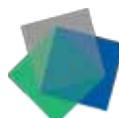


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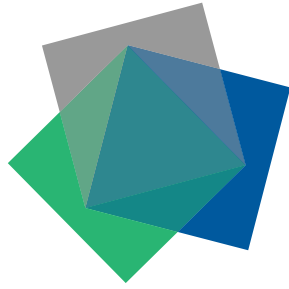
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# TELECOMMUNICATIONS IN ASIA

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# EXECUTIVE SUMMARY

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The telecommunications sector represents a diverse industry with worldwide revenues estimated at \$3.7 billion as of 2009. In Asia, China and India are the biggest markets due to their large populations and significant growth is expected in the coming years as telecom services become available to more and more users. In other Asian countries, forecasts are also very positive. Driven by constant innovation, new technologies and applications, several big industry players have emerged in Asia. There are many opportunities for investors as small, innovative companies seek support to expand their markets while large companies search for partners to sustain their capital-intensive growth.

This report provides an overview of environmental, social and governance (ESG) issues in the telecommunications industry in Asia. We highlight the issues that we believe pose the biggest threats to a company's operations, reputation and profitability. We think that responsible telecom corporations should monitor, measure and report on these risks to provide a comprehensive assessment of their business models and also to provide assurances to their investors on their understanding and management of sustainability issues.

In this report, 32 Asian telecommunications companies we assessed and benchmarked them against a total of 109 ESG indicators. Our research found that the 'Leaders' among Asian companies in the sector on sustainability disclosure were DiGi.com in Malaysia, Chunghwa Telecom in Taiwan, SK Telecom and KT Corp in South Korea and China Mobile in Hong-Kong.

This report begins with an industry and market overview followed by three sections dedicated to ESG issues. Supply chain considerations are then discussed because of their importance in the industry. Finally, a financial overview is given covering private equity and mergers and acquisition (M&A) activities in the region.

## Environment

This report analyses the industry's environmental footprint, life cycle management and water usage and pollution. We discuss the reputational, regulatory and operational risks that telecom corporations must consider and properly manage to achieve a sustainable business.

While improving the energy efficiency of equipment and using alternative and renewable energy sources seem to be the future on the product design side, several initiatives have been taken to reduce the environmental impact of the industry overall. Management of products' end of life and finding solutions for the recycling and disposal steps of the life cycle is a priority. Trade associations and regulators are trying to address environmental concerns but progress is slow. However among our benchmarked companies, several firms have decided to be proactive to compensate for the lack of regulatory guidance. For example, they have developed green products, closely monitor the practices of their suppliers to ensure they are environmentally responsible, and collaborate with other industry players to share best practices.

Finally, telecommunications has a major role to play in addressing climate change as it can enable other industries to reduce their footprint by adopting virtual alternatives.

## Social

On the social side, reporting is weak for virtually all the companies we benchmarked. Furthermore poor working conditions and low labour standards are a major threat to corporate reputations and brands. Occupational health and safety systems are not widely implemented and the selection and control of suppliers usually do not take into account important employee health and safety criteria. Child labour, excessive overtime and the lack of freedom of association are still common. On the supplier side, each sourcing company has its own labour standards requirement making implementation difficult.



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Marketing practices, network security, data privacy and freedom of expression are other material risks for the telecoms sector. The lack of international guidelines is a major challenge for firms when dealing with many different governments and regulators. Another concern is the huge amount of personal data transmitted and stored over different networks. Few companies take measures to raise consumers' awareness and education or to implement preventive actions on these topics. This may change in the future as security and privacy issues become more important to users.

Access to telecommunications technologies has improved but still varies greatly between and within countries. Initiatives to bridge the digital divide are appearing, benefiting the economy and population development. However the regulatory environment is not always mature or robust enough to enable corporations to undertake such projects. Investing in this area is nevertheless an excellent opportunity for companies to grow by attracting new customers and generating additional sustainable revenue streams.

On the community side, telecommunications are critical during natural disasters and political instability, and could be better leveraged to improve risk management. They also enable others industries to become more sustainable and provide better services to remote areas.

### **Governance**

Corporate governance among telecom companies has improved significantly in recent years, with all companies publishing annual reports and most meeting the governance requirements of the exchange they are listed on. However, corruption is still a major concern in most of the countries of our universe and several companies have taken their own actions to counter the lack of local law enforcement. Political risks are also high as governments often decide on awarding licences attribution and thus shape the future of the industry.

### **Supply chain**

Responsible supply chain management is very important to encourage a sustainable industry along the whole value chain and spread good ESG practices. Practices in our universe still lag behind those of global leaders' ones and require attention.

### **Conclusion**

Investors will continue to find opportunities in the telecom sector in Asia as operators invest in new infrastructure and manufacturers develop new technologies to meet growing demand. Players are increasingly concerned about ESG issues and disclosure has improved in the last years. While environmental initiatives and better governance can be observed, the impact on employees, consumers and communities still lags behind global peers. Investors can also focus on the services that telecom firms deliver to other industries, enabling them to become more sustainable. This will help create new market niches and generate sustainable revenue streams while contributing to the growth of the overall market in Asia.

