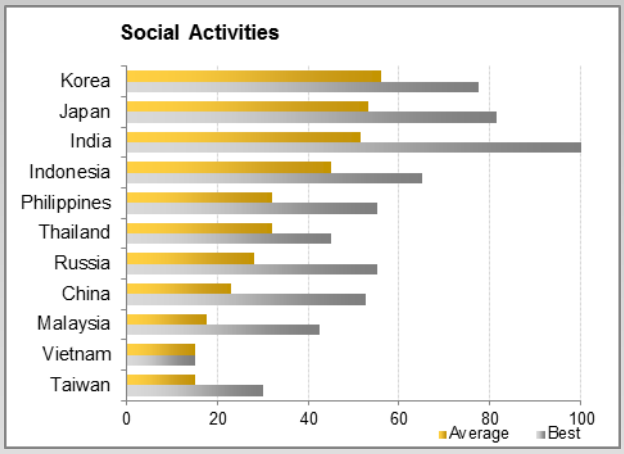


Social Activities & Supply Chain

Win-win strategies in early stages

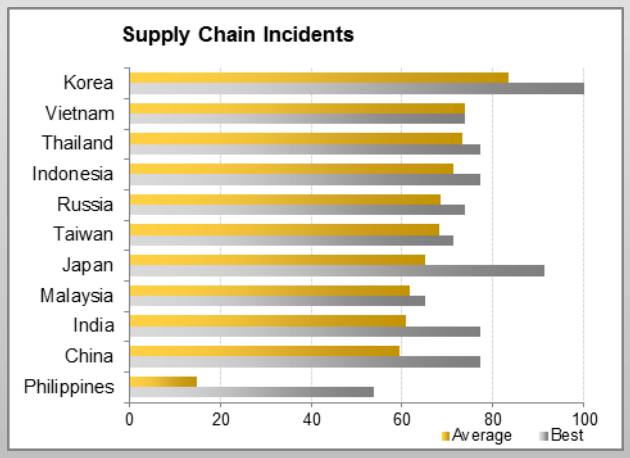
Social Activities

- The management of corporate citizenship activities can help a company to increase its standing with host communities. Developing a comprehensive win-win strategy in this sector is a long-term insurance policy for conflict-free operations
- Korea companies, which has a fairly long tradition of corporate giving, have implemented to most comprehensive strategies on average.



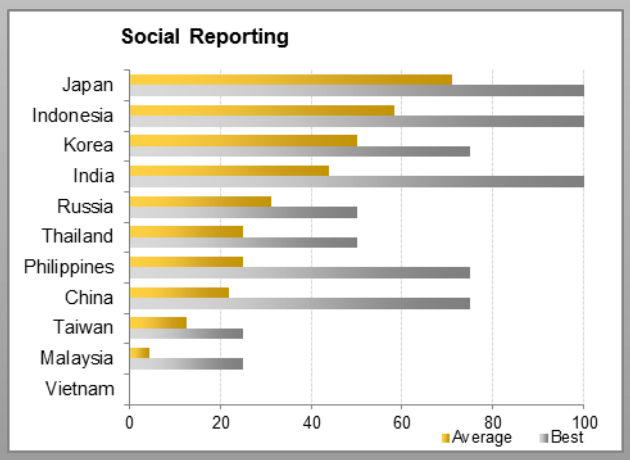
Supply Chain Incidents

- Supply chain management systems are difficult to assess based on policies alone, even if a company publishes a detailed sustainability report (or similar disclosure).
- Negative screening therefore is essential to gain a true picture of a company's supply chain risk exposure and potential liabilities.



Social Reporting

- Reporting, at most companies, is limited on the description of charitable donations to communities and underprivileged groups, and/or employee volunteer activities
- As with environmental reporting, levels of social reporting (disclosure) is more a reflection of a company's size and exposure to global markets than an indicator for the company's social sustainability

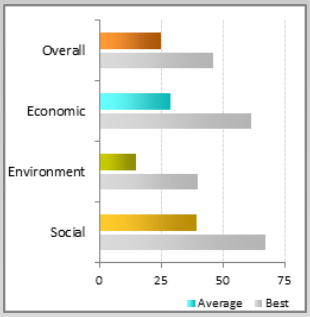


Country Observations

Part I

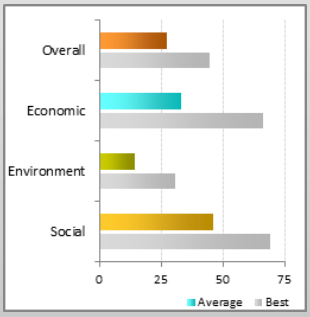
China

China is a mixed bag. Past policies of prioritizing economic development above everything else and the availability of cheap energy have resulted in below-par sustainability performance (in particular in terms of environmental issues and resource efficiency). However, the depletion of resources (water) and higher cost of raw materials due to high demand and rising energy costs have lead to re-thinking. Newly build facilities do reflect efficiency improvements, and some corporations have been undertaking group-wide improvement potential analysis. In addition, Chinese companies have become aware of green growth business opportunities, indicating improved future performance. Most Chines companies, even if listed, are somehow controlled through Government officials which are present in Board-like bodies. To Governance purists, this is probably not best practice and entails risks of political interference – but then again, how many Boards in "mature" Western companies are truly independent?



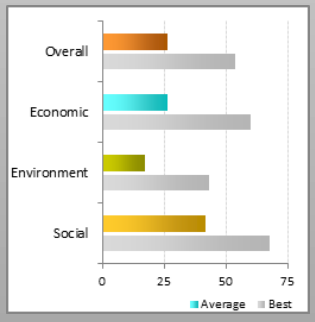
India

Indian companies fair comparable well in social terms, but average awareness for cost/opportunity implications of integrated sustainability management and related efficiency improvements are only starting to creep in. That said, some of the large – both national and multi-national corporations – show promising signs and are starting to take steps in the right direction. Corruption remains an issues, while Governance policies are fairly developed.



Indonesia

Indonesia shows all characteristics of a frontier market and an economy in early development stages, currently still in the stage of resource exploitation to stimulate growth rather than exporting know-how based, value added finished products. While companies have started to implement pollution prevention measurements and have discovered the importance of community engagement for retaining smooth operations in host communities (in particular the mining companies), further going developments in terms of pro-actively seeking new business opportunities and reducing resource efficiency are not yet visible.

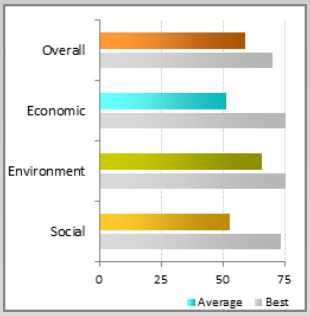


Country Observations

Part II

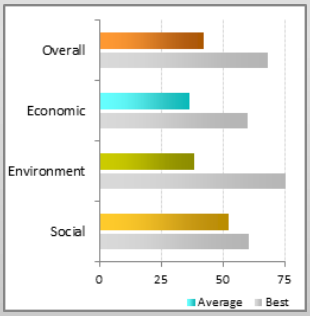
Japan

Japanese companies are mainly used as reference in this report. The corporate culture in Japan is unique, leading to the absence of any form of independent management control (other than "the market"…) that is considered best practice in the Anglo-Saxon governance models. Japanese companies today benefit of the early introduction of environmental regulation and relatively high taxes on energy compared to other countries. The higher taxes have lead to early realization of the cost implications of resource efficiency – as a result, Japanese companies in the basic materials sector are today far more efficient than their counterparts in Asia (as well as in most "developed" countries), meaning that Japanese companies will enjoy a significant competitive advantage in the area of high energy prices which we are about to enter.



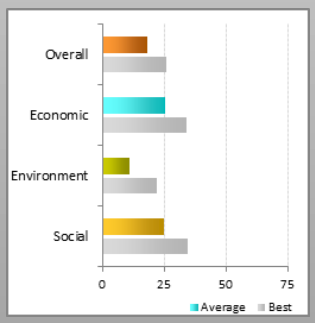
Korea

There is a very clear distinction between companies that are globally active and companies that are mostly catering to the (significant) domestic market. While the large companies have gone quite far in terms of implementing sustainability related policies and are venturing in green growth related business fields, smaller companies – until very recently – have paid worryingly low attention to resource efficiency as a consequence of the governments policy to provide cheap energy to spur economic development in the past. However, all companies have now been required to draw up efficiency improvement plans , facing potential penalties should certain targets not be reached. Governance is dependent on the company – while legislation requires all companies to have a Board with a majority quota of "independent" Directors, management control in Chaebol-style organizations remains non-existent.



Malaysia

Malaysian companies are currently in a stage somewhere between emerging and developed economy sustainability standards. Environmental management systems have been implemented, and first steps are being made into the direction of further integrating of sustainability through better manage of resources, and human capital. As in other countries, there is a difference between export-oriented companies and companies with a domestic focus

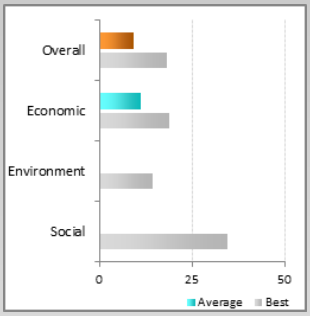


Country Observations

Part III

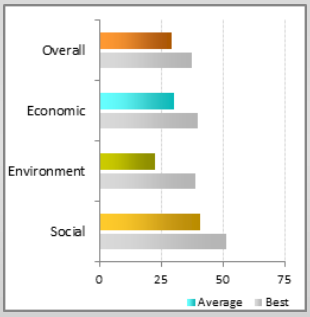
The Philippines

Companies based in the Philippines are mainly active in raw materials exploitation rather then focusing on manufacturing value-added finished products. Given the standards of the infrastructure – from a technical and regulatory point of view – it would be too much expected from companies to have to most modern management systems implemented. Philippines companies are in the very early stages on the road to sustainability, with environmental protection, regulation and accountability only being implemented as we speak.