# KEY INSIGHTS

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- 1. The Asian telecommunications market will grow significantly in the near future and represents huge opportunities for outperformance for prospective investors.** Innovative technologies and infrastructure deployment in Asia, particularly in India and China, will continue to grow and companies will look to the capital markets to support their growth. In addition, Asian telecoms markets are now more open to foreign investors. Mergers and acquisitions as well as private equity activity are expected to remain strong, even though consolidation may occur within the largest players.
- 2. Globalisation has led the Asian telecoms companies to adopt good corporate governance practices and has encouraged governments to define comprehensive regulatory frameworks.** Most of the countries in our universe have independent regulatory authorities; however political risks still need to be considered as governments often grant operational licences rather than independent regulators and agencies. Because of stock market listing requirements, corporate governance is improving in Asia; however corruption is still a major problem. Some leaders have adopted strong ethical policies and are committed to tackling this issue. However, the commitment of private and public sectors is necessary to achieve long-term sustainability. Investors and corporations would benefit financially from better practices that reduce the cost of capital and lessen risk.
- 3. Labour practices in the telecom sector, especially in suppliers' factories, are still a major concern for the industry and may impact its reputation and sustainability.** After well-publicised employee suicides at Foxconn, a major Taiwanese telecom and IT manufacturer with operations in China, awareness of working conditions has risen. As a consequence, corporations in Asia are investing more in occupational health and safety measures as well as supply chain auditing. However many companies could improve working conditions, workforce diversity and toleration of labour unions. In addition, telecom technologies can be used to offer better work-life balance by providing more flexible work environments.
- 4. The telecom industry is able to reduce the total global carbon footprint by providing technology to enable other industries to reduce their emissions and become more sustainable.** Few players in our universe disclose their emissions or quantifiable targets to reduce their own carbon footprint. Telecommunications sector contribution to global emissions will increase in the future because of rising service penetration, however the emissions of other industries should significantly reduce thanks to mobility or 'smart', portable technology. The telecom sector can raise awareness among other industries about the benefits of technology. Initiatives to partner with other industries are emerging but not yet significant. Trade associations play an important role by developing initiatives to counterbalance the lack of leadership from governments and regulators.
- 5. Environmental design to reduce energy and water consumption are upcoming challenges for the telecommunications industry, which is historically driven by innovations.** Companies are exploring solutions using alternative energy sources such as wind, solar and bio-fuel. They are also developing new products that are more energy-efficient, made of recycled parts or easier to recycle. Concerns about water pollution and water usage are increasing and companies understand that it is as important to consider climate change as it is to achieve sound water management. However few companies actually implement those initiatives in Asia. We expect industry players to be more committed in the future. Governments should take the lead by enforcing existing laws and defining new ones to generalize good practices.

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- 6. Potential adverse effects of electromagnetic field (EMF) emissions on humans remains a hot issue and could have severe financial consequences on the corporations and thus ultimately on the investors and their beneficiaries.** Most of the studies published so far may be criticised for their lack of objectivity as they were funded by industry players. In addition, habits and products have evolved a lot in the past decades and adverse effects such as brain tumours may take a long time to be detected. The World Health Organization (WHO) launched the EMF Project in 1996, and new recommendations should be issued in 2012. Depending on the outcome, companies may be heavily affected as products may not conform to the new standards. Companies could also become the target of individual and class action law suits for not having warned about potential adverse effects. They should carefully follow any new developments on this topic, anticipate any change of regulation and take action now to prevent any future liabilities.
  
  - 7. Life cycle management, especially disposal and recycling, is one of the major challenges for the industry to achieve global sustainability.** Take-back programs and reverse-vending are appearing in Asia but consumers and companies are slow to adopt good practices. In terms of recycling, regulators and governments are improving industry practices, but this is not promoted in all the countries in our universe and some companies are taking their own initiative to promote environmentally friendly practices. New business opportunities are appearing in the recycling sector and strong growth is expected.
  
  - 8. Telecom technologies can help in achieving the United Nations Millennium Development Goals.** By bridging the digital divide and allowing even those in the most remote areas, to have access to information and communication services, the industry can help emerging economies develop. Access to education and health services could be improved tremendously thanks to the latest technologies. Mobile money and eHealth programmes are examples of such applications. While corporations do not often invest and deploy such services, the long-term benefits include increasing the customer base and generating new revenue streams.
  
  - 9. New technologies have brought concerns over security, data privacy and responsible content.** The lack of an adequate regulatory framework makes it challenging for companies to handle these sensitive topics. Because of poor guidance from legislators, corporations face a dilemma when they have to distinguish between legitimate and illegitimate demands. While access to information has never been so easy, customers are more and more concerned about the protection of their personal data and also want to control content available to young customers. Some responsible investors even practice "adult content" exclusions now. Corporate and government awareness is rising and several initiatives have been observed in our universe. However adherence to global standards would reduce the risks to a firm's reputation, and would provide adequate procedures and frameworks to answer these concerns.
  