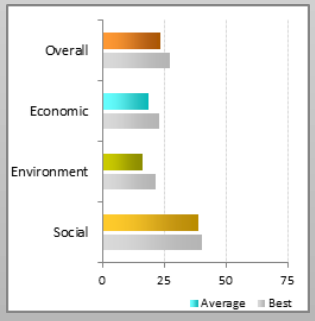
Russia

With the long decline following the collapse of the soviet union and the subsequent political and economical miss-management of the transition, Russia has been associated with dire environmental pollution and leaks of discarded industrial facilities. However, recent developments indicate that Russian companies have found their back foot again, have significantly reduced pollution and established management systems to monitor resource efficiency, leading to improved overall performance. While most companies have a Board-like structure, Governance in companies controlled by single majority or minority shareholders remains weak to non-existing.



Taiwan

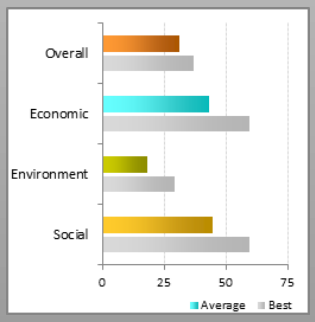
Companies based in Taiwan have implemented established management systems as a standards. However, it seems the business value of long-term sustainable management has not been fully recognized, as companies are somewhat stagnant and do not venture further down the road in terms of fully integrating sustainability in strategic management initiatives.



Thailand

Basic Material companies based in Thailand – a country often associated with high levels of corruption and political turmoil – display a surprising high level of awareness for, and implementation of, sustainability management measurements. Most companies have gone beyond pollution prevention measurements, with established resource efficiency monitoring systems to capitalize on improvement potential. IN addition, some companies have started to actively seek out green growth business opportunities.

The sample of surveyed Vietnamese companies is too small to draw conclusive conclusions.



Conclusions Part I: esG

Challenges, Opportunities

Observations on Sustainability, Governance

ESG 2.0

Different research methodologies yield different results. While we are proud of our research methodology, the consistent under-performance of show-case sustainability indexes and ratings is of high concern and a hindrance to both integration of sustainable investment in mainstream asset management in the finance industry as well as the advancement of corporate sustainability on a global level – and therefore needs to be addressed urgently through adoption of research processes to the changing environment.

Sustainability Performance

Sustainability performance differs to a considerable extent from laggards to sustainability leaders in all countries, allowing for identification of valuable investment opportunities and risk of bonds. The national level of economic development and state of regulations and taxation (energy tax levels do influence energy efficiency, for example) does have an impact on the level of integration of corporate sustainability. For investment purposes, the comparison of companies from within a country is therefore more viable than between countries.

Governance

It seems that the Anglo-Saxon model of governance with some kind of management overview and/or control is taking hold in Asia. Even in Japan, there are discussions surrounding the introduction of introducing some form of management control. However, in many cases – particular in companies controlled by a minority and or family shareholder - governance bodies have a pure formal function, fulfilling regulatory minimal standards without actual decision power.

Sustainable Management & Business Strategy

Integration of sustainability measurement into management strategies is currently on a low level in Asia's emerging and frontier markets. Most companies follow a gradual approach, similar to the evolvement of corporate sustainability in the "mature economies", starting with social activities, ethical guidelines, and integration of serious pollution prevention management before moving into the strategic sustainability areas. In Japan, sustainability is considered a cornerstone in most surveyed companies, while Korea is a mix picture – some companies have fully implemented sustainable measurements while others remain worryingly unaware.

Conclusions Part II: ESg

Challenges, Opportunities

Observations on Environment, Social Management

Policies, Certifications, and External Reporting

Policies are being developed and external certification (ISO 9001, 14001) are spreading. Larger companies and companies exposed to the global market or listed internationally (i.e. also outside their home market) have started to publish Sustainability Reports. However, there is a very clear correlation between size and levels of policies, certification and external reporting. This three traditional ESG indicators reflect the size of the company rather than the level of sustainability integration or performance.

Data Management & Sustainability Performance Date

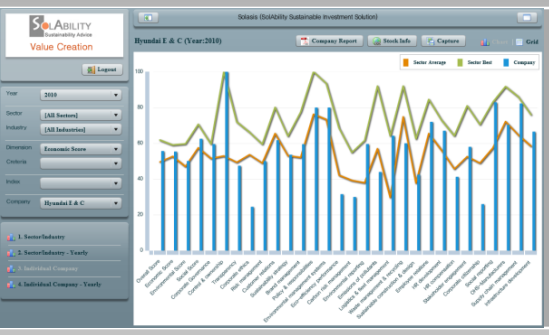
In developed ("mature") economies, modern IT-based data management systems with central data analysis capabilities are not yet established across companies. In emerging economies, such systems are even less widely implemented. Reliable data series are therefore hard to come by at this point in time. However, with advancement of computer applications, data will be more readily available in the near future. The expansion of the CDP and WDP into emerging and frontier markets could help speeding up this process.

Energy & Climate Change

Climate Change is now an everyday term in the business world, including emerging markets. The level of data management is clearly linked to national regulation, and only few companies go the extra mile of voluntarily establishing full data management systems if not required so by law. However, awareness has been increasing sharply, and a rising number of companies have committed to quantitative and (more often) qualitative emissions reduction targets. Strategies to reach targets, however, remain vague. In the absence of a global agreement on GHG emissions or a carbon tax, energy efficiency remains the key bottom-line driver. The recent surge in energy prices following Middle East unrest once again highlight the vulnerability of the energy-intensive basic materials sector. Energy efficiency a clear differentiator for future profitability.

Social

While labor practices in some companies and/or countries probably would not withstand the scrutiny of a seasoned Europe-based auditors, labor practices – generally – improve in step with economic development. The same applies to supply chain incidents. Further improvements across all countries are needed in terms of citizenship to allow companies to retain their license to operate in their host communities in the long term with increasing economic development and rising people's awareness for their own rights.



SolAsis – The Platform

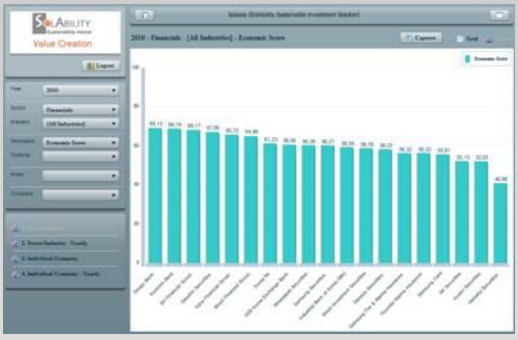
ESG 2.0: Adding Value to Research

SolAbility Sustainable Investment Solution – SolAsis

ESG 2.0 research findings are available through a web-based, interactive platform that allows for overall sustainability guidance on emerging Asia companies as well as for custom-specific screenings, based on individual or client-related investment criteria.

In addition to the on-line data screening, data is downloadable in excel form for further analysis, or integration with existing analysis tools.

A detailed report for each company in the database is available for download.



At full capacity, the **database** will contain data and performance indicators for **more than 2000 companies**, covering the following countries:

- China,
- Hong Kong,
- Taiwan,
- India,
- Russia,
- Korea,
- Japan,
- Malaysia,
- Singapore,
- Thailand,
- Indonesia,
- The Philippines,
- and Vietnam.

Further countries might be added in the future.

Should the database not cover all companies, further equities can be screened on customer wish.

In case you wish to be informed in more detail, please contact us.

ESG 2.0 Emerging Asia

Sustainable Investment.
Our Future.
Your Wallet.

SOLABILITY
Sustainability Advice

Disclaimer

No warranty
This publication is derived from sources believed to be accurate and reliable, but neither its accuracy nor completeness is guaranteed. The material and information in this publication are provided "as is" and without warranties of any kind, either expressed or implied. SolAbility disclaims all warranties, expressed or implied, including, but not limited to, implied warranties of merchantability and fitness for a particular purpose. Any opinions and views in this publication reflect the current judgment of the authors and may change without notice. It is each reader's responsibility to evaluate the accuracy, completeness and usefulness of any opinions, advice, services or other information provided in this publication.

Limitation of liability
All information contained in this publication is distributed with the understanding that the authors, publishers and distributors are not rendering legal, accounting or other professional advice or opinions on specific facts or matters and accordingly assume no liability whatsoever in connection with its use. In no event shall SolAbility be liable for any direct, indirect, special, incidental or consequential damages arising out of the use of any opinion or information expressly or implicitly contained in this publication.

No Offer
The information and opinions contained in this publication constitutes neither a solicitation, nor a recommendation, nor an offer to buy or sell investment instruments or other services, or to engage in any other kind of transaction. The information described in this publication is not directed to persons in any jurisdiction where the provision of such information would run counter to local laws and regulation.

SolAbility Ltd.
Ilsan, South Korea

www.solability.com
contact@solability.com