  - 10. An integrated supply chain will be a fundamental step towards achieving sustainable practices throughout the value chain.** Telecommunications manufacturers outsource a lot of their equipment manufacturing and operators deal with many suppliers, particularly in Asia. However companies usually only set policies and conduct audits for direct stakeholders. ESG risks are neither assessed nor monitored throughout the whole value chain. In addition, several customers can ask the same supplier to comply with different standards, making operations difficult. The future of the supply chain management should be a global standard with common practices for all the players. Led by industry players, the Global e-Sustainability Association is working to develop a supply chain framework for the whole industry. We hope that regulators and local governments will join the effort to improve on long-term ESG practices by all companies associated with the telecommunications industry.

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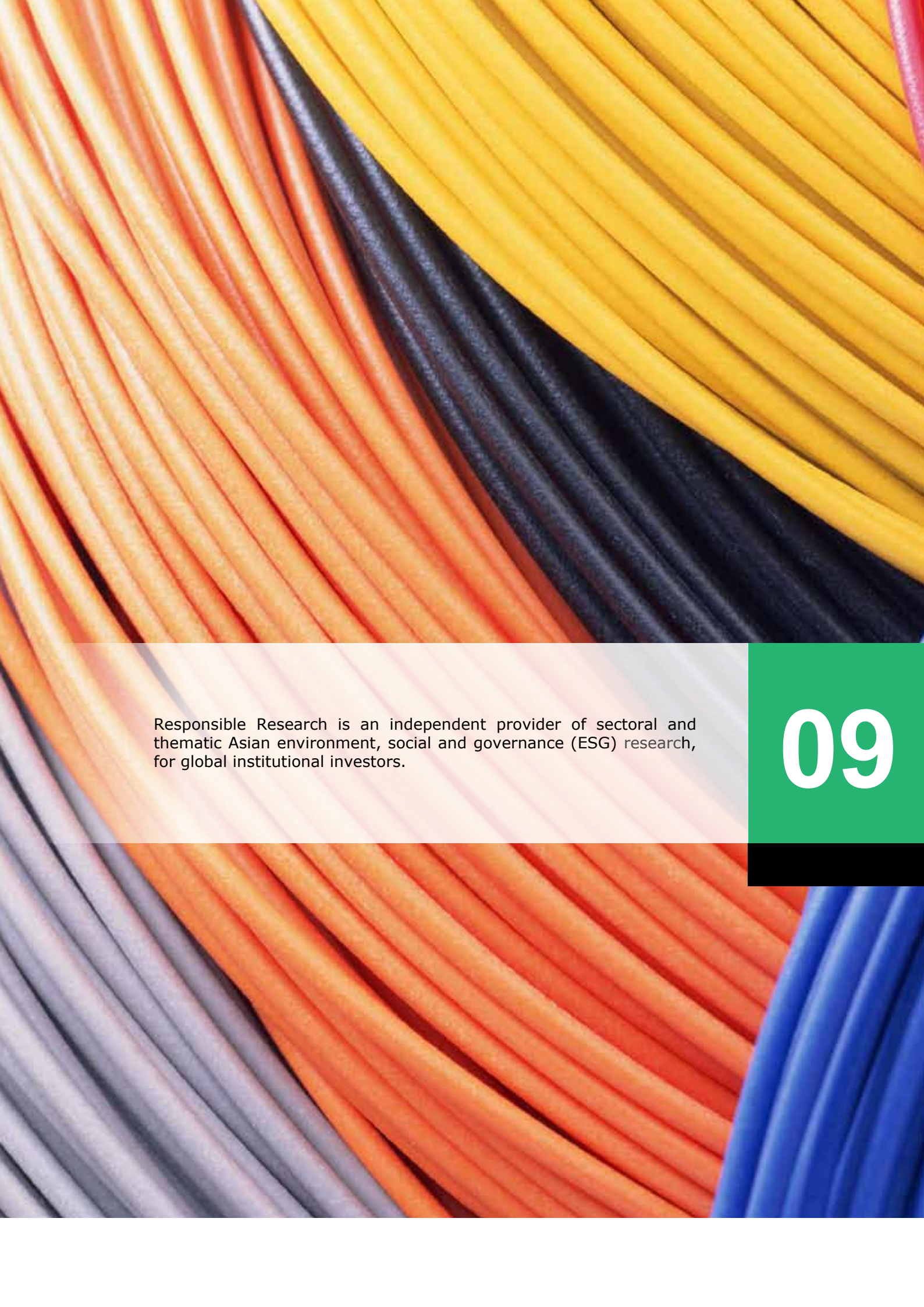
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